TOURISM PLANNING BY TESTING SEASONALITY:

REGIONAL APPROACH

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ABSTRACT
Tourism is characterized by seasonal patterns that provoke substantial implications on tourism development. This paper quantifies the seasonality of tourism demand in selected countries in the region by computing several indicators for measuring dispersion and concentration in tourism. The calculations are done with monthly series of total number of tourists for the period 2007-2013. The results vary in regional frames, from low seasonality with no substantial meaning for tourism development, to high seasonality and considerable concentration of tourism demand. Although the study found certain similarities in tourism flow distribution and concentration, yet the detected differences in the levels of seasonality effects within the region, point to conclusion of applying different tourism policies at national level. Hence, the paper underlines a justification to develop diversified tourism product by implementing different tourism strategies. Additionally, by understanding the process of seasonality, the key-tourism players are in a better position to develop plans and strategies to assist potential tourists negotiate through the constraint process thereby influencing the aggregate patterns of seasonality.

KEYWORDS: Tourism; Seasonality; Region; Development.

INTRODUCTION
Seasonality, or the fluctuation determined by the season, is one of the distinguished characteristics inherent in tourism. It is often detected as one of its most undesired companions due to profound negative effects and major concerns to tourism managers and policy makers. Being identified as a tendency that is related to concentration of tourism flows in a particular time-segment, seasonality is closely related to tourism development. Such concentration in short periods of the year results in many restrictions in the line of social and physical environment and inefficiency (Getz & Nilsson, 2004; Mitchell & Murphy, 1991). On the other side, tourism can promote and cause long-term economic growth, known as tourism-led growth hypothesis (Brida et al, 2010). Furthermore, it urges the planning decisions in tourism as an issue of great challenge for each national government (Brida et al, 2011) since they view tourism as a catalyst for economic growth, meaning active participation in tourism industry (Cheang, 2009). Due to fact that tourism is generated by demand, the possibility arises that tourism demand may assist in providing in-depth analysis about tourist flows. This is of great assistance in decision-making process and drawing up tourism policies (Claveria & Datzira, 2009). Therefore, it is widely recognized the need of investigating and clarifying the nature of seasonality in the line of identifying appropriate tourism policy and strategy.

The research attempts to make an in-depth comparative analysis in the line of gaining knowledge for the (un)presence of seasonal patterns of tourism in the region. Moreover, the intention is to empirically test and analyze the strengths and dynamics of tourism

seasonality of several selected countries from the South East Europe (SEE). The main idea is to conclude whether Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia have similarities in tourism flow distribution and concentration, or there is a justification to develop diversified tourism product by implementing different tourism strategies. Consequently, the research clarifies which countries in the region have low and insignificant tourism distribution with just a high tourism season, and which countries have strong, powerful and constant seasonal tourism concentration.

In order to meet the research issues, the paper is structured in several parts. After the introductory part, Section 2 gives a brief overview on the literature addressing the seasonality issue. The research design encompassing the methodology and research frame is posed in Section 3. Section 4 presents the main research findings and discussion on the computed data. The conclusion remarks are noted in last part, by alarming the tourism key players to focus the attention on policies and strategies in the line of modifying tourism seasonality patterns.

LITERATURE REVIEW

The subject of seasonality in tourism is highly explored by elaborating its negative and positive effects. Generally, the academia agree that seasonality occurs due to temporary imbalance in tourism flows caused by different determinants. It is noted that seasonality as systematic variations may be present not only during the year or a semester, but also in the frames of a month or a week, even in a single day (Holloway, 1994; Lundberg et al, 1995). In this line, it is generally recognized that seasonality tends to have much more negative effects on tourism development, which often cannot be controlled (Allcock, 1989; Edgell, 1990; Laws, 1991; Snepenger et al, 1990). In this respect, the negative impacts are addressing: Employment (part-time employment, social instability and insecurity etc.); Investments (high risks over law occupancy rate); and Environment (pollution, overcrowding, xenophobia, criminal activity etc.).

Besides the long list of negative impacts of seasonal patterns on tourism development, there is a literature that supports the approach that seasonality provokes positive effects as well. This is particularly in terms of sociology and ecology. Namely, after devastating high season, long and quiet period is more than welcomed especially for recovering the sources, and the local population as well.

METHODOLOGY

Several statistical measures of dispersion are computed as an annual single measure of the seasonality's extend. The intention is to investigate the presence of seasonality in tourism demand in the region. Moreover, the purpose is to provide information about whether counter-seasonal policies need to be introduced at regional level, by addressing several selected SEE countries (Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia). In this line, the research makes a comparative analysis and tests the seasonal concentration of tourism demand upon standard equations for calculating Gini coefficient, Seasonality Indicator and Coefficient of Variation. The main variable is the total number of tourists on monthly basis during the period 2007-2013.

The Gini coefficient (G) is one of the most commonly used coefficients for measuring inequality of revenues caused by temporary disorders. In a monthly series, the Gini index of an annual set of observations ranges from 0 (perfect equality between months) to 1 (perfect inequality between months). The G may be 0 only in the case when all 12 data

are the same, pointing to egalitarian distribution over the whole year. To the opposite, the maximum value of G to be 1 may be reached only in a case when 11 data are 0 and only one data (month) has a nonu-null value. Consequently, the higher G represents greater inequality i.e. degree of seasonal concentration in tourism, and vice versa.

The Seasonal Indicator (SI) is commonly used measure for quantifying empirically observed seasonality patterns in tourism. It can be calculated as an inverse value of the seasonality ratio. The value ranges from 1/12 up to 1. In case of having higher values, it means that there is an absence of fluctuation during the year, i.e. seasonality in tourism, and opposite.

The Coefficient of Variation (CV) describes the fluctuation of tourists during the year. Moreover, it measures the spread of each series around its annual mean as a percentage of that mean. This indicator is particularly useful for comparing dispersion in data sets having different standard deviations and different means. It can take values beginning with zero. If the value is small, than the distribution is much homogenous and the average is much representative.

RESULTS AND DISCUSSION

The indicators for measuring the seasonality effects are calculated for each sampled country on yearly basis and then the computed average values are discussed. Table 1 presents the summarized estimated statistics referring tourism seasonality in the region. It is interesting that conclusion completely differs when testing seasonality in different SEE country in the region.

Table 1. Indicators for measuring tourism seasonality in selected SEE countries, 2007-2013 (average values)

Country	G	SI	CV (%)
Bosnia and Herzegovina	0.1370	0.7420	25.33
Croatia	0.5287	0.3165	107.11
Macedonia	0.2820	0.4448	59.54
Montenegro	0.5911	0.2547	127.66
Serbia	0.1437	0.7128	26.61
Slovenia	0.2015	0.5325	40.00

The first calculated indicator for testing the presence of seasonality is the Gini coefficient. Based on Table 3, it may be seen that the average values of G spreads between the lowest 0.1370 (Bosnia and Herzegovina) and the highest 0.5911 (Montenegro). The calculated values of G for the SEE countries are quite different pointing to different strength and dynamic of tourism seasonality. In the cases of Bosnia and Herzegovina, Macedonia, Serbia and Slovenia, the research calculations referring G are far below the margin of 0.5 thus indicating a presence of very modest seasonality. Namely, the low value of G shows that current distribution of tourism demand for the sample period has no meaning for these SEE countries. Therefore, the concentration in terms of tourist arrivals points to relative balance and equality. Thus, high peaks in August (or May in the case of Bosnia and Herzegovina) have not sufficient capacity and strength for serious influence with an in-depth manner in these countries. The computed data show that seasonality in terms of intra-year monthly variations in tourist arrivals is constant during the sample period.

When elaborating the cases of Croatia and Montenegro, the calculated data for the G point to completely opposite conclusion compared to previously analyzed SEE countries. Namely, out of Table 1 it can be seen that the computed average values of Gini coefficient

are above the margin of 0.5 (0.5287 for Croatia and 0.5911 for Montenegro). The high values of G show that current distribution of tourism demand has substantial meaning for Croatia and particularly for Montenegro indicating a presence of high seasonality. Hence, the concentration in terms of tourist arrivals in these two SEE countries points to significant unbalance and large inequality i.e. high tourism seasonality with significant characteristics.
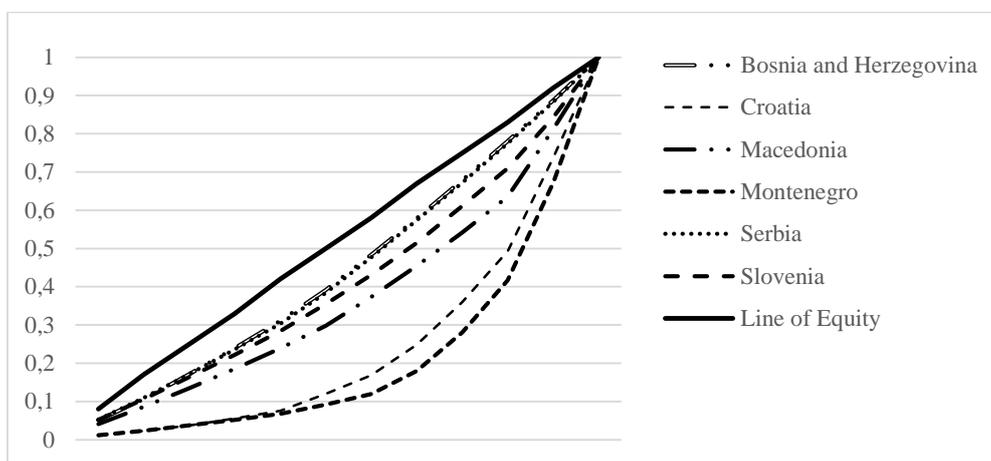

Figure 1. Average Lorenz curves of SEE countries, 2007-2013

Figure 1 presents the graphical representation of the computed G values by presenting the average Lorenz curves of the SEE countries. It is noticeable that the area between the average Lorenz curves of Bosnia and Herzegovina and Serbia and the Line of equity is the smallest. In this line is the same conclusion, but for having relatively small area (yet larger compared to Bosnia and Herzegovina and Serbia) between the average Lorenz curves of Slovenia and Macedonia and the Line of equity. This points to relatively equal seasonal distribution of tourist arrivals and absence of seasonal concentration in these countries during the year. So additionally it is confirmed the forth mentioned and already discussed conclusion for constant, similar and extremely low values of G in the case of Bosnia and Herzegovina (0.1370) and Serbia (0.1437) and constant, similar but still low values of G when addressing Slovenia (0.2015) and Macedonia (0.2820). At the same time, Figure 1 confirms the conclusion previously discussed for the cases of Croatia and Montenegro. Namely, one may note that the area between the average Lorenz curves of Croatia and Montenegro and the Line of equity is big (much bigger compared to other SEE countries). This points to unequal seasonal distribution of tourist arrivals and presence of seasonal concentration during the year, being supportive to the constant, similar and high values of the G index for Croatia (0.5287) and the highest in the region – Montenegro (0.5911).

The second calculated indicator for testing the presence of seasonality is the Seasonality Indicator. Table13 presents the computed average values for SI ranging between 0.2547 (Montenegro) and 0.7420 (Montenegro). Higher values mean that there is an absence of fluctuation during the year i.e. no seasonality in tourism. Since the computed data for Bosnia and Herzegovina (0.7420) and Serbia (0.7128) are far above zero, it means extremely humble fluctuation within a year pointing to exceptionally fragile tourism concentration in these countries. Similar is the conclusion for Slovenia (0.5325) and Macedonia (0.4448) whose evaluated average data are also above the zero, pointing to insubstantial seasonal concentration of tourism demand i.e. no significant meaning of

tourism flows. The calculated average data for Croatia (0.3165) and Montenegro (0.2547) are relatively close to zero, and by far lower compared to other SEE countries. This indicates strong fluctuation within a year and presence of high tourism seasonality in these two countries.

The final indicator in terms of measuring tourism seasonality is the Coefficient of Variation being used numerically to measure stability of tourism demand distribution in the sample period. Table 3 presents computed average data on CV for SEE countries spreading between the lowest 25.33% (Bosnia and Herzegovina) and the highest 127.66% (Montenegro). In the cases of Bosnia and Herzegovina (25.33%), Serbia (26.61%), Slovenia (40%) and Macedonia (59.54%) the values are within the limit of 55-60% pointing to homogeneous distribution and representative average. The opposite is the conclusion for Croatia (107.11%) and Montenegro (127.66%) whereas such high values (much higher than the limit and other evaluated SEE countries) implies that the distribution in not homogenous and that the average is not representative.

When summarizing the research findings referring tourism seasonality in the SEE countries, it is necessary to underline the opposite conclusions on the presence of seasonality effects. Namely, all outcomes for majority of the investigated SEE countries point to values for no significant seasonal impacts on tourism development (this is the case for four out of six evaluating countries, which either do not have sea and/or develop other types of tourism). On the other side, the computed data for other two cases (countries that are dominantly developing sea-tourism) support the conclusion of having strong and high season during summer.

CONCLUSION

By using some of the most applied indicators (Gini coefficient, SI and CV), the research investigates the seasonal concentration of tourism demand in terms of total tourism arrivals in selected SEE countries between 2007 and 2013. In the same time, the paper underlined the importance of seasonality as one of the major and profound limits generally for utilisation of tourism infrastructure and effects on a region's economy and employment. Furthermore, the research detected two groups of countries with differences in tourism flow distribution and concentration. Moreover, the study found certain similarities in tourism flow distribution and concentration, and underlined a justification to develop diversified tourism product by implementing different tourism strategies.

In this line, Bosnia and Herzegovina, Macedonia, Serbia and Slovenia have no significant seasonal concentration in tourism demand, but rather presence of modest tourism development. On the other hand, Croatia and Montenegro are countries with strong and powerful seasonality in tourism flows. Simultaneously, the research posed that in the third quarter exist cumulative influence of all factors that provoke extended concentration and increased tourism demand for these two countries. Such situation includes acceptable and favourable weather conditions; extensive insolate days; usage of vacations and ferries; personal preferences for summer season etc. So, the researched revealed strong and robust seasonality patterns in tourism only in Croatia and Montenegro where the distribution i.e. concentration of tourism demand is substantial and has considerable meaning to further national and regional tourism development.

For the countries that have strong effects of seasonality, the paper suggests to apply some attempts to overcome the negative influences, like: lengthening the main season, establishing additional seasons, diversifying markets, using differential pricing and tax

incentives on a temporal basis, encouraging the staggering of holidays, encouraging domestic tourism in off-seasons, and providing off-season attractions or events. In addition, special events such as festivals and conferences may help overcome the seasonal effects within tourism regions, if they take place in the shoulder or off-season. It could be pointed out, however, that tourists expect to have attractive programmes organized during the season.

Despite the fact that the research uses simple technique, still the findings can assist in increasing the knowledge for the (un)presence of seasonal patterns of tourism in the region. Furthermore, the paper contributes in understanding the phenomenon of seasonality in tourism demand and can further enhance the future work by employing advanced methods.

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