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Article

A Quantitative Approach Regarding the Evolution of the Romanian Tourism Firms, During and After the Global Financial Crisis

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A QUANTITATIVE APPROACH REGARDING THE EVOLUTION **OF THE ROMANIAN TOURISM FIRMS, DURING** AND AFTER THE GLOBAL FINANCIAL CRISIS

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Abstract

The main goal of this research paper is to provide a quantitative assessment of the Romanian tourism industry (hotels and restaurants) from a county level perspective, in the specific context of the global financial recession and in the post-recession one. The evolution of the field is analyzed for the period 2008-2014 using county level data sourced from the National Institute of Statistics and from the Office of the Trade Register. The evolution of the main characteristics of the field: number of companies, number of employees, total turnover of the companies from the field and number of newly established companies, suggest the existence of significant disparities at the county level. The research reveals the fact that the total number of employees from the field (companies which have sent the final year documentation to the MPF) has decreased during the analyzed period with over 20%, fact that is a clear indicator of the magnitude of the effects of the crisis.

The analysis of the disparities has revealed that Bucharest which is the most important concentration pole in this field, accounting for almost 11% from the total number of companies in 2008, has diminished its importance to little under 8.7%, in 2014.

Using panel data regression we have identified some of the main characteristics of the Romanian counties that can be considered as indicators of the development perspectives of the tourism (hotels and restaurants) at county level (NUTS 3).

Keywords: tourism firms, fixed/random effects, panel data regression, county level disparities, regional development.

JEL Classification: L83, O18, P25, P48.

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Introduction

Due to the favorable and the unique natural environment, which includes, among others, the Danube Delta, the Black Sea and the Carpathians, the potential for developing tourism activities is truly remarkable in Romania. This geographical diversity is enhanced also by the cultural and historical heritage which represent other important resources for the national tourism industry. Among the most important heritage items one can list the important ancient relics (Greek, Roman etc.), the monasteries located in Moldavia and Wallachia, the castles and the fortresses located in Transylvania and other notable natural resources such as natural mineral springs which were the starting point of some spas (and they can still be today and even in the future the starting point of future developments).

Taking in consideration the development and the diversification of the economic activity in Romania, over the past few years, business trips become a new notable opportunity for the tourism sector. Due to reasonable costs and quality of services, the tourism focused on medical treatments can be a niche with a significant growth potential in the future years or even future decades. Having all these possible development directions and all the existing potential, the Romanian tourism could compete with the achievements of neighboring countries in the touristic field.

The global financial recession has severely affected households' income and companies' turnover and the expenditure related to services which could be postponed, mainly in tourism and transport, both by the decrease of the domestic and of the foreign demand. In the tourism sector, the survival of the firms and of their activities has been done by reducing prices and as a consequence by reducing the quality of provided services.

Starting with these main coordinates, the paper aims to provide an objective assessment of the development of the business environment from tourism, over the period 2008 - 2014 (using a spatial approach at county level), including therefore both the recession period and the post-recession one. According to the Nomenclature of Territorial Units for Statistics (NUTS 2013), the data (at the European level) is presented by Eurostat (in Romania this function is performed by the National Institute of Statistics) at the level of macro-regions (territorial unit level NUTS1) at the level of regions (functional territorial units of the European Union for which all regional European policies are designed and implemented, NUTS2) and at the level of other smaller size territorial units represented by counties in the case of Romania (such units are NUTS3 units, according to the general framework).

The paper is organized into three main sections accompanied by introduction, conclusions and abstract. The first section presents the literature review where the following concepts are presented: tourism business (size, evolution and performance), tourism potential at regional level and main tools and methodologies used for analyzing the development of tourism, as reflected in the literature. The second section includes the presentation of the main objective of the research, the main aspects of the employed research methodology and of the used data. The third section consists of a detailed presentation of the main results and findings of the analysis (including the results of the econometric models) conducted in the paper.

1. Review of the scientific literature

Since ancient times humans have wanted to discover new places, new cultures and to experience new lifestyles. In this context, it may be assessed that touristic travels appeared

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since antiquity and that tourism has been representing a very common activity in humans' life. Nowadays, tourism is one of the most important economic activities in the world, being an industry with a special potential for economic growth and an important value generator, and an important mean of education, civilization, and knowledge design (Petrescu, 2009). However, there are several scholars who argue that the importance of tourism as generator of economic development is exaggerated (Diaz, 2001; Ryan, 2003; Gössling, 2002).

The tourism industry generates substantial economic benefits, representing one of the most dynamic industries in the world, being an important driver of change and also an important job generator (Drucker, 1985). Thus, tourism is one of the economic fields where entrepreneurship is highly encouraged (Ball, 2005; Hatten, 2012) due to the fact that this sector is extremely dynamic as a result of rapid changes in the consumer behavior. Also, according to Bateson and Hoffman (2011) tourism thrives in an area if it increasing its attractiveness to tourist constantly. In the nowadays reality, increasing the attractiveness of a certain area is a complex activity and it requires the combined activity of the involved stakeholders and it sources the collective entrepreneurship (Ateljevic and Page, 2009). Another notable aspect in what regards the regional development of the tourism is represented by the involvement of some minority ethnic groups (Deakins and Freel, 2003) which represent is some cases important development engines.

From an economic perspective, for countries with touristic resources properly exploited, tourism also represents an important source of development or recovery of their national economies (Minciu et al., 2012). Tourism has an important impact through its contribution to economic development through the diversification of the local industry, through reducing imbalances in certain areas, especially on the labour market, through reducing unemployment, through increasing the GDP and population's income (Săseanu, Drăguşin and Petrescu, 2010a).

Romania has a great potential for tourism development that may represent an important contributor to our country's economic growth. Romania's touristic offer is represented by natural, historical, civilization, and cultural values, and also by their development and improvement degree, manifesting a great attraction force on touristic flow (Nistoreanu et al., 2003). As a tourist destination, Romania has a series of strong points including the geography, the environment, the culture and cultural heritage. The touristic potential of Romania is composed of a great variety of natural resources, the most important referring to the Black Sea beaches, the Danube and the rivers, the Carpathians and other mountain chains and the Danube Delta Biosphere Reservation. "The geography and the environment are strong points in the natural tourism potential through: the Danube Delta biodiversity (the Biosphere reservation which belongs to the UNESCO world heritage); the diversity of the national parks and of the protected natural areas with forests, lakes and unpolluted rivers; the seaside and beaches of the Black Sea; the Carpathian Mountains; the Danube River; a large number of caves; the flora and fauna diversity; the mineral water springs which offer a wide array of spa treatments; temperate-continental climate; good natural conditions for tourism activities as ski, mountain trekking, equitation, cycling or water sports. The assets in culture and cultural heritage are represented by: the diversity of the heritage objectives – monasteries, archaeological sites, fortified constructions, including objectives/areas which are part of the UNESCO world heritage; medieval citadels; rural settlements where the traditional lifestyle can be experimented; museums with various

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themes; a wide variety of festivals, traditions, folklore and legends" (Săseanu, Drăgușin and Petrescu, 2010b, p. 464). All these valuable assets - either natural or anthropic - referring to geography, environment, culture, or cultural heritage are well distributed along Romania's territory. For example, the seaside and the beaches at the Black Sea can be found in macro region 2 (NUTS 1 level), more specific in the South-East region (NUTS 2 level). The Carpathian Mountains with all their famous resorts are part of macro regions 1, 2, 3, and 4 (NUTS 1 level), North-West region, Centre region, North-East region, South-East region, South-Muntenia region, South-West region, and West region (NUTS 2 level), while the Danube Delta can be found in macro region 2 (NUTS 1 level), South-East region (NUTS 2 level). On the other side, many of the monasteries part of the UNESCO world heritage can mainly be found in macro region 2 (NUTS 1 level), North-East region (NUTS 2 level).

However, compared to other tourist destinations, Romania displays a weaker performance especially caused by the infrastructure, mainly by the poor road network. Also, the global financial crisis put a mark on the Romanian tourism industry. Even though tourism was remotely connected with the real-estate sector which was initial the generator of the crisis, by the second semester of 2008 and the beginning of 2009, the tourism industry experienced the consequences of the global economic crisis. According to the United Nations (UN) tourism agency, since October 2008, the world tourism started experiencing the impact of financial crunch (Petrescu and Balalia, 2009). The demand started to fall in both business and leisure tourism sectors, directly impacting the firms active in the tourism industry. People's purchasing power started to fall and they have cut down the expenses with travel activities - mainly because they usually imply discretionary expenses. Following the same trend, the companies have reduced their budget for travelling (business traveling) mostly due to falling business. On April 22nd 2008, the Standard & Poor's Agency published an analysis according to which Romania was among the countries which were most vulnerable to the effects of the real estate crisis in the United States of America (Socol and Hrebenciuc, 2008) and in November 2008, in a report, Goldman Sachs rated Romania the second-most vulnerable economy in Eastern Europe, after Hungary. Many of the economic sectors of Romania were affected by the economic crisis, tourism not being an exception. According to The National Association of Travel Agencies in Romania (NATA), some of the first effects of the economic crisis on the Romanian tourism industry appeared in November 2008 and some of the firms active in the tourism industry are still feeling them even nowadays. Many of the business opportunities before the crisis - such as the existence of various funding programs, many of them not refundable (Pădurean, Nica and Nistoreanu, 2015), the quite low investment in starting a business in some areas of the industry, such as reseller travel agencies, etc. - lead many entrepreneurs, eager for rapid profit, to start and develop businesses in the tourism industry. The crisis somehow ruined many of the plans entrepreneurs aimed; crisis' direct impacts were expressed, among others, in the decrease of the number of overnights stays, implicitly in the hotel occupancy rates, decrease of the number of foreign tourists, decrease of the accommodation prices, reduction of the corporate tourism, etc. (Bălan and Bîrsan, 2010; Mazilu, 2010; 2011). Also, a significant percentage of the entrepreneurs working in the field have even went out of business. However, according to Fleser and Criveanu (2012), during 2008-2011, the share of firms in the tourism industry which have reduced their activity was lower than of firms active in other branches like construction or trade.

As long as the research methodology is regarded, the instruments used to assess the development of the touristic sector and its impact on the general economic development

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have developed continuously and include, mainly, input-output analysis (Lichty and Steinnes, 1982; Surugiu, C., Frent and Surugiu, M., 2009; Zaman et al., 2010), social accounting matrix (Wagner, 1997; Madsen and Zhang, 2010) and computable general equilibrium. (Hara, 2008; Li, Blake and Cooper, 2010) Simple and multiple linear regressions (Ghali, 1976; Figini and Vici, 2010; Mshenga et al., 2010), panel data regressions (Tyrrell and Johnston, 2009; Seetanah, 2011) and causality analysis, mainly during the last years, are among the main statistical and econometrical instruments uses in the research conducted in the field.

2. Research methodology

The main goal of the research presented in this research paper is represented by the analysis of the Romanian (county level) tourism (firms within the NACE 55 class) during the 2008 - 2014 period, during and after the global financial crisis. It was decided to use only the firms registered in the NACE 55 class due to the fact that they can be regarded as a good indicator of the entire touristic activity of a certain territorial area as far as the capacity of receiving incoming tourists is regarded. The analysis conducted in this research project is approached from a county level territorial perspective and as a consequence it provides a deeper analysis of the main macroeconomic characteristics of the Romanian tourism in the broader context of the entire Romanian economy (business sector). County level analysis conducted for different economic sectors (Strat, 2014) should be regarded as prerequisite activities when developing economic national integrated development strategies. In order to present a thorough description of the evolution of the field, several econometric models, where several socioeconomic characteristics of the Romanian counties are used as explanatory variables of the development level of the touristic activity (measured as number of newly established firms in the NACE 55 class), were constructed and estimated.

The time series used in the current research paper cover the period 2008 – 2014 and are aggregated at county level. The 2008 – 2014 period was selected so that it covers the debut of the global financial crisis, the entire recession period and also a short post-recession period. Another reason for selecting the 2008 -2014 time period is represented by the availability of data (except the county level GDP which is available in the table CON103I, in the Tempo Database only for the period 2008 -2013). Because of the availability of the variable county level GDP, the econometric models are estimated only for the period 2008-2013. The sources of the data are represented by the publically available Tempo Database of the National Institute of Statistics [NIS], by the Annual Macroeconomic Database of the European Commission (the AMECO database of the National Office of the Trade Register (NOTR). The time series aggregated using the data received from the National Office of the Trade Register contain information for all those companies which are fulfilling their reporting obligations to MPF.

The indicators used for the firms working in tourism are aggregated for the firms in the NACE 55 class due to the fact that these companies can be used as an indicator of the entire capacity of the county in receiving tourists. As far as the employed methodology is regarded, the first step was represented by the analysis of the evolution of the main indicators presented in table no. 1 and of other indicators constructed with the help of the available data. Indices and relative changes are used in order to describe the evolution of the companies' sector from tourism in the broader context of the entire Romanian economy.

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The next step of the proposed approach was represented by the territorial analysis of the indicators with the clear purpose of identifying the main concentration poles of the field. Afterwards, the evolution of the field (number of newly created companies in the field – companies in the 55 NACE class) was correlated with the main socioeconomic characteristics of the Romanian counties using several econometric models. Data regarding the firms from the NACE 55 class were used due to the fact that the analysis intended to describe the capacity of the Romanian counties in receiving incoming tourists using their main socioeconomic characteristics.

Indicator[Code]	Source	Time period
GDP (county level)[GDP]	National Institute of Statistics (NIS)	2008-2013
Population (county level)[POP]	NIS	2008-2013
Population of the capital city of each county[POP_CC]	NIS	2008-2013
Urbanization degree (urban population/ all population) (county level)[UD]	NIS	2008-2013
Number of libraries (county level)[LIB]	NIS	2008-2013
Number of museums (county level)[MUS]	NIS	2008-2013
GDP deflator	The Annual Macroeconomic Database of the European Commission (AMECO)/Eurostat	2008-2014
Turnover of companies from tourism (county level)[TO_T]	NOTR	2008-2014
Number of employees in tourism (county level)[EMP_T]	NOTR	2008-2014
Number of companies in tourism (county level)[FIR_T]	NOTR	2008-2014
Number of newly established companies in tourism (county level)[N_FIR_T]	NOTR	2008-2014
Turnover of all companies from Romania (county level) [TO]	NOTR	2008-2014
Number of employees in Romanian companies (county level)[EMP]	NOTR	2008-2014
Number of companies in the Romanian economy (county level)[FIR]	NOTR	2008-2014
Number of newly established companies in the Romanian economy (county level)[N_FIR]	NOTR	2008-2014

Within the research paper, we have estimated two econometric models, each constructed with no effects, either random effects and with fixed effects. The general structure of the two estimated models is the following:

$$N_FIR_{T_{it}} = \beta_0 + \beta_1 \cdot POP_CC_{it} + \beta_2 \cdot GDP_{it} + \beta_3 \cdot LIB_{it} + \varepsilon_{it}$$
(1)

$$N_FIR_{I_{it}} = \beta_0 + \beta_1 \cdot POP_CC_{it} + \beta_2 \cdot UD_{it} + \beta_3 \cdot GDP_{it} + \beta_4 \cdot N_FIR_{it} + \beta_5 \cdot LIB_{it} + \varepsilon_{it}$$
(2)

Where:

N_FIR_T – number of newly established companies in tourism, into county (i) at time (t); POP_CC – the population of the county's capital city, into county (i) at time (t);

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- GDP the GDP of county (i) at time (t);
- BIB number of libraries located into county (i) at time (t);
- UD urbanization degree measured for county (i) at time (t);
- N_FIR number of active firms located into county (i) at time (t).

The regression models are constructed and estimated for the 2008 - 2013 time period using all Romanian counties, including the capital city Bucharest. The time period was selected because of the availability of official data for the county level GDP (presented in the table CON103I, from the Tempo Database) which are presented only up to 2013. The values for 2014 will become available in the first part of the year 2017. The construction and the estimation of the econometric models started with the no effects models and moved further to the random effects and fixed effects models.

Throughout this paper the terms firm and company are used interchangeably having the same meaning.

3. Results and discussion

The evolution of the tourism sector (only firms from the NACE 55 class), as far as the number of existing firms is regarded, during the 2008-2014 period, records a decreasing trend which is in line with the entire companies' sector for the entire Romanian economy. Although, the decreasing trend is similar, noteworthy is the fact that over the analyzed period, the number of companies working in the tourism sector has decreased with 5.3% while the total number of companies from the economy has dropped with almost 9%. Therefore, a first finding is the fact that the impact of the recession was under the national average for this economic sector.

Both due to the demographic and economic concentration, the main concentration pole is for tourism is Bucharest (figure no. 1). However, notable is that while in Bucharest are located over 21% from all Romanian companies, over the entire period, only about 8.7% from the number of companies working in tourism are located in Bucharest, in 2014. Over the analyzed period the percentage of tourism firms located in Bucharest decreased from 11%, in 2008, to around 8.7%, in 2014.

When analyzing the number of employees working in firms operating in the tourism business the evolution over the analyzed time period is negative and similar with the one reflected at the level of the entire Romanian firms' sector. The number of employees working in 2014 represents only 79.9% from the total number of employees working in 2008, in tourism. In absolute figures, the value for 2014 is 40417employees, while the one for 2008 was 50587.

The decrease at the entire companies sector is even more dramatic and it is about 21.6%. The recovery of the Romanian tourism sector from the global crisis looks to be much more difficult than the general recovery of the Romanian business sector. While the number of new companies established in tourism represented around 1.4% of the total number of newly established companies, at the level of the entire economy, during 2008-2009, it only represents around 0.74% in 2014. The same conclusion is obvious when analyzing the number of new companies from the field represent only about 6.5% from the existing ones, while in 2008 the newly created firms were representing almost 20.5% (a

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much lower decrease, from 15.3% to only little under 9.4% suffers the entire firms' sector in Romania, over the analyzed period).

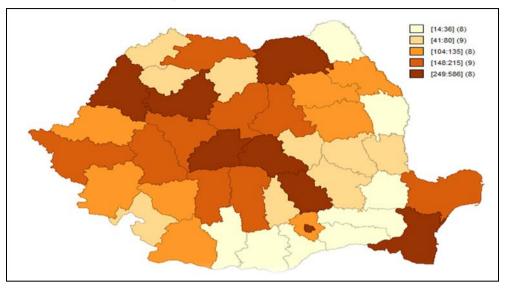


Figure no. 1: The spatial distribution of the tourism companies, 2014

Another notable aspect is the fact that, during the analyzed period, the average dimension of the companies from tourism has decreased with a higher rate than the general average dimension of the Romanian companies (expressed as number of employees/company).

If at the level of the year 2008, the average number of employees/company was in tourism with almost 1.6% higher than the general average, in 2014 it is with almost 0.5% lower. This result indicates the fact that the impact of the recession on the tourism company (measured as number of employees/firm) was over average. Therefore it is obvious that in this field working places were lost with a higher speed than companies.

Taking the investigation further in this direction we observe that the total turnover of the tourism businesses has decreased over the analyzed period with almost 28.7% while the total turnover of the business sector from Romania has suffered a decrease of less than 21%. The percentage represented by the turnover of the tourism businesses in the general turnover of the companies from the Romanian economy has decreased from 0.4% to 0.36% in 2014, pointing out again that the impact of the recession was more severe in this sector than it was in the entire economy.

In the same time the productivity of the employees from tourism is significantly lower than the general average productivity per employee (computed for all available Romanian companies). In 2008 the turnover/employee from tourism represented about 38.6% from the general average and this percentage decreased over the analyzed period to little over 34%. This result supports the hypothesis formulated earlier which states that the impact of the recession was heavier than the average impact recorded for the entire economy. Summing up all aspects mentioned earlier it becomes very clear that this domain was one of those who have suffered heavier losses during the global crisis.

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The most important 10 counties for the economic activity of the field host over 55% of the total number of companies from the tourism sector, during the entire analyzed period (notable is also the fact that the importance of the first 10 counties is slightly decreasing over the 7 years period). Bucharest, Brasov, Constanta, Cluj and Suceava are the top five counties for the entire period. On the other hand, the 10 less important counties are only hosting under 4% of the companies from the field. When analyzing the number of employees, the concentration increases and the 10 most important counties accommodate over 65% from the total number of employees working in tourism. In the same time the 10 less developed counties host less than 4% (the percentage is similar with the one for companies).

Over the same time period the number of arrivals (measured as number of tourists) received by the Romanian touristic facilities has increased with over 18.8%. Notable is the fact that the evolution was not linear and after a significant decrease the growing trend emerged beginning with 2011. Over the same time span the number of places – days increased with over 31% and moreover, for this indicator the growing trend was stable and continuous.

The estimation procedure, as presented in the previous section, includes six panel data regression models (two of them with no effects, two of them with random effects and two of them with fixed effects). The time period is 2008 -2013 because of the availability of data for the county level GDP. As far as the cross sections are regarded, the models are estimated for all 41 Romanian counties plus Bucharest. All estimation is done using E-Views 7.

The estimations are presented in table no. 2 for the first three models and in table no. 3 for the following three models.

Tuble not 21 The F	Table no. 2. The results of the models estimation for the mist three models				
Dependent variable: Number of new firms established in tourism					
Time period: 2008 - 201	3				
Cross – sections: 42					
	Model I	Model II	Model III		
Independent Variable	No effects	Random Effects	Fixed Effects		
POP_CC	-3.48E-05**	-6.93E-05*	0.002095*		
GDP	0.001014*	0.001546*	0.002435*		
LIB	0.026026*	0.058450*	0.132746*		
С	4.344541	-4.857727	-465.8850*		
F-Value	38.6*	17.56*	26.42*		
R square	0.32	0.18	0.84		
Adj. R square	0.31	0.17	0.82		
Durbin - Watson	0.58	0.97	1.80		

Table no. 2: The results of the models' estimation for the first three models

Note:* represents statistical significance at 1% level, ** at 5% level and *** at 10% level

Both, the Hausman test and the Redundant Fixed Effects Likelihood Ratio, indicate that the most appropriate model is the third one, namely the fixed effects model. Due to the fact that the third model is the most appropriate we can conclude that there is clear evidences supporting the existence of some unobserved county specific variables which have a strong influence on the number of newly established companies in the field of tourism.

The coefficients of all independent variables included in the third model are statistically significant for a 1% significance level and the entire model is significant (Prob. (F-statistic) < 0.01) for the same significance level. The value of the R square coefficient shows that a

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large percentage (84%) of the variability of the dependent variable is explained by the model and the value of the Durbin-Watson Statistic (1.8) does not indicate that the residuals are auto correlated. For the third estimated model, the number of newly established tourism firms is positively correlated with the number of libraries and with the GDP of the county (all three models) supporting therefore the idea that the recovery of the tourism field is stronger in economically powerful counties where the general development level is high (the number of libraries is considered an indicator of the overall sociocultural development level of a county; the general hypothesis is that a higher development level is correlated with a larger number of libraries). Moreover, the third model reveals a positive (positive coefficient) and statistically significant relationship between the number of newly established companies in tourism and the population of the capital city of the county.

Taking in consideration the results of the third model one can argue that the sector of tourism is more developed in counties where the development level (both economic and sociocultural) is higher (positive coefficients for GDP and number of libraries) and where a strong urban are is located (positive coefficient for the POP_CC). A potential explanation might be represented by the business tourism which is targeted mainly to areas with strong economies and by the "city break" tourism which targets mainly urban areas with a developed sociocultural environment.

Dependent v	ariable: Number of n	ew firms established in t	ourism		
Time period: 2008 - 2013					
Cross – sections: 42					
	Model IV	Model V	Model VI		
Independent Variable	No effects	Random Effects	Fixed Effects		
POP_CC	-7.36E-05*	-0.000106*	0.001826*		
UD	0.284975*	0.301063*	1.713593		
GDP	-0.000298	0.000161	0.001459*		
N_FIR	0.001763*	0.001809*	0.004765*		
LIB	0.019798**	0.037487*	0.124770*		
С	-10.81708**	-16.96550*	-559.3979*		
F-Value	51.68*	23.6*	25.56*		
R square	0.51	0.32	0.85		
Adj. R square	0.50	0.31	0.82		
Durbin - Watson	0.76	0.94	1.713		

 Table no. 3: The results of the models' estimation for the last three models

Note:* represents statistical significance at 1% level, ** at 5% level and *** at 10% level

Also for the case of the last three estimated models, both, the Hausman test and the Redundant Fixed Effects Likelihood Ratio indicate that the most appropriate model is model VI, namely the fixed effects model. Therefore, as we did for the previous model we can conclude that there is strong evidence supporting the existence of some unobserved county specific variables which strongly influence the number of newly established companies in the field of tourism (all these variables are included in the fixed effects). The coefficients of the independent variables included in the sixth model are statistically significant for a 1% significance level (except the one for the urbanization degree) and the entire model is significant (Prob.(F-statistic)<0.01) for the same significance level. The value of the R square coefficient shows that a large percentage (85%) of the variability of the dependent variable is explained by the model and the value of the Durbin-Watson Statistic (1.713) does not indicate that the residuals are auto correlated.

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For these three models we have added, as explanatory variables, the total number of firms (at county level) and the county level urbanization degree (as indicator of the general development level). The total number of firms is positively correlated (positive coefficient and statistically significant in the sixth model) with the dependent variable, being therefore another proof supporting the idea that tourism tends to develop in the areas where the economic environment is strong. On the other hand, the urbanization degree is also positively correlated (positive coefficient) with the explained variable, but is not statistically significant. The population of the capital city of the county, the county level GDP and the number of libraries remain county level characteristics (positively correlated) which explain the development of the tourism sector.

Corroborating all these findings revealed by the econometric modelling we can argue that the economic activities from the tourism sector (hotels and restaurants) thrives in areas where the general economic environment is developed and also in areas where sociocultural environment is rich.

Conclusions

Without the slightest pretension to claim that the analysis presented throughout this paper includes all relevant characteristics of the touristic sector, it is nevertheless a clear analysis of the Romanian tourism, over the period 2008 - 2014, from a county level perspective.

The overall conclusion of the research, which needs to become one of the main concerns of the key policy and decision makers of the field is that the tourism sector was one of the most affected economic sectors (all specific indicators of tourism companies included in the analysis show a significant decrease, over the reporting period) in Romania. This findings were clearly indicated by all comparisons made throughout the paper between the tourism sector and the entire firms' sector (the average size of the company in tourism sector experienced a greater decrease than the average size of the Romanian company in the economy, the share of sector's turnover in the turnover of the whole companies' sector decreased over the analyzed period; employees productivity in tourism measured as turnover/employee decreased as a percentage in the average turnover/employee across the whole companies' sector).

The results of the estimations done for the econometric models indicate that the development of the tourism sector (measured by the number of new created companies in NACE class 55) is positively correlated with the county economic development level (the GDP and total number of active companies), with the county sociocultural development level (number of libraries) and with the size of the capital of the county.

From a territorial perspective, one should note that there are a number of concentration poles of the tourism activity in Romania. They are represented by the counties of Constanta, Cluj, Prahova, Brasov, Bucharest, Sibiu, Bihor and Suceava.

Another notable finding revealed by the conducted analysis is that in the most important 10 counties of the field more than 55% of companies working in the tourism sector are located and over 65% of the employees are hosted. This result indicates a severe polarization at national level. Another notable result of the research is the one showing that the speed of development of the sector, measured using the number of new established companies decreased sharply (in 2014 only 418 companies had been established while in

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2008 a number of 1388 of new companies were established). It is worth noting from a spatial perspective that the tourism sector is underdeveloped in the south of the country and also in the southern and eastern parts of Moldova.

One of the main limitations of the present research is represented by the time period for which the econometric modeling was conducted. Although this limitation is an important one as far as the practical utility of the results is regarded it is quite common, when using county level approaches which include among variables, the value of the GDP (due to methodological limitations, official data for GDP at county level are published by the National Institute of Statistics with a delay of 3 years). Another important limitation of the research (with fundamental practical implications) revealed by the estimated econometric models is that there are unobserved characteristics (fixed effects) specific to each county, that may explain the evolution of the number of newly established companies in tourism. This limitation opens the perspectives for a new research which should have a deeper approach (to conduct the study at the level of the local administrative units within each county) in order to identify the catalysts of tourism's development in each particular case. Also, in terms of future research we will consider the county level analysis of other economic sectors in order to fully describe the economic profile of the Romanian counties and to identify the local main drivers of the economic development.

This research can be considered as a starting point for a more detailed territorial analysis of the sector of companies working in tourism, carried out with the clear objective to identify the main local features that may enhance the development of tourism, and to an even more aggregated level to build a strategic development plan of the field.

References

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- Ateljevic, J. and Page, S.J., 2009. *Tourism and Entrepreneurship: International Perspectives*. Oxford: Elsevier, Ltd.
- Ball, S., 2005. The importance of Entrepreneurship to Hospitality, Leisure, Sport and Tourism. London: Hospitality, Leisure, Sport and Tourism Network.
- Bălan, A. and Bîrsan, M., 2010. Impact of economic crisis on the tourism industry in Romania. An econometric analysis of overnights stays. The Annals of The "Ştefan cel Mare" University of Suceava. Fascicle of The Faculty of Economics and Public Administration, 10(Special Number), pp.110-116.
- Bateson, J.E.G. and Hoffmann K.D., 2011. Services Marketing. 4th ed. Toronto: South-Western.
- Deakins, D. and Freel, M., 2003. *Entrepreneurship and Small Firms*. 3rd ed. Maidenhead: McGraw-Hill Education.
- Diaz, D., 2001. The sustainability of international tourism in developing countries, Paper presented at OECD Seminar on Tourism Policy and Economic Growth. Berlin: UNCTAD.
- Drucker, P.F., 1985. Innovation & Entrepreneurship: Principle sand Practices. New York: Harper Trade.
- Figini, P. and Vici, L., 2010. Tourism and growth in a cross section of countries. *Tourism Economics*, 16(4), pp.789-805.

Amfiteatru Economic

- Fleser, A. and Criveanu, R.C., 2012. Some consequences of the economic crisis in Romania. Annals of the University of Petrosani, Economics, 12(2), pp.135-142.
- Ghali, M., 1976. Tourism and economic growth: an empirical study. *Economic Development and Cultural Change*, 24, pp.527-538.
- Gössling, S., 2002. Global environmental consequences of tourism. *Global Environmental Change*, 12(4), pp.283-302.
- Hara, T., 2008. Quantitative Tourism Industry Analysis: Introduction to Input-Output, Social Accounting Matrix Modelling and Tourism Satellite Accounts. Oxford: Butterworth-Heinemann.
- Hatten, T., 2012. *Principles of Small Business Management*. 5th ed. China: South-Western Cenage Learning.
- Li, S., Blake, A., and Cooper, C., 2010. China's tourism in a global financial crisis: a computable general equilibrium approach, *Current Issues in Tourism*, 13(5), pp.435-453.
- Lichty, R.W., and Steinnes, D.N., 1982. Measuring the impact of tourism on a small community. *Growth and Change*, 13(2), pp.36-39.
- Madsen, B., and Zhang, J., 2010. Towards a new framework for accounting and modelling the regional and local impacts of tourism, *Economic Systems Research*, 22(4), pp.313-340.
- Mazilu, M., 2010. Opportunities and Threats for Romania as a Tourist Destination after the World Economic Crisis. [Online] Available at: http://s3.amazonaws.com/academia.edu.documents/30966561/EMT1-08.pdf?AWSAccessKeyId=AKIAJ56 TQJRTWSMTNPEA&Expires=1470517411&Signature=StwI12Hk4i562Z%2FGSbyX mjyAd%2BM%3D&response-content-disposition=inline%3B%20filename%3 DOpportunities_and_Threats_for_Romania_as.pdf> [Accessed 6 August 2016].
- Mazilu, M., 2011. Romania an Attractive Tourist Market after the World Economic Crisis. [Online] Available at: [Accessed 6 August 2016].
- Minciu, R., Popescu, D., Pădurean, M. and Hornoiu, R., 2012. Integrated management of tourism in protected areas – vector of quality and sustainability. *Calitatea – acces la succes*, 126, pp.51-58.
- Mshenga, P.M., Richardson, R.B., Njehia, B.K., and Birachi, E.A., 2010. The contribution of tourism to micro and small enterprise growth. *Tourism Economics*, 16(4), pp.953-964.
- Nistoreanu, P., Țigu, G., Popescu, D., Pădurean, M., Talpeş, A., Țală, M. and Condulescu, C., 2003. *Ecoturism și turism rural*. București: Editura ASE.
- Pădurean, M.A., Nica, A.M. and Nistoreanu, P., 2015. Entrepreneurship in Tourism and Financing through the Regional Operational Programme. *Amfiteatru Economic*, 17(38), pp.180-194.
- Petrescu, R.M., 2009. Rural tourism a business opportunity for entrepreneurs. *Revista de Turism*, Special Number, pp.53-58.
- Petrescu, R.M. and Balalia, A.E., 2009. Tourism agencies and economic crisis in Romania. In: University of Messina and The Bucharest Academy of Economic Studies, *The 2009 International Conference on Tourism and Workshop on Sustainable tourism within*

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High Risk Areas of Environmental Crisis. Messina, Italy, 22-25 April 2009. Messina: SGB Edizioni.

- Ryan, C., 2003, *Recreational Tourism: Demand and Impacts*. Bristol: Channel View Publications.
- Săseanu, A.S., Drăguşin, M. and Petrescu, R.M., 2010a. Main influences of the economic crisis on the Romanian entrepreneurial ventures in the tourism industry: the case of travel agencies. In: University of Rijeka, Opatija, 20th Biennial International Congress Tourism & Hospitality Industry 2010 New trends in tourism and hospitality management. Opatija, Croatia, 6-8 May 2010. Opatija: the Faculty of Tourism and Hospitality Management in Opatija, University of Rijeka.
- Săseanu, A.S., Drăgușin, M. and Petrescu, R.M., 2010b. The importance of tourism for sustainable development in Romania. *Analele Universității din Oradea, Științe Economice TOM XIX*(2), pp.462-468.
- Seetanah, B., 2011. Assessing the dynamic economic impact of tourism for island economies. *Annals of Tourism Research*, 38(1), pp.291-308.
- Socol, C. and Hrebenciuc, A., 2008. Effects of international financial turbulences extension on the Romanian economy. Prevention solutions. *Economie teoretică şi aplicată*, 15(8), pp.31-42.
- Strat, V.A., 2014. What happened with the attractiveness of the Romanian Counties for FDI during the period 2001-2012? *Journal of Applied Quantitative Methods*, 9(4), pp.22-39.
- Surugiu, C., Frent, C. and Surugiu, M., 2009. Tourism and its impact upon the Romanian economy: an input-output approach. Analele Ştiințifice ale Universității 'Alexandru Ioan Cuza' din Iași – Științe Economice, 56, pp.355-376.
- Tyrrell, T.J. and Johnston, R.J., 2009. An econometric analysis of the effects of tourism growth on municipal revenues and expenditure. *Tourism Economics*, 15(4), pp.771-783.
- Wagner, J.E., 1997. Estimating the economic impacts of tourism. Annals of Tourism Research, 24(3), pp.592-608.
- Zaman, G., Vasile, V., Surugiu, M. and Surugiu, M., 2010. Tourism and economic development in Romania: input-output analysis perspective. *Romanian Journal of Economics*, 31(2(40)), pp.5-37.

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