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INFLUENCE OF PROJECTS FINANCED BY THE REGIONAL OPERATIONAL PROGRAM ON THE ECONOMIC PERFORMANCE OF COMPANIES

Abstract. *Our research focuses on analyzing the medium and long-term evolution of the economic performance of companies that have benefited from grants under the Regional Operational Program implemented in the Central Region, Romania, in the financial programming period 2007-2013 (including the additional implementation period program 2014-2015). The aim of the paper is to identify the evolution trends of the economic performances obtained by the analyzed companies during the project implementation period (period extended with the sustainability period of the projects), respectively in the following period, when these companies were no longer monitored by representatives of the funding program. For a unitary analysis, there was chosen to be included in the analysis, the companies that implemented projects with non-reimbursable financing within the Regional Operational Program 2007-2013, respectively through Priority Axis 5 – Sustainable development and tourism promotion, Major field of intervention 5.2 – Creation, development, modernization of tourism infrastructure for capitalizing on natural resources and increasing the quality of tourism services in the Central Region. Particular attention was also paid to the indicators pursued by the program, including the evolution of the number of newly created jobs following the implementation of projects and their maintenance in the period following sustainability.*

Keywords*: regional development; economic performances; econometric model; Regional Operational Program, turnover evolution and influenced parameters.*

JEL Classification: D02, D22

1. Introduction

Balanced development on the medium and long term is the European Union's biggest challenge for the next period, along with ensuring cohesion and improving

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the living standards of all European citizens. Balanced development is supported through structural funds implemented by all Member States through regional development strategies designed and implemented at national level through operational programs. The role of these operational programs at national level is to help reduce regional and inter-regional development disparities, as well as to alleviate the unequal distribution of added value at territorial level and to support the development of regions and areas within less developed regions. The process of European integration is, essentially, a model of economic integration (Garrido et all, 2007; European Commission, 2014). The sustainable development of the European Union, as a whole, is a complex process that is influenced by a number of internal and external factors, this complexity being found at the level of each Member State and each region, thus highlighting all dependency relationships within European Union countries (Klasik, 2006; Mrozinska, 2017; Mach et all, 2021). In this context, the objective of this research refers to the analysis of the impact of regional financing of the tourism sector, the analysis being conducted at the level of the Central Region for projects financed through the Regional Operational Program, respectively the objectives pursued in its implementation for the financial programming period 2007-2013. Thus, the purpose of the analysis carried out in this article is to identify the impact of non-reimbursable financing on the economic efficiency of tourism companies in the Central Region, in the period after the project implementation and including period following the sustainability, when the evolution of these companies is no longer monitored by the funding bodies.

The Regional Operational Program has the role of implementing a part of the elements of the National Regional Development Strategy, respectively of the National Development Plan. Being one of the operational programs implemented at national level, it contributes to achieving the objective of the National Regional Development Strategy, respectively the National Development Plan and the National Strategic Reference Framework, namely reducing the economic and social development gaps between Romania and the average development of European Union's member states. The strategic objective of the Regional Operational Program is to support the economic, social, sustainable and territorially balanceed development of all regions of Romania, according to specific needs and resources. Particular attention is paid to supporting the sustainable development of urban growth poles, improving the business environment and basic infrastructure, to make the regions of our country, especially the least developed, attractive places for investment (MDRT, 2012).

In the implementation of the Regional Operational Program, the differentiated allocation of funds by regions was pursued, depending on the degree of their development and through a close coordination with the actions carried out within the other operational programs. Thus, the Regional Operational Program gave priority to lagging regions and less developed areas within more prosperous regions, as well as to the sustainable development of cities – seen as growth poles,

which can contribute to a polycentric development of Romania. In order to achieve the general objective of regional development, the strategy aimed at achieving the following specific objectives: (1) increasing the economic and social role of urban centers, through a polycentric approach, in order to stimulate a balanced development of regions; (2) improving accessibility in regions and in particular the accessibility of urban centers and their connections with surrounding areas; (3) increasing the quality of the social infrastructure of the regions; (4) increasing the competitiveness of regions as business locations; (5) increasing the contribution of tourism to the development of regions (MDRT, 2012).

The implementation of the Regional Operational Program as it is designed at national level, contributes to reducing interregional disparities as well as disparities within regions, between urban and rural areas, between urban centers and adjacent areas, and within cities, between areas attractive to investors and those unattractive, through better use of regional synergies. The aim is to support the balanced development of all regions of the country, based on an integrated approach, to ensure the combination of public investment in local infrastructure, active policies to stimulate business activities and support the use of local resources. During the analyzed period, the projects financed from the funds allocated within the Regional Operational Program for the financial programming period 2007-2013, were framed on the following thematic priority axes: Priority Axis 1 – Supporting the sustainable development of cities – urban growth poles; Priority Axis 2 – Improving regional and local transport infrastructure; Priority Axis 3 – Improving social infrastructure; Priority Axis 4 – Supporting the development of the regional and local business environment; Priority Axis 5 – Sustainable development and promotion of tourism; Priority Axis 6 – Technical Assistance.

This research is focused on the analysis of economic performance obtained at the regional level by companies operating in the field of tourism, following the implementation of projects financed from structural funds, respectively in Priority Axis 5 – Sustainable development and tourism promotion. The analysis includes both the period of implementation and sustainability of the monitored projects by the financing authorities, and especially the evolution of these companies in the subsequent period, when their activity was no longer monitored by the authorities with responsibilities in the field. The analysis was performed at the level of the Central Region of Romania.

2. Literature Analysis

Considering the national dimension, the Romanian economy is an integral part of the global economic system, and the international context is one of the key factors influencing the development of each national economy (Mobarak, H., 2018). The evolution of the Romanian economy and its dependence on cyclical evolution and development trends of the global system must be analysed in the context of international economic relations and international market conditions, including participation in the common market of the European Union and international trade

agreements. At the same time, the status of a European Union's member state with full rights since 2007, made it possible to attract in the Romanian economy and support and encourage economic development through the structural funds.

The status of European Union's member state, determined Romania to get focused not only on the discussions on the importance of sustainable development and regional development, but also on how to assess these concepts. Thus, summarizing the research conducted in this field, the competitiveness of a national economy and its development potential depend on public funds allocated at national level, respectively on structural funds allocated at Community level (Barska, A., 2020; Antonescu, D., 2014). In this context, supporting and stimulating regional development and smart sustainable development is the goal of structural funds (Mach L. et all, 2021; Di Mauro et all, 2008; Mayer-Stamer J., 2008).

The concept of development must be understood as representing any change in the economic and social system, while taking into account the impact of these changes on the environment. Thus, development refers to the quantitative, qualitative and structural transformations of the system, transformations that are irreversible (Caja, S., 1998, Di Mauro et all, 2008). At the macroeconomic level, regional development is analysed in terms of economic, institutional, demographic, natural and infrastructure indicators, including the living conditions of the inhabitants, respectively indicators on quality of life (Stawasz, D., 2004). Strategies at regional and national level are designed based on the evolution of these indicators. These strategies have the role of combining the use of public funds with structural funds with the aim of strengthening competitiveness at national and regional level (Klasik, A., 2006).

In this context, the concept of regional development must be analysed in close connection with the elements that define the potential of a development region. Thus, regional development depends on both a number of external and internal factors, the latter being those that can be capitalized at the regional level (Klasik, A., 2006, Mayer-Stamer, J., 2008). Regional development reflects the increase of competitiveness of companies operating regionally, improving the standard of living of residents, capitalizing on economic potential at the regional level, contributing to the economic and social development of the whole country (Szlachta, J., 1996).

The research conducted in this article aims to analyse the medium- and long-term evolution of companies that have benefited from grants under the Regional Operational Program implemented in the financial programming period 2007-2013 (including the additional period of implementation, the years 2014-2015). The purpose of the research is represented by the analysis of economic performance obtained by companies during the implementation of projects (implementation and sustainability period of projects, in which they were monitored by the Regional Development Agencies as Intermediate Bodies), respectively in the following period, when these companies were no longer monitored by representatives of the

financing program. For a unitary analysis, there were included in the analysis the companies that implemented projects with non-reimbursable financing through Priority Axis 5 of the Program. The objective of the priority axis, within which the analysed companies obtained financing, is to support the development of tourism, in the case of the analysed companies, at the level of the Central Region. The scientific approach is materialized in following the evolution of the economic indicators of the analysed companies, respectively the efficiency of the economic activity of these companies after the completion of the financing projects, including their sustainability periods. The purpose was to carry out an analysis that captures the efficiency of the economic activity of the analysed companies in the period when they are no longer monitored by financing authorities, respectively the appreciation of the medium- and long-term contribution of the Regional Operational Program according to the assumed objectives. Thus, the economic performances registered at the level of companies are analysed and their inclusion in the general objective of the program, respectively in this case of the priority axis, namely supporting the development of tourism in the Central Region, due to the potential of this activity to create regional economic growth opportunities locally and to contribute to the creation of new jobs by valorising the cultural and natural heritage. Also, special attention is paid to newly created jobs following the implementation of projects, respectively their maintenance in the period following the sustainability period. A special indicator in the newly created jobs program is the regional opportunity for female employment.

3. Methodology

During the analysis, information and data collected are referring to companies that have implemented projects with non-reimbursable funding within the Major Area of Intervention 5.2 – Creation, development, modernization of tourism infrastructure to capitalize on natural resources and increase the quality of tourism services in the Central Region. The analysis also aimed to identify correlation regarding the economic performance obtained on medium and long term by companies that have modernized their material base, ensuring, in this manner, the possibility of business development. In this sense, at the level of the analyzed companies the aim was to identify a correlation between the evolution of turnover (T) and the evolution of net profit (NP), the level of debt (D), fixed and current assets, as well as the number of employees for the companies included in the research. The identification of a correlation between these variables must be seen in the context in which the projects implemented through the analyzed financing axis aim in particular to support and develop the tourism activity by investing in the development of the material base of the beneficiaries, respectively the creation of new jobs and their long-term maintenance. Thus, the operations financed under this priority axis refer to the arrangement of natural tourist objectives with tourist potential, capitalization of mountain tourist potential, development of spa tourism, respectively creation, rehabilitation and expansion of leisure infrastructure,

including related utilities. Most of the projects implemented and included in the research were aiming at this last objective of the funding axis.

In this context, the research was conducted in order to identify correlations between the evolution of turnover and the evolution of net profit, debt level, fixed and current assets, as well as the number of employees at the level of tourism companies that obtained financing through the Axis priority 5 – Sustainable development and promotion of tourism, Major field of intervention 5.2 – Creation, development, modernization of tourism infrastructure for capitalizing on natural resources and increasing the quality of tourist services, at the level of the Central Region within the Regional Operational Program 2007-2013. In this sense, three hypotheses were formulated, based on which the research was developed. In addition to these hypotheses, additional research questions were established, which aim to identify the intensity of these correlations at the level of the two periods considered: (1) the period of project implementation and sustainability in which companies are monitored by the financing authority through the Intermediate Bodies, respectively (2) the period subsequent to the monitoring, during which the performances achieved by the analyzed companies were no longer monitored by the financing authority. The hypotheses and the additional research questions are the following:

Hypothesis H1. *The increase in net profit and debt is associated with an upward trend in turnover,* and the **Research Question 1** associated to H1: *How do the results of testing hypothesis 1 differ for the two periods considered (implementation and sustainability period of projects, respectively the subsequent period)?*

Hypothesis H2. *The company's assets (fixed assets – FAs and current assets – CAs) influence the size of turnover (T).*

In addition, it was intended to test the results for the two periods considered in the analysis, in order to determine whether there are significant differences for the implementation and monitoring period, respectively the subsequent period. Therefore, the following question was asked for research:

Research Question 2: *How do the results of H2 differ for the two periods (implementation and sustainability period of projects, respectively the subsequent period)?*

Hypothesis H3. *Equity and number of employees (Eq, Emp) influence the size of turnover (T),* with its components: **H3.1**: *Increasing equity leads to a higher value of turnover* and **H3.2**: *Increasing the number of employees will contribute to a higher turnover.* The following additional research questions associated with hypothesis H3 are also formulated here: ***Research Question 3.1.*** *How do the results of testing H3.1 differ for the two periods (implementation and sustainability period of projects, respectively the subsequent period)?* ***Research Question 3.2.*** *How do the results of testing H3.2 differ for the two periods (implementation and sustainability period of projects, respectively the subsequent period)?*

A similar research technique was used by Hada et all to investigate how some macroeconomic determinant factors affects the rate of nonperforming loans (Hada et all, 2020).

For the analyzed period, 11 projects were implemented by 11 beneficiary companies. The economic and financial information on their activity for the period 2005-2019 was taken from the official website of the Public Finance Administration and used in research and analysis without associating the names of companies, as the analysis is intended to be an objective that surprises the overall evolution of companies operating in the field of tourism, and not to highlight the economic performance obtained by a particular entity.

3.1. Descriptive statistics

As first step, we proceed *to a short descriptive statistic of the level* of the turnover (T) as shown in Table 1. As we can see, for all the 11 analyzed companies, the mean values of the turnover increased significantly in the period following the implementation of the projects.

Table 1. The average values of the turnover (T) before and after the implementation of the projects

Company	T before implementation and sustainability	T after implementation and sustainability	T for the whole 2005-2019 period
F1	1 122 944	2 323 937	1 843 540
F2	42 323 318	48 399 848	44 348 829
F3	3 965 175	6 086 129	4 773 826
F4	15 858 218	4 171 512	11 962 650
F5	1 167 412	7 414 003	4 523 208
F6	3 311 444	3 420 140	3 376 662
F7	495 880	2 214 024	1 708 510
F8	539 864	9 135 449	4 530 351
F9	1 673 265	10 900 650	6 874 187
F10	266 649	782 528	473 001
F11	8 068 530	15 608 574	11 587 217

The standard deviation is a number that tells us how far numbers are from their mean. (Table 2). In our case, the high values of the standard deviations confirm that the considered companies do not have similar values of the turnover, i.e. among them are companies with high turnover, but some with low turnover. The average value of turnover for the entire period is 8,727,453 lei, the lowest value being 473,001 (for company F10), and the highest 44,348,829 (for F2). Before accessing European funds, the turnover has an average value of 7,162,973, increasing to 10,041,527 in the following period, after the end of the implementation and sustainability period. We also notice that even the lowest average turnover triples after using European funds. It is not difficult to see that the difference between the recorded mean for the analyzed companies during the implementation and sustainability period, compared to the subsequent period

analyzed in terms of turnover is significant, being a good argument to perform a separate analysis of turnover for these two sub-periods in order to explain this variation.

Table 2. Some statistical values for T considered over the two subperiods during 2005-2019

Period	Mean	Std. Dev.	Min.	Max.
Implementation and sustainability period	7 162 973	12 554 593	266 649	42 323 318
Post-sustainability period	10 041 527	13 458 532	782 528	48 399 848
The whole period	8 727 453	12 390 743	473 001	44 348 829

3.2. Testing hypotheses and research questions

Now we are going *to test the working hypothesis* and the *appropriated research questions (H1, RQ1; H2, RQ 2; H3.1, RQ3.1, H3.2, RQ3.2).* Testing the **Hypothesis H1**. *The increase in net profit and debt is associated with a trend of increasing turnover*, and the **Research Question 1**: *How do the results of testing hypothesis 1 differ for the two periods considered (the period of implementation and sustainability of projects, respectively in the subsequent period)?* involves the analysis of Tables 3 and 4. **Correlation** is used to measure strength of the relationship between two variables. It can be positive, negative or zero. The correlation coefficient may take on any value between +1 and -1. **A correlation matrix** is a table showing correlation coefficients between sets of variables. Each random variable (X_i) in the table is correlated with each of the other values in the table (X_j). In Table 3, the pairwise correlations of the Turnover (T), Net Profit (NP) and Debt (D) variables for the entire considered period and for each of its two parts: before and after the implementation of the projects. For the 11 companies, a total of 160 annually measured values, 82 of them being in the first part of the period, respectively the period of project implementation and sustainability, and 78 after.

Table 3. Correlation matrix between T, NP and D

	Implementation and sustainability period			**Post-sustainability period**			**The whole period**		
	T	NP	D	T	NP	D	T	NP	D
T	1			1			1		
NP	0.1001	1		0.6095	1		0.3654	1	
D	0.9356	-0.0786	1	0.7481	0.0692	1	0.8610	-0.0072	1

A very weak correlation was identified between T and NP (coef. = 0.101) for the period of implementation and sustainability of the projects, this being much stronger in its subsequent period (coef. = 0.6095). This aspect must be interpreted in the context in which the companies that have implemented projects financed from priority axis 5, intervention area 5.2 focused in particular on investments in the development and modernization of material bases in order to increase the capacity to provide specific services. The investments proposed to be made through

the projects that have been selected for financing are the majority of large-scale investments that involve their realization. This explains why the correlation between turnover and net profit is weak during the project implementation period. At the end of the implementation of the projects, the investments had to be completed and become functional, respectively to be introduced in the service provision process, which thus explains the intensification of the correlation between turnover and net profit. The economic performances of the companies registered in the subsequent period correspond to the general objective of the program, namely to support the development of tourism at regional level, revealing economic indicators with long-term growth trend, which validates the objective assumed by the program implementation strategy at regional level, which is to capitalize the potential of this economic activity to create opportunities for regional and local economic growth, also contributing to the creation of new jobs. The situation between the debts of the companies and the turnover is exactly the opposite. Thus, if the turnover was strongly influenced by the level of debt during the project implementation period (coef. = 0.9356), after the implementation and sustainability, the correlation between the two became less intense (coefficient = 0.7481). We also note that if, in the period of implementation and sustainability of projects, the influences of these two characteristics of business (net profit and debt) were at a great distance, in the second period they are almost equal. The evolution of the correlation between debts and turnover highlights the pressure that the implementation of projects exerts on companies. This influence is due to the fact that contractors must comply with the timetable for the implementation of project activities, timetable assumed by submitted projects and signed financing contracts. Additionally, the pre-financing that could be requested from the eligible value of the project, was a maximum of 10% of the amount. It should also be mentioned that, and most of the time, each project has associated also non-eligible expenses that are fully borne by the beneficiaries, expenses that must be made to ensure the implementation of the projects undertaken. In statistical modelling, **regression analysis** is used to estimate the relationships between two or more variables. Regression analysis helps us understand how the dependent variable changes when one of the independent variables varies and allows to mathematically determining which of those variables really has an impact. In Table 4 the linear regressions between government turnover (T) and the two variables that influence it (NP and D) for the entire period and separately for its two subperiods are presented.

Table 4. Linear regression between T, NP and D

	Implementation and sustainability period			**Post-sustainability period**			**The whole 2005-2019 period**		
T	Coef.	T-st.	P-val.	Coef.	T-st.	P-val.	Coef.	T-st.	P-val.
NP	1.6896	5.04	0.0000	2.8629	13.54	0.0000	2.42	13.01	0.0000
D	0.6800	27.42	0.0000	0.4969	17.14	0.0000	0.5847	30.68	0.0000
	R-squared = 0.9058			R-squared = 0.8722			R-squared = 0.8755		

From table 5, we can find a linear relationship between T and the two independent variables considered (NP and D), statistically significant at a significance level of 1% (P-value = 0.0000), for all periods considered. The signs of the NP and D coefficients are the expected ones, being positive in all situations. For each period we observe high values for the R-squared indicator (over 0.87), which means that the proposed linear model is very representative for the connection between T and the two independent variables. In conclusion, according to our calculations, net profit and debt are two representative components of the factors influencing CA, with a significant impact on the size of turnover in each of the periods considered. Therefore, hypothesis H1 is valid.

As regards the results on the two subperiods, from Table 4 we can find they differ to a certain degree. According to these calculations, we notice that the influence of debt on turnover is higher in the period of implementation and sustainability of projects (coefficient = 0.68) than in the subsequent period (coefficient = 0.49). Things are exactly the opposite in the case of net profit. In both cases the multilinear relationship is statistically significant, with high values for R-squared confirming this.

The results obtained must be interpreted in the context in which the entrepreneurs, in order to ensure the implementation of the projects, must make sustained efforts to ensure the cash flow for carrying out the activity under normal conditions. Thus, they must ensure the realization of the investments assumed by the financed projects, in the conditions in which it goes on the system of reimbursement requests, which involve the advancement of the necessary amounts from own or attracted resources (these most often having associated costs), following, that they would be recovered after the validation of the expenditure incurred by the intermediate bodies. This situation improves after the completion of the project implementation, respectively after the exit of the companies from the sustainability period when the pressure to ensure the co-financing, respectively the cash flow necessary for the investment are disappearing, and the companies carrying out their activity using the operational investments resulted through the projects implementation.

Hypothesis H2. *The company's assets (fixed assets – FA and current assets – CA) influence the size of turnover (T).* In addition, we intend to test whether the results differ significantly for the implementation and sustainability period of the projects compared to the subsequent period. Therefore, we will consider the following research question: **Research question 2.** *How do the results of Hypothesis H2 differ for the two periods (the period of implementation and sustainability of the projects, respectively in the subsequent period)?*

Table 5. Correlation matrix between T, FA and CA

	Implementation and sustainability period			Post-sustainability period			The whole 2005-2019 period		
	T	FA	CA	T	FA	CA	T	FA	CA
T	1			1			1		
FA	0.8942	1		0.9070	1		0.8842	1	
CA	0.6524	0.4570	1	0.6225	0.5039	1	0.6401	0.4631	1

Very strong correlations were identified between the turnover and the fixed assets, almost equal for the two periods, the difference between them being 0.0128. The difference of correlations between the turnover and the current assets is not very big either, but still a slightly more intense connection is observed between T and CA for the first period (coef. = 0.6524) compared to the second (coef. = 0.6225). After the implementation of the projects and the end of the sustainability monitoring period, the correlation between the two became less intense (coefficient = 0.7481). We also notice that, both before and after the implementation of the projects, the influence of FA is greater than that of CA. This is explained by the specifics of the investments included in the financed projects presented above, as in this field of activity the impact of the material base, respectively of the fixed assets, in the quality of the services provided and on the capacity to provide services, is major.

Table 6 presents the linear regressions between turnover (T) and fixed assets (FA) and current assets (CA) both for the entire period and separately for its two subperiods. We can observe a multilinear relationship between CA and the two independent variables considered (FA and CA) statistically significant at a significance level of 1% (p = 0.0000), for all periods considered. The signs of the coefficients of FA and CA are the expected ones, being positive in all situations.

Table 6. Linear regression between T, FA and CA

	Implementation and sustainability period			Post-sustainability period			The whole 2005-2019 period		
T	Coef.	T-st.	P-val.	Coef.	T-st.	P-val.	Coef.	T-st.	P-val.
FA	0.2891	16.83	0.0000	0.2132	15.86	0.0000	0.2402	21.43	0.0000
CA	0.9116	6.88	0.0000	0.7361	4.423	0.0000	0.9066	8.40	0.0000
R-squared = 0.8747				R-squared = 0.8594			R-squared = 0.8496		

For each period we observe high values for the R-squared indicator (over 0.849), which means that the proposed linear model is very representative for the connection between the T and the two independent variables. In conclusion, according to our calculations, fixed assets and current assets are representative components of the factors that influence turnover, with a significant impact on its size in each of the considered periods. Therefore, Hypothesis H2 holds.

The validation of this hypothesis must be seen in the context in which the projects implemented through the analyzed financing axis aim in particular at supporting and developing the tourism activity through investments in the development of the material base of the beneficiary companies.

Hypothesis H3. *Equity and the number of employees (Eq, Emp) influence the size of turnover (T)*, with its components: **H3.1** *Increasing equity leads to higher turnover.* **H3.2** *Increasing the number of employees will lead to a higher turnover.*

The following additional questions also appear here: **Research question 3.1.** *How do the results of testing hypothesis H3.1 differ for the two periods (the period of implementation and sustainability of projects, respectively in the period after it)?* **Research question 3.2.** *How do the results of testing hypothesis H3.2 differ for the two periods (the period of implementation and sustainability of the projects, respectively in the period after it)?*

Table 7. Correlation matrix between T, Eq and Emp

	Implementation and sustainability period			**Post-sustainability period**			**The whole 2005-2019 period**		
	T	Eq	Emp	T	Eq	Emp	T	Eq	Emp
T	1			1			1		
Eq	0.8478	1		0.9223	1		0.8378	1	
Emp	0.9555	0.8454	1	0.9072	0.8070	1	0.9275	0.7239	1

From table 7 we observe that there are high levels of correlation coefficients between T and Eq and Emp, both for the whole period and for the two parts of it, results that do not raise any question about the validity of Hypotheses H3.1. and H3.2. We notice a stronger link between the number of employees and the turnover for the period of implementation and sustainability of the projects, compared to the subsequent period. Table 8 presents the linear regressions between T and the two independent variables Eq and Emp, for the whole period and also for its components. From here we find a linear relationship between T and each of the two independent considered variables (Eq and Emp), both models being statistically significant at a significance level of 1% (p value = 0.0000), for all the considered periods.

Table 8. Linear regression between T, Eq and Emp

	Implementation and sustainability period			**Post-sustainability period**			**The whole 2005-2019 period**		
T	Coef.	T-st.	P-val.	Coef.	T-st.	P-val.	Coef.	T-st.	P-val.
Eq	0.6294	14.30	0.0000	0.3398	20.81	0.0000	0.4147	19.29	0.0000
Emp	155069.8	28.99	0.0000	198501.1	18.80	0.0000	165667	31.20	0.0000
R-squared (Eq) = 0.7188				R-squared (Eq) = 0.8507			R-squared (Eq) = 0.7020		
R-squared (Emp) = 0.9131				R-squared (Emp) = 0.8230			R-squared (Emp) = 0.8603		

The signs of the Eq and Emp coefficients are positive in all situations, which means that an increase in the values of the two variables will positively influence the turnover. For each period we observe high values for the R-squared indicator, hence the proposed linear model is representative for the connection between the T and the two independent variables, especially for Eq with the number of employees. Therefore, hypothesis H3 is valid. About finding the answers to questions RQ3.1 and RQ3.2, we also used the data from tables 7 and 8. We observe an increase in the correlation coefficient (presented in table 7) between T and equity during the implementation and sustainability of projects (coef. = 0.9223) compared to the subsequent period (coef. = 0.8478). This means that after the end of the project sustainability period, the equity contribution is more efficient than before.

The same increase in productivity is confirmed by the relationship between T and the number of employees (Emp). As mentioned before, in Table 8 we see a stronger connection between the number of employees and turnover for the period of implementation and sustainability of projects, compared to the subsequent period. This is also confirmed by the coefficients of the Emp variable in the linear regression model (Table 9). Thus, we notice that the contribution of an employee to the turnover is higher by almost 30% after the implementation of the projects (coef. = 198501.1) than before (coef. = 155069.8).

4. Results, discussions and conclusions

The implementation of the projects implies the assumption by the beneficiaries, respectively by the entrepreneurs, of the responsibility to develop the business. Thus, entrepreneurs must pay more attention to the development strategy of companies, taking into account the obligations assumed by financing contracts to maintain jobs, to create new jobs, and thus to develop the entire company. The objective of the priority axis, within which the analyzed companies obtained financing, is to support the development of tourism, in the case of the analyzed companies, at the level of the Central Region. The evolution of the economic indicators of the analyzed companies is analyzed from the perspective of its efficiency after the completion of financing projects, including after the end of sustainability periods, in which companies are monitored by intermediate bodies, in this case, the Agency for Regional Development – Central Region.

The results obtained after analyzing the economic performance of the companies included in the research, correspond to the general objective of the program, respectively in this case of the priority axis, to support the development of tourism at regional level due to the potential of this activity to create regional and local economic growth contributes to the creation of new jobs by capitalizing on the cultural and natural heritage. It should also be noted that a significant part of the newly created jobs represented a regional opportunity for female employment. The results of the analysis performed reveal an inverse situation, regarding the analysis of the intensity of the connection between the debts of the companies and the

turnover achieved by each of them. Thus, if the turnover was strongly influenced by the level of debt during the implementation and sustainability of the projects, later, in the subsequent period, the correlation between the two variables became less intense. The influence of the evolution of the debts on the turnover highlights the pressure exerted by the implementation of the projects on the companies. This is due to the fact that contractors must comply with the implementation schedules of project activities undertaken through submitted projects and signed financing contracts, provided that the pre-financing that can be requested is a maximum of 10% of the eligible value of the financing contract and most of the times each project has associated and ineligible expenses that are fully borne by the beneficiaries for the implementation of the assumed project.

The analysis of net profit reflects an inverse situation to the situation of debt influence on the turnover presented above. Thus, in both cases the correlation between the evolution of net profit and turnover is statistically significant, the values obtained confirming this. This aspect brings into question the efforts sustained by the entrepreneurs for the implementation of the projects, respectively for ensuring the cash flow that would allow them to make the assumed investments, which in most cases come with associated costs. This situation improves after the implementation of the projects, respectively after the exit of the companies from the sustainability monitoring period when the pressure of ensuring co-financing, respectively of the cash flow necessary for the investment disappears, and the companies carry out their activity using the investments made and put into operation, following the implementation of projects. The validation of the last hypothesis must be seen in the context in which the projects implemented through the analyzed financing axis aim in particular at supporting and developing the tourism activity through investments in the development of the material base of the beneficiaries. Thus, the operations financed under the financing axis refer to the arrangement of natural tourist objectives with tourist potential, capitalization of mountain tourist potential, development of spa tourism, respectively creation, rehabilitation and expansion of leisure infrastructure, including related utilities. Most of the implemented projects aimed at this last objective of the financing axis, aspect confirmed by the results obtained in terms of the correlation between the evolution of fixed assets and current assets with turnover.

Particular attention must be paid to the analysis of the link between turnover and the number of employees. The data obtained show that the number of employees and equity are representative factors, which are influencing the turnover, with a significant impact on its size in each of the two periods considered. Thus, the analyzed hypothesis is valid. The results show an increase in labor productivity, confirmed by the relationship between turnover and the number of employees. It is important to mention the increase of an employee's contribution to the turnover by approximately 30% after the end of the implementation and sustainability period of the projects, compared to the previous period.

The Regional Operational Program achieves its long-term goal and objectives, the research proving that the economic performance of companies improves and has positive trends in the period after the completion of sustainability. This research was carried out objectively, being collected official information on the evolution of the main economic and financial indicators of the activity of the analyzed companies until the level of 2019 inclusive. Moreover, within the analyzed companies, the conclusions are valid regardless of the size of the companies, the hypotheses formulated being valid for small, medium and large companies. A direction for further research in this field is the analysis of the impact of the restrictions imposed by the pandemic, especially in the tourism sector, for companies participating in the research, followed by a qualitative analysis to identify the motivations of managers of these entities, respectively solutions that were identified for the activity reopening in the field of tourism, at the level of Central Region, Romania.

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REFERENCES

[1] **Antonescu, D. (2014),** ***Regional Development Policy in Context of Europe 2020 Strategy.*** *Procedia Econ. Finance 2014,* 15:1091–1097;
[2] **Barska, A.; J˛edrzejczak-Gas, J.; Wyrwa, J.; Kononowicz, K. (2020),** ***Multidimensional Assessment of the Social Development of EU Countries in the Context of Implementing the Concept of Sustainable Development.*** *Sustainability,* 12:7821;
[3] **Brzakova, K., Simanova, J. (2014),** ***Evaluation of the Implementation of Selected Regional Operational Programs with a Focus on Public Projects Economic Efficiency.*** *Proceedings of the 2nd International Conference on European Integration 2014 (ICEI 2014),* ISBN 978-80-248-3388-0, Ostrava, Czech Republic, 51-58;
[4] **Bruzkova, P. (2014),** ***Selected Instruments of Support for Tourism in the South Bohemia Region.*** *17th International Colloquium on Regional Sciences;* ISBN978-80-210-6840-7, Hustopece, Czech Republic, 817-823;
[5] **Czaja, S. (1998)** ***Etropijno-energetyczna analiza procesów gospodarczych. Kierunki rozwoju analizy enegetycznej.*** *Ekonomia i Srodowisko 1998,* 2:9–20;

[6] **Di Mauro, F.; Dees, F.; McKibbin, W. (2008),** ***Globalisation, Regionalism and Economic Interdependence.*** *Cambridge University Press: Cambridge, NY, USA;*
[7] **European Commission. (2014).** ***General Union Environment Action Programme to 2020: Living Well, within the Limits of Our Planet.*** *Brussels: European Commission;*
[8**] Florian M. (2020),** ***Territorial Distribution of Projects Contracted at the Level of Cohesion Policy 2014 – 2020,*** *Economics of Agriculture,* 67(1):107-124;
[9] **Garrido R., Mancha T. & Cuadrado, J.R. (2007),** ***Regional and Cohesion Policy in the European Union: Twenty Years of Progress and a New Future.*** *Regional Investigations,* 10:239-266. [in Spanish: La política regional y de cohesión en la Unión Europea: veinte años de avance y un futuro nuevo. Investigaciones Regionales];
[10] **Gavrila-Paven, I. (2020),** ***Determining International Competitiveness through Comparative Advantage at Regional Level – Instrument in Designing Regional Strategy. Study Case: Central Region, Romania,*** *2020 BASIQ International Conference: New Trends in Sustainable Business and Consumption,* ISSN2457-483X, Messina, Italy, p. 618-625;
[12] **Hada, T., Bărbuță-Mișu, N., Iuga, I.C., Wainberg, D. (2020),** ***Macroeconomic Determinants of Nonperforming Loans of Romanian Banks.*** *Sustainability, 12:*7533;
[13] **Harasimowicz, A. (2015),** ***Role of the Regional Operational Programme of the Podlaskie Voivodeship in Shaping of the Environment of the Region.*** *Ekonomia I Srodowisko-Economics and Environment,* 2 (53):40-49;
[14] **Hedvicakova, M., Caslavska, M. (2009),** ***Solution of the Regional Disparities – The Regional Operational Programme NUTS II Northeast,*** *International Scientific Conference on Hradec Economical Days 2009 - Economic Development and Management of the Region,* ISBN978-80-7041-455-2, Hradec Kralove, Czech Republic, p. 145-+;
[15] **Klasik, A. (2006),** ***Przedsiebiorczosc i konkurencyjnosc a rozwój regionalny-wprowadzenie. In Przedsiebiorczosc i konkurencyjnosc a rozwój regionalny.*** *Klasik, A., Ed.; Akademia Ekonomiczna im. Karola Adamieckiego w Katowicach:* Katowice, Poland, p. 598;
[16] **Mach, Ł.; Bedrunka, K., Dabrowski, I.; Fracz, P. (2021),** ***The Relationship between ROP Funds and Sustainable Development – A Case Study for Poland.*** *Energies*, 14:26-77;
[17] **Mayer-Stamer, J. (2008),** ***Systematic Competitiveness and Local Economic Development. In Large Systematic Change: Teories;*** *Bodhanya, S., Ed.; Modelling and Practices;* Mesopartner: Duisburg, Germany, p. 7;
[18] **Mobarak, H.; Murshed, N. (2018),** ***Antoine Augustin Cournot: The Pioneer of Modern Economic Ideas.*** *MPRA Paper;* University Library of Munich: Munich, Germany;

[19] **Mrozinska, A. (2017),** ***Struktura oraz skutecznosc pozyskiwania srodków na projekty unijne realizowane w miastach wojewódzkich w perspektywie 2007-2013/Structure and effectiveness of obtaining funds on the EU projects implemented in Polish voivodeship cities in the perspective.*** Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, 467;
[20] **Popescu, V.I., Georgescu, B., Albastroiu, I., Popescu, L. C. (2020),** ***The Importance of the Regional Operational Program in the Regional Development of Romania,*** 2020 Basiq International Conference: New Trends in Sustainable Business And Consumption, ISSN2457-483X, Messina, Italy, p. 439-446;
[21] **Ramajo, J., Márquez, M., Hewings, G. & Salinas, M. (2008),** ***Spatial Heterogeneity and Interregional Spillovers in the European Union: Do Cohesion Policies Encourage Convergence across Regions?*** *European Economic Review,* 52:551–567;
[22] **Sokolowska-Wozniak, J., Wozniak, D. (2016),** ***The Comparison of Funds Allocation under the Regional Operational Programmes in 2007-2013 and 2014-2020 Programming Periods;*** Business and Non-Profit Organizations Facing Increased Competition and Growing Customers' Demands, VOL 15, ISBN978-83-65196-35-4, Nowy Sacz, Poland, p. 251-267;
[23] **Srankova, V. (2014),** ***Regional Disparities in Use of Funds From Operational Program Environment in the Czech Republic,*** 17th International Colloquium on Regional Sciences, ISBN978-80-210-6840-7, Hustopece, Czech Republic, p. 417-424;
[24] **Stawasz, D. (2004),** ***Gospodarka regionalna—Teoria i praktyka. In Ekonomiczne i Organizacyjne Uwarunkowania Rozwoju Regionu—Teoria i Praktyka;*** Wydawnictwo Uniwersytetu Łódzkiego: Lodz, Poland, p. 58;
[25] **Szlachta, J. (1996),** ***Główne problemy polityki rozwoju regionalnego Polski na przełomie XX i XXI wieku. In Strategiczne Wyzwania dla Polityki Rozowju Regionalnego Polski;*** Broszkiewicz, R., Ed.; *Friedrich-Ebert-Stiftung:* Warsaw, Poland;
[26] **Vystoupil, J., Sauer, M., Repik, O. (2010),** ***Regional Operational Programme as a Tool for Support of Tourism Develompent in the South-East Region (Period 2007-2010),*** 13th International Colloquium on Regional Sciences, ISBN 978-80-210-5210-9, Boretice, Czech Republic, p. 373-391;
[27] **Vystoupil, J., Vesely, R. (2016),** ***Tourism Support from ROP Southeast in Years 2007-2015,*** 19th International Colloquium on Regional Sciences, ISBN 978-80-210-8273-1, Cejkovice, Czech Republic, p. 946-953;
[28] **Guvernul României, Ministerul Dezvoltarii Regionale si Turismului (2012) Ghidul Solicitantului – Axa prioritară 5** – Dezvoltarea durabilă şi promovarea turismului, Programul Operaţional Regional 2007-2013.