CONSIDERATIONS REGARDING THE HORECA INDUSTRY IN BIHOR COUNTY. AN ECONOMETRIC APPROACH

Simona Roxana Pătărlăgeanu*, Marius Constantin, Mihai Dinu
Faculty of Agri-Food and Environmental Economics, Bucharest University of Economic Studies, Bucharest, Romania
rpatarlageanu@eam.ase.ro
constantinmarius15@stud.ase.ro
mihai.dinu@eam.ase.ro

Abstract: *The tourism and restaurant sectors contribute to the local economy in many ways and can ensure achieving the sustainable development goals. Since Bihor County presents great potential for the development of the HORECA industry, both locally and nationally, the main objective of this research was aimed towards studying the dynamics of the indicators specific to this field. More precisely, the main objective was to quantify the influence of indicators specific to the HORECA industry on the average monthly nominal net earnings in the industry in Bihor County. The multiple linear regression methodology (least squares method) was applied in this study, in order to validate or reject hypothesis that the average monthly nominal net earnings in the HORECA industry in Bihor County is strongly influenced by a series of specific indicators. Findings validate this hypothesis because the coefficient of determination indicates that the multiple linear equation successfully (78.89%) predicts the directions of influence between the previously mentioned indicators. Out of all the indicators included in the regression model, the increase with one unit of the relative change of the number of active enterprises in Bihor in the HORECA industry determines the biggest increase of the relative change in the average monthly nominal net earnings in the HORECA industry in Bihor, an increase with 1.058%, should the other exogenous variables remain constant.*

Keywords: HORECA industry, Bihor County, multiple linear regression, county-level analysis, Romania.

JEL classification : C22, C32, C5, R40, Z31.

1. Introduction

Bihor County is considered to present great potential for tourism development, considering the partnerships and networks of cross-border cooperation in tourism at the Euro-regional level (Dodescu and Borma, 2017). The emergence and development of common European policies have fostered cross-border cooperation and proactive self-governance through a major increase in the involvement of local authorities and communities (Badulescu, Badulescu and Borma, 2014). The rural tourism in Eastern European developing countries meets the conditions of sustainable activities and harnesses the potential of the local touristic resources (Badulescu et al., 2016). Nationally, the tourism and restaurants (HORECA) sectors had to face many challenges in order to ensure its economic sustainability (Chiriac, 2015).

Recent perspectives of the HORECA industry refer to the opportunities for increasing its competitiveness via e-commerce (Yaneva and Bichurova, 2018). Moreover, some suggest that applying hot spot analysis and spatial clustering helps to observe the digital footprint of

* Corresponding author: Simona Roxana Pătărlăgeanu

tourists, providing valuable knowledge regarding the online representation of a destination, including from an economic standpoint (van der Zee et al., 2018). Taking into account the change in dynamics in the HORECA industry, one cannot deny the necessity to elaborate an analysis which includes important KPIs for a development area/region such as: the average monthly nominal net earnings in the HORECA industry, the turnover from the active local units generated by the HORECA industry, the gross investments for tangible goods made from the active local units in the HORECA industry, the number of active enterprises in Bihor in the HORECA industry, the number of airport passengers. The correlation of the previously mentioned KPIs is significant enough for representing a detailed image regarding the role of the HORECA industry in the local economy development throughout Bihor County (Herman et al., 2017).

Since the human capital is important, especially in this sector of the economy (Filimon et al., 2019), the main research question addressed in this paper is whether the average monthly nominal net earnings in the HORECA industry in Bihor County is influenced by a series of indicators with local economic impact. And if so, how is the influence manifested and how can it be quantified? Considering this, the main objective of this research paper is to quantify the influence of indicators specific to the HORECA industry based on the average monthly nominal net earnings in the industry in Bihor County, under the hypothesis that the average monthly nominal net earnings in the HORECA industry in Bihor County is strongly influenced by the Oradea International Airport passengers, by the turnover from the active local units (in Bihor, in the HORECA industry), by the number of active enterprises (in Bihor in the HORECA industry) and by the gross investments for tangible goods made by the active local units (in the HORECA industry in Bihor).

2. Methodology

As the title suggests, the research methodology is specific to a quantitative approach. Besides the short statistical analysis carried out, the multiple linear regression methodology was applied in this research, the least squares method to be more precise. Therefore, econometrics represents an important form of knowledge used as a research method in this paper. Econometrics comprises techniques and methods for analysing the dynamics of variables in many fields of activity, and that of the relationships between variables. (Anghelache et al., 2019). The multiple linear regression model provides ways to determine and establish the (in)existence of correlations between two types of variables: a dependent variable, also called the endogenous variable, and multiple independent variables, also called the exogenous variables (Gheorghiţă and Pătărlăgeanu, 2006).

Table 1: The indicators included in this research

Code	Indicator	Unit of Measure	Type of Variable	Source
FOM106A and FOM106E	Average monthly nominal net earnings in the HORECA industry in Bihor County	RON (lei)	Dependent	The Romanian National Institute of Statistics
avia_tf_apal (LROD)	Oradea International Airport passengers	Number of passengers	Independent	Eurostat
INT104C and INT104D	Turnover from the active local units in the HORECA industry in Bihor County	Millions RON (lei)	Independent	The Romanian National Institute of Statistics
INT101A and INT101O	Active enterprises in the HORECA industry in Bihor County	Number of enterprises	Independent	The Romanian National Institute of Statistics

Code	Indicator	Unit of Measure	Type of Variable	Source
INT105D and INT105B	Gross investments for tangible goods made by the active local units in the HORECA industry in Bihor	Millions RON (lei)	Independent	The Romanian National Institute of Statistics
FOM103A and FOM103D	Population working in the HORECA industry in Bihor County	Thousands of persons	Not included in the linear regression	The Romanian National Institute of Statistics

Source: Own conceptualisation

Further in this research, multiple indicators were analysed based on the statistical data taken from the databases of Eurostat and of the Romanian National Institute of Statistics on 13 January 2020, as presented in Table 1. There are some important methodological considerations to be considered, as it follows:
- FOM*106A(E)*: The average monthly net nominal earnings is an indicator obtained by subtracting from the gross nominal earnings the following: tax, the social security contribution and social health insurance paid by the employees.
- *avia_tf_apal (LROD)*: The values of this indicators include all passengers on a particular flight, counted only once and not repeatedly on each individual stage of that flight, excluding the direct transit passengers. LROD is the ICAO code for the Oradea International Airport (IATA code: OMR), located in Bihor County, Romania.
- *INT104C(D)*: Turnover (excluding VAT) represents the income resulted from sales of goods and commodities, execution of works and provision of services, excluding rebate, commissions and other discounts for the customers.
- *INT101A(O)*: The Romanian National Institute of Statistics defines an active enterprise as the entity which, from an economic perspective, is active, namely it produces goods or provides services, outlay and draws up the balance sheet.
- *INT105D(B)*: Gross investments in tangible goods are investments in new and or in existing tangible capital goods, whether bought from third parties, acquired under a financial lease contract or produced for own use, having a useful life of more than one year, including non-produced tangible goods such as land.
- FOM*103A(D)*: Includes all the persons who work for income, based on a work contract or a free-lance activity (self-employed) in order to get an income such as salary, in kind payment etc. This indicator is not included when carrying out the multiple linear regression and it is only used in the statistical analysis.
In order to validate or reject the previously formulated hypothesis, the multiple linear regression methodology was carried out on the values of the variables explained in Table no. 1. Moreover, a statistical analysis was carried out on the time series data.

3. Results

Starting with the statistical analysis of the beforementioned indicators, Table no. 2 was elaborated and contains relevant information regarding the descriptive statistics:

Table 2: Descriptive Statistics of the Indicators in the 2002-2018 Timeframe (17 Observations)

Indicator	avia_tf_apal (LROD)	INT104C INT104D	FOM106A FOM106E	INT101A INT105O	INT105D INT105B	FOM106A FOM106E
Mean	51,497.65	325.52	5.10	802.88	82.73	790.35
Median	37,070	334	4.80	824	71	790
Maximum	217,005	701	7.30	1,004	187	1,551
Minimum	8,028	77.6	3.60	461	15.90	212
Std. Dev.	53,264.80	171.51	1.078	131.297	51.593	363.867
Skewness	2.4099	0.5551	0.7371	-1.1049	0.5714	0.4913
Kurtosis	7.3913	2.7304	2.7553	3.9619	2.5666	2.7389
Jarque-Bera	30.1143	0.9245	1.5778	4.1141	1.0583	0.7322
Probability	0.0000	0.6299	0.4543	0.1278	0.5891	0.6934

Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

The standard deviation is above the mean in the case of the Oradea International Airport passengers, which indicates an anomaly in the distribution of passengers during the analysed timeframe (2002-2018), therefore a leptokurtic distribution confirmed by the value of Kurtosis (7.3913 which is above the desired value of three, considered desirable for a normal distribution). This anomaly is justified by the increase of passengers in 2017 (160,299 passengers) and 2018 (217,005 passengers, representing 4.21 times more than the mean), which has caused a shock on the mean (51,497 passengers).

Skewness is an important indicator, since it reflects the asymmetry of data distribution around the mean. A normal distribution is as close as possible to zero (HIS Markit, 2017). In the case of the indicators included in Table no. 2, the distribution is not normal and one can notice the strong positive asymmetry (the Skewness values are above zero) in the case of the Oradea International Airport passengers, and the weak positive asymmetry (which is still not desirable when carrying out the multiple linear regression) in the case of all the others indicators, with the exception of the number of active enterprises existing in the HORECA industry in Bihor County, which is an indicator characterised by a negative asymmetry (due to the negative value of Skewness, -1.1049). This is caused because of the low values of the indicator tracked in the 2002-2006 timeframe (mean: 643 active enterprises, minimum: 461 in 2002), as compared to the values registered in the 2007-2018 timeframe (mean: 870 active enterprises, minimum: 780 in 2011). Moreover, this statistical analysis indicates that the entrepreneurship in the HORECA industry in Bihor has intensified after 2006, proof being that the number of active enterprises has increased.

Additionally, Kurtosis is an indicator which reflects the flatness or curving of a distribution as compared to a normal distribution. In the case of a normally distributed series, the Kurtosis value is 3. From this perspective, the indicators included in Table no. 2 have a distribution close to normal, with few exceptions: the number of passengers (previously explained), the number of active enterprises in the HORECA industry (leptokurtic distribution, due to the value of 3.9619 which is above the limit of a normal distribution, 3).

Since this research focuses on time series data and the objective is not create a spurious regression, the variables must be stationary in time (Noriega and Ventosa-Santaulària, 2007). In order to test that, the Augmented Dickey-Fuller statistic test was performed and the results were gathered together in Table no. 3:

Table 3: Stationarity Testing – Augmented Dickey-Fuller

		avia_tf_apal (LROD)		INT104C INT104D		FOM103A FOM103D	
Augmented Dickey-Fuller test statistic		**t-Statistic**	**Prob**	**t-Statistic**	**Prob**	**t-Statistic**	**Prob**
		-3.3408	0,0313	1.4698	0.9982	0.0900	0.9541
Test critical values	**1% level**	-3.9591		-3.9203		-3.9203	
	5% level	-3.0810		-3.0656		-3.0656	
	10% level	-2.6813		-2.6735		-2.6735	
		INT101A INT101O		**INT105D INT105B**		**FOM106A FOM106E**	
Augmented Dickey-Fuller test statistic		**t-Statistic**	**Prob**	**t-Statistic**	**Prob**	**t-Statistic**	**Prob**
		-3.4357	0.0252	-2.5311	0.1270	1.0148	0.9943
Test critical values	**1% level**	-3.9203		-3.9203		-3.9203	
	5% level	-3.0656		-3.0656		-3.0656	
	10% level	-2.6735		-2.6735		-2.6735	

Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

Because only two indicators (*Oradea International Airport passengers* and *Active enterprises in Bihor in the HORECA industry*) are characterised by stationarity (Prob is below the limit of 0.05 and the value of the t-Statistic in module is situated between the 1%-5% test critical values), the data needs to be processed in order to avoid a spurious regression. As a result, studying the relative change of the indicators from 2002 to 2018 can be tested as a method to obtain a normal distribution of the series and stationarity. Considering this, Table no. 4 was elaborated, which contains information regarding the descriptive statistics of the relative change of the indicators:

Table 4: Descriptive Statistics of the Relative Change of the Analysed Indicators in the 2002-2018 Timeframe (16 Observations)

Indicator	**avia_tf_apal (LROD)**	**INT104C INT104D**	**FOM106A FOM106E**	**INT101A INT105O**	**INT105D INT105B**	**FOM106A FOM106E**
Mean	0.434	0.156	0.048	0.047	0.258	0.141
Median	0.071	0.162	0.049	0.037	0.216	0.097
Maximum	4.163	0.414	0.194	0.306	1.258	0.604
Minimum	-0.779	-0.057	-0.104	-0.133	-0.674	-0.072
Std. Dev.	1.251	0.140	0.086	0.098	0.584	0.151
Skewness	2.2326	0.0496	0.0549	0.6300	-0.0049	1.7914
Kurtosis	6.7126	2.3505	2.1960	4.7449	2.1752	6.6465
Jarque-Bera	22.4807	0.2878	0.4390	3.0882	0.4536	17.4220
Probability	0.0000	0.8660	0.8029	0.2135	0.7971	0.0002

Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

Regarding the normality of the series distribution, based on data from Table no. 4:

- *avia_tf_apal (LROD)*: Distribution continues to present anomalies. The standard deviation is still about four times greater than the mean, Skewness indicates strong positive assymmetry and the series is leptokurtic. However, the value of Jarque-Bera indicates a small change towards a normal distribution, characterised by a Jarque-Bera value of zero (in this case, the value dropped from 30.11 to 22.48).
- *INT104C(D)*: The relative change of the turnover from the active local units in Bihor in the HORECA industry could be considered as having a normal distribution. Skewness and Jarque-Bera indicate a normal distribution, but Kurtosis indicates that the distribution is flat.
- *FOM106A(E)*: The relative change of the working population in the HORECA industry in Bihor could also be considered as having a normal distribution, considering that Skewness indicates a normal distribution (value close to zero) and Jarque-Bera is only 0.4390. However, the distribution is platykurtic (2.35 – below the desired 3).
- *INT101A(O)*: The relative change of the number of active enterprises in Bihor in the HORECA industry is not described by negative asymmetry (as analysed before in the case of the number of active enterprises), but by a small form of positive asymmetry (0.63). The leptokurtic characteristic of the distribution has accentuated (from 3.96 to 4.74).
- *INT105D(B)*: The distribution of the relative change of the gross investments in tangible goods could be considered a normal, taking into account that the value of Skewness is very close to the desired value of zero, similar to Jarque-Bera. Data is platykurtic (2.17).
- *FOM106A(E)*: The distribution of the relative change of the average monthly nominal net earnings in Bihor in the HORECA industry is similar to the distribution of the relative change of the Oradea International Airport passengers (deeply leptokurtic).

Following the research's objective, stationarity testing – Augmented Dickey-Fuller was performed in EViews and the results were centralised in Table no. 5:

Table 5: Stationarity Testing – Augmented Dickey-Fuller (on the processed data)

		avia_tf_apal (LROD)		**INT104C INT104D**		**FOM103A FOM103D**	
Augmented Dickey-Fuller test statistic		**t-Statistic**	**Prob**	**t-Statistic**	**Prob**	**t-Statistic**	**Prob**
		-2.7052	0.0961	-3.0081	0.0569	-3.6240	0.0186
Test critical values	**1% level**	-3.9591		-3.9591		-3.9591	
	5% level	-3.0810		-3.0810		-3.0810	
	10% level	-2.6813		-2.6813		-2.6813	
		INT101A INT101O		**INT105D INT105B**		**FOM106A FOM106E**	
Augmented Dickey-Fuller test statistic		**t-Statistic**	**Prob**	**t-Statistic**	**Prob**	**t-Statistic**	**Prob**
		-3.9179	0.0108	-4.1577	0.0069	-5.9746	0.0003
Test critical values	**1% level**	-3.9591		-3.9591		-3.9591	
	5% level	-3.0810		-3.0810		-3.0810	
	10% level	-2.6813		-2.6813		-2.6813	

Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

Based on the results from Table no. 5, the time series are now stationary (the Prob is below the limit of 0.05), with one exception. The relative change of the Oradea International Airport passengers has a Prob of 0.09 – but this can be caused by the small number of observations (only 16), therefore this exception can be accepted.

Table 6: The Results of the Multiple Linear Regression (Least Squares)

Variable	Coefficient	Standard Error	t-Statistic	Prob.
C	0.0410	0.0319	1.2837	0.2256
INT104C/D	0.3631	0.1895	1.9165	0.0816
avia_tf_apal (LROD)	0.0222	0.0173	1.2843	0.2254
INT105D/B	-0.0542	0.0382	-1.4206	0.1831
INT101A/O	1.0115	0.2651	3.8157	0.0029
R-squared	0.789842	Mean dependent var	0.140772	
Adjusted R-squared	0.713421	S.D. dependent var	0.151226	
S.E. of regression	0.0810	Akaike info criterion	-1.939520	
Sum squared resid	0.0721	Schwarz criterion	-1.698086	
Log likelihood	20.5162	Hannan-Quinn criter.	-1.927157	
F-statistic	10.3354	Durbin-Watson stat	2.497088	
Prob(F-statistic)	0.0010			

Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

The R-squared coefficient of determination indicates that the multiple linear equation successfully (78.89%) predicts the values of the dependent variable within the sample included in Table no. 6. Moreover, the t-Statistic associated probability for the exogenous variables is zero (0.00) in the case of *the relative change of the number of active enterprises in Bihor in the HORECA industry* – which is desirable in order to validate the equation, similar to the situation of the following indicator: *the relative change of the Oradea International Airport passengers* (0.08 – slightly above the 0.05 limit). However, due to the low number of observations (16), the t-Statistic associated probability of the other exogenous variables have bigger values (0.22 and 0.18), but accepted. The Durbin-Watson statistic measures the serial correlation in the residuals and suggests that successive error terms are negatively correlated, considering the value which is above 2 (2.49 – according to Table no. 6), therefore a value which validates the model.

Table 7: The Estimation Command, Equation and Substituted Coefficients

Estimation Command:
LS *FOM103D/A* C *INT104C/D avia_tf_apal (LROD) INT105D/B INT101A/O*
Estimation Equation:
FOM103D/A = C(1) + C(2)**FOM104C/D* + C(3)**avia_tf_apal(LROD)* + C(4)**INT105D/B* + C(5)**INT101A/O* + ε
Substituted Coefficients:
FOM103D/A = 0.047 + 0.363**FOM104C/D* + 0.022**avia_tf_apal(LROD)* -0.054**INT105D/B* + 1.011**INT101A/O* + ε

Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

According to data in Table no. 7, if *the relative change in the turnover from the active local units in Bihor in the HORECA industry* increases by one unit and the other independent

variables remain constant, this determines *the relative change in the average monthly nominal net earnings in the HORECA industry in Bihor* to increase with 0.41% (0.047 plus 0.363). Similarly, if *the relative change of the Oradea International Airport passengers* increases by one unit and the other independent variables remain constant, this determines *the relative change in the average monthly nominal net earnings in the HORECA industry in Bihor* to increase only with 0.069% (0.047 plus 0.022).

Table 8: The Coefficient Confidence Intervals

		90% CI		95% CI		100% CI	
Variable	**Coefficient**	**Low**	**High**	**Low**	**High**	**Low**	**High**
C	0.0409	-0.0163	0.0982	-0.0292	0.1112	-0.0581	0.1400
INT104C/D	0.3631	0.0228	0.7034	-0.0539	0.7802	-0.2253	0.9516
avia_tf_apal	0.0222	-0.0088	0.0533	-0.0158	0.0603	-0.0315	0.0759
INT105D/B	-0.5419	-0.1227	0.0143	-0.1381	0.0297	-0.1726	0.0642
INT101A/O	1.0114	0.5354	1.4875	0.4280	1.5948	0.1881	1.8374

Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

Should *The relative change in the gross investments for tangible goods from the active local units in the HORECA industry in Bihor* increase with one unit, this would cause a decrease with 0.007% (0.047 minus 0,054) of *the relative change in the average monthly nominal net earnings in the HORECA industry in Bihor*, considering the rest of the independent variables remain constant. The increase with one unit of the last exogenous variable included in the equation, *the relative change of the number of active enterprises in Bihor in the HORECA industry*, could determine the biggest increase of *the relative change in the average monthly nominal net earnings in the HORECA industry in Bihor*, an increase with 1.058%, if the other exogenous variables remain constant.

obs	Actual	Fitted	Residual
2003 vs 2002	0.60377	0.49590	0.10787
2004 vs 2003	0.13235	0.19187	-0.05952
2005 vs 2004	0.25714	0.19527	0.06187
2006 vs 2005	0.05579	0.08575	-0.02996
2007 vs 2006	0.26027	0.22371	0.03656
2008 vs 2007	0.13199	0.25724	-0.12525
2009 vs 2008	0.08368	0.12812	-0.04445
2010 vs 2009	-0.07215	-0.10433	0.03218
2011 vs 2010	0.08458	-0.04906	0.13364
2012 vs 2011	0.02138	0.11703	-0.09565
2013 vs 2012	0.07759	0.07738	0.00020
2014 vs 2013	0.10857	0.07057	0.03800
2015 vs 2014	0.04845	0.08237	-0.03392
2016 vs 2015	0.13471	0.16463	-0.02992
2017 vs 2016	0.24263	0.21002	0.03262
2018 vs 2017	0.08159	0.10586	-0.02427

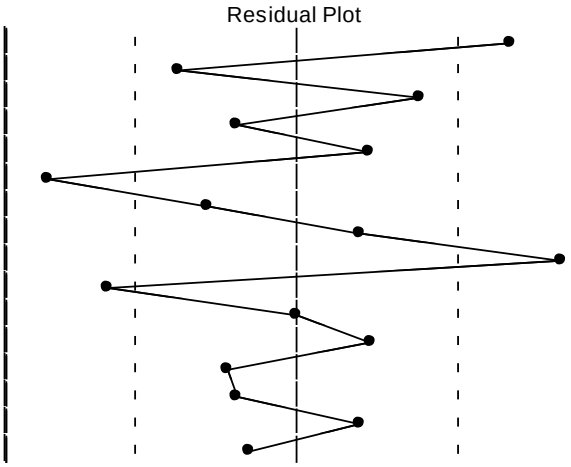
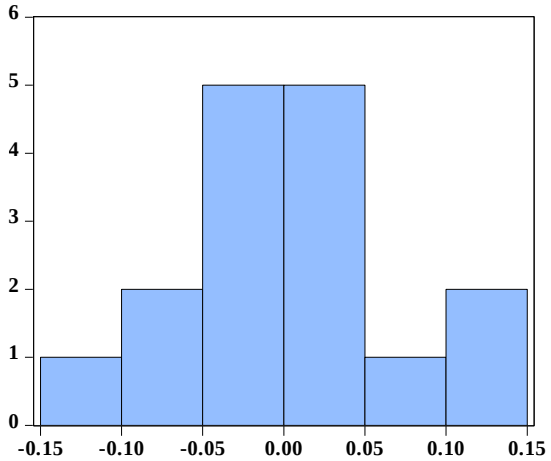


Figure 1: Residual Plot. Observations, Actual and Fitted Residuals
Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)



Heteroskedasticity Test: White
Null hypothesis: Homoskedasticity

F-statistic	0.638072	Prob. F(14,1)	0.7689
Obs*R-squared	14.38921	Prob. Chi-Square(14)	0.4211
Scaled explained SS	5.232540	Prob. Chi-Square(14)	0.9823

Figure 2: Residual Histogram. Heteroskedasticity Test: White
Source: Own conceptualisation (data extracted from Eurostat and The Romanian National Institute of Statistics and processed in EViews 10 Student Version Lite)

According to residual plot and histogram in Figure no. 1 and 2, if we look at the residual mean (zero), the residual distribution is normal. There is a very small tendency towards a positive asymmetry (the Skewness value is slightly above the ideal zero threshold), but we consider it acceptable. The Kurtosis value (2.538) confirms the normality in the residual distribution, also validated by the Jarque-Bera value, which is close to zero. Regarding the heteroskedasticity test (White), the Probability indicator has values above 0.05, which is desirable. The Prob. F indicator in the White test reflects the homoscedasticity of the residuals (due to the value 0.76 – above 0.05 limit), which is one of the characteristics of a normal residual distribution. In consequence, the normal distribution of the residuals and the results of the White test for heteroskedasticity demonstrate that the multiple linear regression model is valid.

4. Conclusions

The HORECA industry continues to evolve in order to ensure its economic sustainability in Romania, both nationally and locally. There are a lot of opportunities for increasing competitiveness in the industry, including in Bihor County. By considering the dynamics of the indicators specific to this field in the case of Bihor County, one cannot deny the continuous improvement process that takes place.

The main indicators analysed in this study refer only to the HORECA industry and to Bihor County: the average monthly nominal net earnings, the number of Oradea International Airport passengers, the turnover from the active local units, the number of active enterprises, the gross investments for tangible goods made by the active local units and the population working in the HORECA industry in Bihor County. Not all of the previously mentioned indicators have a normal distribution in time and are not stationary, so the data was transformed from absolute to relative, following the change in dynamics from one period to

another. This caused the distribution of the series to become normal or close to normal and stationary in time, which allowed the methodology of multiple linear regression (least squares method) to become applicable, so that the hypothesis of the research was validated. The average monthly nominal net earnings in the HORECA industry in Bihor County is strongly influenced by the series of previously mentioned indicators. The coefficient of determination indicates that the multiple linear equation successfully (78.89%) predicts the directions of influence between the variables. Out of all the indicators included in the multiple linear regression model, the increase with one unit of the relative change of the number of active enterprises in Bihor in the HORECA industry determines the biggest increase of the relative change in the average monthly nominal net earnings in the HORECA industry in Bihor, an increase with 1.058%, should the other exogenous variables remain constant.

According to the research findings, the average monthly nominal net earnings in the HORECA industry in Bihor County represents a key indicator for the local economy. A suggestion for local authorities is to stimulate the increase of enterprises in the HORECA industry, since this determines competitiveness and performance in the labour market, on one hand, and an increase of the quality of services in the industry, on the other hand.

Regarding the limitations of this research, the study can be improved by testing more variables in the model, so that it would follow the socio-economic reality more accurately. Further studies could include more variables such as: touristic accommodation capacity in Bihor County, the number of total tourists arrived in Bihor County, the number of overnight stays in Bihor County and others. Moreover, future studies can follow the methodological procedure carried out in this research, but applied on other counties.

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Bio-note

Simona Roxana Pătărlăgeanu is Associate Professor at the Bucharest University of Economics Studies, Faculty of Agri-Food and Environmental Economics. Her main areas of interest in research are: Econometrics, Marketing Management, Regional and Rural Development.
Marius Constantin is a final year master's student at the Bucharest University of Economics Studies, Faculty of Agri-Food and Environmental Economics. The author's disseration thesis is: "Econometric analysis of the relationship between the corruption perceptions index and other socio-economic indicators". His main areas of interest in research are: Econometrics, Marketing Management, Regional and Rural Development.
Mihai Dinu is currently Assistant Professor of Regional and Rural Development at The Faculty of Agrifood and Environmental Economics, The Bucharest University of Economic Studies. He is involved in a postdoctoral program in order to develop the zootechnical sector in the Romanian agriculture.