
PRELIMINARY FINDINGS INAGRITOURISM GROWTH IN ROMANIA OVER 18 YEARS

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ABSTRACT

In Romania there has been a significant growth of agritourism in particular after the enlargement of the European Union in 2007. An efficient use of financial subsidies allocated by the Common Agricultural Policy has been fundamental in stimulating the pluriactivity in farms. The key purpose of this study was to assess by a quantitative approach which variables have acted on the growth of agritourism such as Gross Domestic Product (GDP) in agriculture, employed people and permanent emigration. The methodology has used a multiple regression model in order to find out since 2000 to 2017 the main relationships among development of agritourism and GDP in agriculture and emigration. In general, unemployed people and GDP in the primary sector have been the most important variables in influencing the growth of agritourism in Romania and this should be taken in adequate attention in the next seven year time 2021-2027 of the framework of the planning of the Common Agricultural Policy (CAP) allocating financial resources aimed at supporting the pluriactivity in farms..

Keywords: Multiple regression model, socio-economic marginalization, Common Agricultural Policy, rural development, emigration.

1. INTRODUCTION

In the second-last enlargement of the European Union, taken place in 2007 Romania and Bulgaria became two new member states during a significant phase of re-allocation of financial resources in EU's budget consequence of a path of Common Agricultural Policy renewing (Galluzzo, 2018a; Erjavec et al., 2011; Swinbank and Daugbjerg, 2006).

The socio-economic between rural and urban areas is arose after the collapse of the centralized economy in 1989 and financial supports allocated by the SAPARD and by other initiatives financed by the European Union over the pre-accession phase have partially lessened these structural and productive imbalances in the Romanian rural fabric. Lots of scholars have argued as rural infrastructures are not adequate to get better the general living conditions in rural areas and the socio-economic marginalization in this context hence, fundamental is the need of further allocations of private and public financial resources with the purpose to enhance an integrated rural development (Galluzzo, 2018a; Alexandri and Luca, 2008). Alexandri and Luca in 2008 and also Burja and Burja in 2014 have underlined as in the Common Agricultural Policy (CAP) a specific role has been played by the second pillar than by the first one aimed at stimulating on-farms activities in Romanian farms able to solve partially disparities among Romania and other European countries. In fact, the main bottlenecks in the path of rural development in Romanian

countryside are a modest diversification in farm's activity, a limited land capital endowment and a poor level of infrastructures in rural territories hence, the positive impact of the second pillar of the Common Agricultural Policy is closely tied to an improvement in these constraints (Burja and Burja, 2014).

Before the enlargement of the European Union, some authors have argued the fundamental role of financial subsidies in supporting the primary sector and in particular their own role played towards small farms managed by young farmers in new central and western member states of the EU considering that there is a significant dichotomy between large and small farms (Sarris et al., 1999). Comparing these findings assessed by previous authors to a most recent study carried out after the accession of Romania to the European Union in 2007 till 2013 research findings have pinpointed significant disparities among European countries (Burja and Burja, 2014); therefore, according these authors, albeit the initiatives have been particularly intense, the target of convergence has not been achieved due to a lag in infrastructures endowment and also to a modest level of diversification in farms and in rural territories which are tingly linked to the primary sector and to the traditional and codified farm activities due to a modest action in enforcement of technologies labour saving and capital intensive.

Several studies carried out in different European countries have underlined the pivotal role of the Common Agricultural Policy in lessening the rural emigration (Galluzzo, 2016a; 2016b; 2016c; 2018a) and a pivotal role has had the agritourism and rural tourism in farms managed by young farmers during the transition from a productivist to a post productivist scenario consequence of noteworthy structural changes in the Common Agricultural Policy (Ilbery, 1998; Rizov, 2004; 2005). Further, rural areas by the farm's diversification and productive specialization have played a fundamental function in protecting the environmental in the framework of multifunctionality hence, focusing the attention on the economic aspect no traditional and codified services such as agritourism, rural tourism and environmental services have to be compensated adequately by the second pillar of the Common Agricultural Policy (Westhoek et al., 2006; Galluzzo, 2009; 2010). During the recent economic crises in 2008-2010 the primary sector has been a buffer sector able to avoid the socio-economic marginalization in rural areas which has corroborated the pivotal role of public administrations and European Commission in supporting lots of rural development initiatives (Galluzzo, 2016a; 2017; 2018a; Van Berkel and Verburg, 2011; Petrick and Weingarten, 2004; Bojnec, 2003; Petrick and Tyran, 2003).

Romanian countryside is characterized by lots of small rural villages with a significant endowment of natural and touristic resources which make Romania an attractive destination for international tourists. By contrast, an inadequate level of social capital, financial capital, infrastructures and human capital are severe bottlenecks towards an holistic and integrated rural development (Mikulcak et al., 2015; Galluzzo, 2018b). A particular challenge that Romania agriculture has to face with are the rural depopulation and emigration; in fact, according to the recent data published by the Romanian Institute of Statistics (INSEE) in TEMPO time series, Romania has suffered a sharply decline of people which since 2005 to 2017 has had a drop of 2 million of people (Galluzzo, 2017) most of them moved in urban center such as Bucharest-Ilfov

strengthening the duality between rural and urban areas and socio-economic unbalances as well (Sageata, 2010; Naghiu et al., 2005).

Agritourism, rural tourism and other on farm activities with a low impact on the environment are pivotal in Romanian small scattered rural villages in the framework of an holistic and sustainable development (Chiritescu, 2011) based on multifunctional farms pivotal for the rural development (Dachin, 2008) exploiting the cultural heritage endowment in rural Romanian areas. Furthermore, agritourism solving partially the socio-economic issues in these areas at risk of a severe marginalization and a rural depopulation, is a good opportunity to an economic growth and towards an environmental friendly sustainability in Romania (Silviu et al., 2011) in particular in some rural areas where deep-rooted is the nexus between tourism-food-heritage.

Aim of the research

The key purpose of this research was to assess by a quantitative approach the relationships among emigration, GDP in agriculture and employed people and agritourism aimed at assessing if agritourism has been an important leverage of development in Romania since 2000 to 2017.

2. METHODOLOGY

The research has estimated by a quantitative method such as the multiple regression model the main correlations among the growth of agritourism and three socio-economic variables as GDP in agriculture, emigrated citizens and employed people.

The estimation of regressors in the multiple regression model has used the software XLSTAT which has been used also to estimate the matrix of correlations and graphs. In its algebraic form of matrix, the multiple regression models can be expressed as a mathematical equation (Verbeek, 2006):

$$y = X\beta + \varepsilon \quad (1)$$

where y is the dependent variable and ε is the statistical error, but both are vectors with n -dimensions; X is a matrix of independent variables investigated which has a dimension $n \times k$.

In analytical terms, the multiple regression model in its general formulation has been written in this way (Asteriou and Hall, 2011; Baltagi, 2011; Verbeek, 2006):

$$y = \alpha_0 + \alpha_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k + \varepsilon_j \quad (2)$$

y are the agritourisms in Romania

α_0 constant term

x_1, x_2, x_3 are three independent variables such as permanent emigrated people from Romania, GDP in agriculture and employed people.

α, β, γ are estimated parameters in the model

ϵ_i is the term of statistic error in the model of regression which is the part of variance does not explain by the model. The poorer is the variance explained in the model more modest is the goodness of the model.

According to many authors, the basic assumptions in order to use a multiple regression model are (Asteriou and Hall, 2011; Baltagi, 2011):

- 1) statistic error ϵ has conditional average zero that is $E(\epsilon|X_i) = 0$;
- 2) (X_i, Y_i) , $i = 1, \dots, n$ are extracted as distributed independently and identically from their combined distribution;
- 3) X_i, ϵ have no fourth moment equal to zero.

Furthermore, in the model of multiple regression it is pivotal that there is no correlations among regressors and random noise if the value between β expected and β estimated is the same (Asteriou and Hall, 2011; Baltagi, 2011; Verbeek, 2006); in order to analyse if there is also heteroscedasticity on standard errors in the multiple regression model it has used White's test on the error terms (Verbeek, 2006).

Table 1: Main descriptive statistics in Romania (Source: author's elaboration on data INSEE TEMPO time series)

Variable	Min.	Max.	Mean	Std. deviation
Agritourism	400	2,556	1,303.11	549.92
Emigration	7,906	22,807	13,603.78	4,851.39
Agriculture GDP	8,778	36,363	26,666.21	7,253.45
Employed people	12,481,100	14,047,700	13,494,811.11	559,054.52

3.RESULTS AND DISCUSSION

The main findings, as reported by the Romanian National Institute of Statistics (INSEE), in the quantitative analysis of descriptive statistics have pointed out since 2000 to 2017 an increase of agritourism with an average value of 1,303 farms with the highest value assessed in 2017 equal to 2,556 and the lowest close to 400 farms stated in 2000 (Tab. 1).

Table 2: Matrix of correlation among all investigated variables in Romania since 2000 to 2017. In bold values with significance of 5% (Source: author's elaboration on data INSEE TEMPO time series)

Variable	Agritourism	Emigration	GDP agriculture	Employed people
Agritourism	1	0.610	0.712	-0.495
Emigration	0.610	1	0.427	-0.362
GDP agriculture	0.712	0.427	1	-0.068
Employed people	-0.495	-0.362	-0.068	1

The matrix of correlation among all investigated variables has underlined a direct correlation between the emigration and agritourism in Romania and between the variables agritourism and GDP in the primary sector (Tab. 2). This has implied as in poor areas where the more modest is the impact of GDP produced by the primary sector the lower is the diffusion of agritourism; by contrast the variable agritourism correlates indirectly with the variable employed people hence, the lower is the employed people the higher is the agritourism in Romanian counties (Fig. 1). The variables permanent emigration and GDP in the primary sector have had a direct correlation which means as a low level of emigration is linked to a poor level of GDP in agriculture

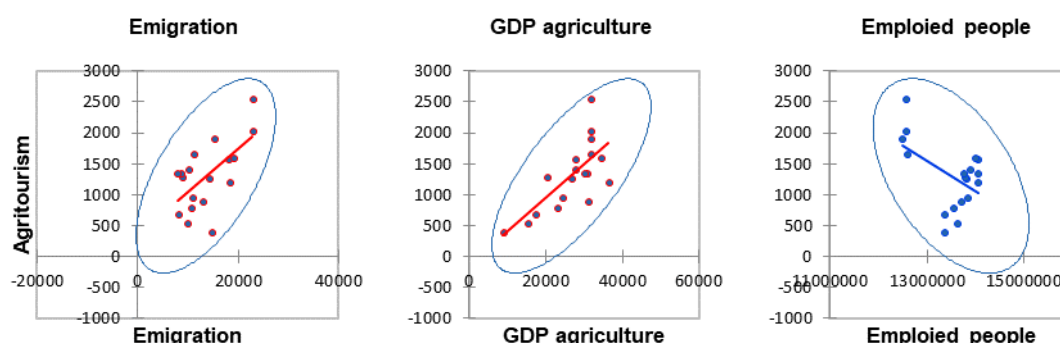


Figure 1: Main correlations in all investigated variables over the time of study in Romania. (Source: author's elaboration on data INSEE on data published in TEMPO time series)

Table 3: Outcomes in the standardised multiple regression model. (Source: author's elaboration on data INSEE on data published in TEMPO time series)

Variable	Value	St.error	T value	Pr > t	Lower bound (95%)	Upper bound (95%)
Emigration	0.22	0.130	1.712	0.109	-0.056	0.500
GDP agriculture	0.59	0.105	5.617	< 0.0001	0.366	0.817

Employed people	-0.37	0.110	-3.399	0.004	-0.610	-0.138
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The multiple regression model standardizing the values in all investigated variables has pointed out as the dependent variable agritourism has been directly correlated to the independent variables GDP in agriculture (Tab. 3). By contrast, an indirect correlation has been found between the variable agritourism and employed people in Romania.

Summing up, on the growth of agritourism in Romanian counties no impacts has had the independent variable emigration instead the higher is the agritourism growth the higher is the level of GDP in the primary sector and lower is the level of employed people. According to the research outcomes, the agritourism is typical of rural Romanian areas characterised by the highest levels of unemployment and by a meaningful and deep rooted agricultural fabric.

4. CONCLUSIONS

The European Union through the financial subsidies allocated by the second pillar of the CAP and by the LEADER initiative has supported the diversification in farm's activities by the agritourism and rural tourism and before the enlargement through the SAPARD has partially renewed and improved the rural and social-economic infrastructures in Romanian rural areas. For the future, it is important to keep in the financial supporting pattern, these measures of modernisation in farms even if both the European context and also the international one is addressing the political strategies and the budget decisions towards a shrinking in allocation of financial resources. Thus, it is pivotal for the national and local authorities, in order to keep steadily financial resources increasing the cofinancing of the Common Agricultural Policy in particular in some of them specifically tailored for disadvantaged rural areas which need of financial aids aimed at reducing the permanent emigration and environment degradation.

Summing up, in Romanian rural areas it is pivotal strengthening the agritourism by a generation turn-over and an increase of agrarian capital in terms of land endowment which should be focused towards crops more economic efficient and labour saving considering that the agritourism is a specific kind of tourism for a tourist with specific needs able to emphasize the rurality in all of its own integrated aspects.

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