The Impact of Seasonality on the Using of Accommodation Capacity in Operation in Romania

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ABSTRACT

For accommodation service providers one of the main objectives is to obtain and maintain a higher degree of using of accommodation capacity in operation. Based on these considerations, the paper analyzes the evolution of the index of utilization of the accommodation capacity in operation in the development regions of Romania for a period of six years in order to reveal similarities and disparities between them. For this purpose, besides the analysis of the developments of the index of utilization of the accommodation capacity in operation, the evolution of dispersion spreading is also analyzed. Both the variability amplitudes of the two main indicators and their trend are analyzed. The conclusion of the study is the fact that in Romania, the dispersion of the index of the use of the accommodation capacity in operation had an increasing trend, which means that in terms of the ratio between demand and supply of accommodation, the disparities between development regions continue to grow with all the negative implications on the performance of the tourism industry in Romania.

KEYWORDS

Accommodation Capacity in Operation, Development Regions, Multiplicative Model, Romania, Seasonality, Variance

INTRODUCTION

In modern society, tourism occupies a prime place due to the dynamics and pressure with which daily activities are carried out. At the same time, stress and pollution are two key elements underpinning the activation of tourism activities. In this context, the tourism includes a lot of activities to create comfort for travelers (Rabontu & Vasilcescu, 2012), of which accommodation services has an important place. Running them at high levels is the result of fluctuations that occur at the intersection of tourist demand and supply.

Sensitive to socio-economic changes, tourists’ fluxes show significant fluctuations in time and space, both locally and regionally (Babucea & Balacescu, 2012). In relation to the reception capacity of the tourist enterprises, respectively the tourist destinations, there are periods when the number of tourists exceeds, and others where their number is much lower. Therefore, we can talk about the seasonality of tourism in this context.

Seasonality in the tourism industry can be influenced by a number of factors including weather, holidays, calendar and business effects (Frechtling, 2001). Of course, there are a number of other factors that depend on the potential and preferences of potential tourists.
In the case of accommodation services where demand elasticity is significantly higher than supply elasticity, seasonality may lead to reduced economic performance and even loss to the producers of such services, as well as to the workforce in the hospitality industry (Zaharia & Balacescu & Gogonea, 2014).

Identifying tourism flows, knowing their preferences and especially diversifying offers under the conditions of globalization (Panyik & Zaharia, 2014) and sustainable development imperatives (Lucchetti, 2014) can be ways of reducing seasonality, all the more so as the tourism potential, natural and anthropic, of Romania can represent tourist attractions in any season.

In this context, the study carried out focused on the analysis of the regional variation of the index of utilization of accommodation capacity in operation, at the level of Romania during 2010-2015. The analysis of regional variation in the degree of using of accommodation capacity in operation has two aspects. Firstly, the developments in the way accommodation capacity was used were analyzed. The analysis was carried out at the level of the eight development regions of Romania during 2010-2015. In this case, the objective was to identify the similarities and disparities between the ways in which the accommodation capacity in operation at the level of the development regions is used.

The second aspect was the analysis of the monthly data series on the use of the accommodation capacity in operation, the objectives being, on the one hand, highlighting the amplitude of the degree of spreading of the recorded values, and, on the other hand, the highlight of the impact of the phenomenon of seasonally on the level of using of accommodation capacity in operation.

RESEARCH METHODOLOGY

To achieve the research objectives, the main indicator used was the Index of Using of Accommodation Capacity in Operation (IUACO). In order to determine it, the IUACO monthly data series were used at the level of the eight development regions of Romania, between January 2010 and September 2015 (INSSE, 2016):

\[
IUACO = \|i\text{uaco}_{t,i}\|_{t=1,8, t=1,69}
\]  

(1)

Starting from the matrix (1) the data series Variance of index of Using Accommodation Capacity in Operation (VUACO) and Coefficient of Variation (COV) were determined:

\[
VUACO = \|v\text{uaco}_{t}\|_{t=1,69}
\]

\[
v\text{uaco}_{t} = \frac{\sum_{i=1}^{n} (i\text{uaco}_{t,i} - mr_{t})^2}{n - 1}, \quad mr_{t} = \frac{\sum_{i=1}^{n} i\text{uaco}_{t,i}}{n}, n = 8
\]  

(2)

\[
COV = \|\text{cov}_{t}\|_{t=1,69}, \quad \text{cov}_{t} = \frac{\sqrt{v\text{uaco}_{t}}}{mr_{t}}
\]

The VUACO vector was analyzed as a time series (Oprescu 2007) where \(t = 1\) corresponds to January 2010 and \(t = 69\) to September 2015. Using X11 Multiplicative Method and Henderson Trend Filter was generated the series: Trend cycle (VUACO_TC), Seasonal factors (VUACO_SF) and Irregular component (VUACO_IC). The result is a multiplicative model of the form:

\[
v\text{uaco}_{t} = v\text{uaco}_\text{tc}_{t} \cdot v\text{uaco}_\text{sf}_{t} \cdot v\text{uaco}_\text{ir}_{t}
\]  

(3)
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