IMPACT OF ECONOMIC CRISIS ON THE TOURISM INDUSTRY IN ROMANIA. AN ECONOMETRIC ANALYSIS OF OVERNIGHTS STAYS

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Abstract:
Tourism is one of the largest industries in the global economy and has been both a key driver and a beneficiary of the prolonged period of economic growth seen in recent years. It also has significant social and cultural benefits because of its potential to promote understanding and international relationships. These socioeconomic dimensions make tourism a vital component of globalization. But the many events taking place at global level call into question how the tourism industry is affected. Natural phenomena (earthquakes, hurricanes, volcanic eruptions), epidemics, terrorist acts, political instability drastically affect the tourism industry and hence national economies. The intensity of business organizations is reflected in the national economy and hence overall performance. The tourism industry has been affected by other crises in the previous period but the current crisis (whose starting point can be considered the period September-October 2008) is characterized by some specific aspects that differentiate it from other crises. Its impact, based on real data, are analised in this article. Despite the current difficulties, the Tourism sector remains a critical economic sector worldwide and one that provides significant potential for economic growth and development internationally. A growing national Tourism sector contributes to raises national income, employment, and can improve a country's balance of payments. Using statistical and data and econometric models of overnights stays and tourists accommodation capacity in function is diagnosed the current status of tourism industry from Romania. This paper examines the impact of crisis events on the demand for tourism overnights in order to establish a better understanding of changes and trends in tourism firms.

Key words: economic crisis, competitiveness, tourism industry, tourism, performance, economic growth

JEL Classification: D12, F14, L83

1. INTRODUCTION

Tourism is one of the largest industries in the global economy and has been both a key driver and a beneficiary of the prolonged period of economic growth seen in recent years. It also has significant social and cultural benefits because of its potential to promote understanding and international relationships. These socioeconomic dimensions make tourism a vital component of globalization.

The importance of the sector worldwide is strengthened by increasing volume and complexity of tourism supply that have generated a real development of tourism industry; by the specific business environment witch take proportions more than any other service sector.

Economic advantage that is represented by international tourism, specially, has led many developing countries to increase their efforts to develop tourism industry as an activity susceptible to provide one part from necessary currency in order to develop the national economy.

A growing national Tourism sector contributes to raises national income, employment, and can improve a country's balance of payments.

The sector is thus an important driver of growth and prosperity and, within developing countries; it can play a leading role in poverty reduction. Despite the overall importance of developing the Tourism sector, many obstacles at the national level continue to hinder its development.

This analysis aims to serve two purposes. First, we intend to provide useful comparative information for making decisions related to business and tourism development. Second, and more

importantly, we hope that the analysis provides an opportunity for the Tourism industry to highlight the obstacles to Tourism competitiveness.

The number of tourism overnights stays directly impacts the tourism industry's income and the government agency investments therein. Therefore, policymakers need to improve their understanding of how crisis events affect the demand for inbound tourism.

The impact of economic crisis on the Romanian tourism industry is analyzed with an econometric model based on two indicators: the number of establishments of tourists' reception with functions of tourists' accommodation and overnight stays in the establishments of tourists' reception with functions of tourists' accommodation.

Overnight stay means the 24-hour interval, starting with the admission hour of respective establishment for which a person signs in the register of establishment and benefits of accommodation according to the price paid even if actual stay lasts less than the mentioned interval.

Overnight stays related to additional beds (paid by tourists) are also taken into account.

A short introspection on these data show firstly that, at the moment, the attractiveness of Romanian tourism knows a decreasing trend, especially for foreigners tourist and that trend is suppose to be seen on the whole year 2009, and secondly, the period of staying in Romania decreased, too.

Those facts means that on short time, tourism in Romania could confront with a decrease of revenues, both because of decreasing of the number of tourists and the number of overnights, especially of the foreigners ones.

This paper finds that a long-term equilibrium exists among both variables, indicating that macroeconomic variables may be used to determine the rise or fall of the number of tourists' overnight stays.

Income and foreign exchange rates are both significant explanatory variables. In terms of incurred losses, the number of overnights stays suffered the greatest decline during the impact of the financial crisis.

This paper finds that any impact on safety, whether domestic or international, negatively affects tourism demand. The impact of financial crises on tourists overnights stays demand is not less significant.

The crisis has brought balance between price and quality. Important changes have occurred mainly in the accommodation prices, the time spent on holidays; consider reducing, but especially as a tourist destination and place.

2. DATA ANALYSIS

A literature review of studies investigating tourist demand suggests the most frequently used explanatory variables are income, prices, exchange rates, transportation costs, and some dummy variables.

Among these, income is the most statistically significant variable, followed by prices, exchange rates, and currencies. Dummy variables are used to explain the influence of special events on tourists' overnight stays.

We consider that the overnight stays in the establishment of tourists' reception with functions of tourists' accommodation is an important indicator witch reflect the potential of tourism consumers and measure the tourism phenomena.

Indicators' variations show us financial power of the tourist, the evolution of tourism demands, so if the indicator is increasing in a good signal for national economy (more overnights stays means increasing the income of organizations with functions of tourists' accommodation), while a decrease of indicators shows that the consumers' budget is low.

But this indicator must be analyzed in correlation with number of establishments of tourists' reception with functions of tourists' accommodation.
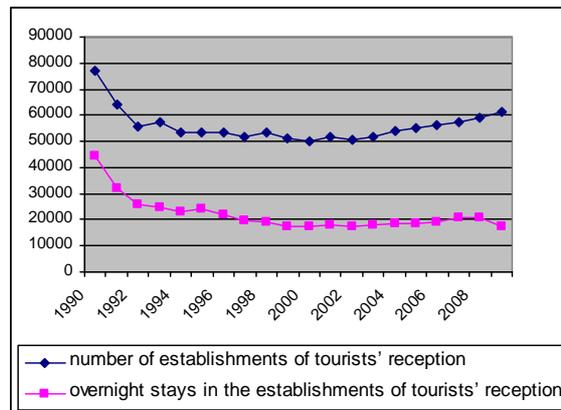
The tourists accommodation capacity in function express the attractiveness of a tourists facility during the period of time when they are available, the closer is the value to 1, the most attractive is the establishment for tourists, meaning even that managers prefer to make available the beds on the appropriate moment of the year or that they do not offer for the entire period the possibility for tourists to accommodate even if there is a large needs for their services.

So, for relevance of analysis we selected data from 1990 to 2009, data witch is reflected in next table (table no. 1):

Table 1. The main indicators between 1990-2009

Year	Overnight stays in the establishment of tourists' reception with functions of tourists' accommodation thousands places)	Number of establishments of tourists' reception with functions of tourists' accommodation (thousands)
	Y_i	x_i
1990	77022	44552
1991	64124	31927
1992	55870	26076
1993	57434	24769
1994	53255	23296
1995	53540	24111
1996	53639	21838
1997	52027	19611
1998	53164	19183
1999	51275	17670
2000	50197	17647
2001	51882	18122
2002	50752	17277
2003	51632	17845
2004	53989	18501
2005	54979	18373
2006	56500	18992
2007	57138	20593
2008	59188	20726
2009	61104	17325

Figure. 2 reflect the evolution of the variables:

Figure 1. Evolution of number of establishments of tourists reception and overnight stays between 1990-2009

Source: wwww.insse.ro

Data were collected from national financial statistics.

Evolution of both indicators is characterized, with a decreasing trend until 2004. The overnights stays continue to decrease due to the influence of economic factors, demographic, political, and social.

Overnight stays registered in establishments of tourists' reception in semester I 2010 amounted to 6252.8 thousands, decreasing by 3.7% as against those in semester I 2009.

Overnight stays of Romanian tourists in establishments of tourists' reception with accommodation functions represented in semester I 2010 80.5% of total overnight stays, while overnight stays of foreign tourists represented 19.5%.

Net use index of accommodation places in semester I 2010 was 22.1% per total establishments of tourists' accommodation, decreasing by 1.6% percentage points as against semester I 2009.

Higher net use indices of accommodation places in semester I 2010 were registered for ship accommodation places (72.3%) and for hotels (34.8%).

3. THE ECONOMETRIC MODEL PROPOSE

The paper wants to demonstrate the link between overnight stays and tourism industry's income through the number of nights

From graph no. 2 we can see that the empirical distribution of points (xt, yt) can be approximated by a straight line. As such, the econometric model that describes the relationship between two variables is transformed into a linear model $y = a + bx$ single factorial $+ u$ and b represent parameters of the model, b   0, the slope is positive because the relationship between two variables is linear.
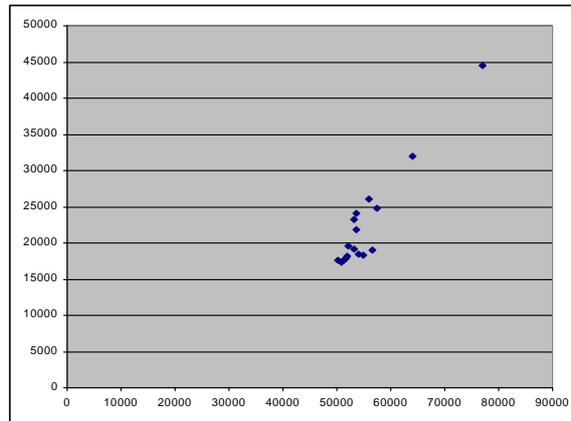
Figure 2. The relationship between tourist accommodation capacity and number of overnight stays

So, the econometric model is a simple regression model:

$$y = f(x) + u \Leftrightarrow y = a + bx + u, \qquad (1)$$

The main variables utilized in this study were two specific tourist behaviors:
- y = tourist accommodation capacity, representing the variable outcome (endogenous);
- x = number of overnight stays, representing the variable factors (exogenous) factors considered by the assumption that working with the strongest influence on the variable y;
- u = residual variable representing the y variable influences of other factors not specified in the model considered accidental factors with significant influence on the variable y.

4. ANALYSIS AND RESULTS.

Estimation of parameters was performed in Excel program and is presented in the following:

Table 2. Linear regression

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,859479187
R Square	0,738704472
Adjusted R	0,724188054
Standard Err	3222,420754
Observation	20

ANOVA

	df	SS	MS	F	Significance F
Regression	1	5,28E+08	5,28E+08	50,88752	1,2E-06
Residual	18	1,87E+08	10383996		
Total	19	7,15E+08			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	38156,0459	2594,446	14,70682	1,79E-11	32705,32	43606,78	32705,32	43606,78
X Variable 1	0,811045863	0,113695	7,133549	1,2E-06	0,572182	1,049909	0,572182	1,049909

Following calculation of the regression model will have the form:

$$y = 38156,05 + 0,810458x \qquad (2)$$

It can be stated so that a unit increases in the number of overnight stays, tourist accommodation capacity increased by 0,8110458 places.

To see whether the parameters differ significantly from the one we compare $t_{0,05}$ (12) = 2,365 with:

$$b = \frac{0,8110458 - 1}{0,0112695} = 1,67 \qquad (3)$$

It may be noted that the slope not significantly different, with a significance level of 5%.

Consequently, the number of tourists is a key factor witch influence the change of accommodation capacity in operation, it contributed to explain variation in 81,10% of total accommodation capacity in operation witch is direct proportional with

There are co-movements in the overnights stays model, indicating that there is a long-term equilibrium between the number of overnights, and of number of establishments of tourists' reception. Over the long-run, all variables become interconnected. The coefficient of the error correction item is 0,11, indicating a positive and rapid adjustment from a short-term imbalance. This implies that the imbalance of overnights tourist stays from the previous period may be adjusted during this period with error corrections that resume the long-term equilibrium. This indicates that long-term relationships are valid.

Those realities conduct to the concussions that there is necessary an additional training for managers and administrators of tourists facilities for making them understand the danger for their businesses of a too reduced level of accommodation capacity, especially the one in used.

So, they can use different efficient options to improve it: reducing the accommodation capacity, keep them open only on the period of time when they are a attractive to tourist or offering new services to increase the attractiveness.

5. CONCLUSIONS

The economic crisis seems not to have affected the tourism industry in Romania since the tourist accommodation capacity increased in 2009.

This indicator reflects the increasing number of tourism organizations with accommodation or maintaining the existing number and increasing the number of investments.

On the other hand the number of nights spent has decreased in 2009 and consequently decrease hospitality industry incomes.

The economic crisis has induced a change in consumer behavior with consequences over the tourism industry.

Because of the crisis, some groups will decide not to take any holiday this year or change their preferences in terms of tourist destination. At the European level, for example, the tourism industry is experiencing a trend towards last minute bookings, which leads to some uncertainty in the demand for tourism operators.

But Romania has an enormous potential which can turn into a tourist destination for the whole year. For this it is important, firstly, understanding and maximizing all opportunities offered by sites of natural and cultural heritage. Geographical positioning Romania will support the development of a unique tourism product, however, found it impressive progress in recent years the number   of   tourists. Upgrading, promotion and investment in accommodations are vital for Romania to become an international tourist destination of success.

This paper shows how the overnight stays and accommodations tourist are dependent and any variations of thus variable have a consequence over the tourism industry.

Indicators' variations show us financial power of the tourist, the evolution of tourism demands, so if the indicator is increasing in a good signal for national economy (more overnights stays means increasing the income of organizations with functions of tourists' accommodation), while a decrease of indicators shows that the consumers' budget is low.

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