FINANCIAL SUSTAINABILITY FOR ROMANIAN COMPANIES - EUROPEAN STRUCTURAL FUNDS BETWEEN INTER-REGIONAL COHESION OR DIVISION? PART I

Laurentiu Droj[1], Ioan Gheorghe Tara[1], Gabriela Droj[2]
[1]*University of Oradea, Faculty of Economic Sciences, Finance and Accounting Department, Oradea, Romania*
[2]*University of Oradea, Faculty of Building Construction, Cadastre and Architecture, Cadastre and Architecture Department, Oradea, Romania*
Laurentiu.droj@gmail.com
itara@uoradea.ro
ggdroj@gmail.com

Abstract: *The current article it is the first part of a study which is focusing on analysing the effects financial sustainability and efficiency, if these are influenced by EU funding. Since the issue of financial sustainability and efficiency in usage of European funding has again came into the attention of both the public and specialists. The main goal of the current paper is to study statistically if SMEs projects financed from European Union Structural Funds are sustainable and if these projects are having a net positive impact over their beneficiaries. In the same time, the article tackles the dilemma between cohesion, convergence and economic competitiveness. The current research was realized by analysing if inter-regional development differences are important or not, when accessing European funds. The case study is using data which was collected from the Government reports and EU statistical databases and it is only focusing Romanian SMEs located in the North-Western region of Romania. This region was selected since it is a mixt developed region with a huge economic contrast between well developed and lesser developed counties. These companies contracted development projects co-financed under the Regional Operational Programme. Taking into consideration the goals of this study the authors decided to use for its first part only corporate finance and statistical methods of analysis. The study concentrated over the evolution of several financial and economic indicators such as: Return on Equity, Economic efficiency, Number of employees and Solvency. The selected period is 2009-2015 in order to analyse the financial information published before and after the implementation of the investment projects. The article also will compare head to head the results in different counties of the above mentioned indicators and also will pair them for a much easier analysis: solvency vs value of fixed assets and economic efficiency vs number of employees.*

Keywords: *SME; Financial analysis; Absorption capacity; Foreign Aid; Efficiency; European structural Funds; Cohesion policy; economic efficiency.*

JEL classification: *F35; F36; G30; C58; D61; O16; R15.*

1. Introduction

The topics regarding the financial sustainability and efficiency for the usage of the financial aid provided by the European Union through its Structural Programs have again(in 2013-2016) came under closed scrutiny by both researchers and policy makers. The focus over the issues of absorption capacity and efficient

usage of European Structural Funding has been increased in 2016, since this year is the last year of implementation for the period 2007-2013 and, in the same time, it's the year when most of the calls for projects belonging to the 2014-2020 European Structural Funds programming are launched.
Over the last 20 years, many authors analysed the impact and efficiency of foreign aid programs over different economies. The opinions were diverse, starting from strong supporters of foreign aid such as Sachs (2005), Barry et all (2005) or Woods (2009) which consider that the effects of foreign aid are mostly positive with clear effects over economic development, reduction of discrimination, poverty reduction, so on. Critical, but moderate opinions can be found in the writings of authors such as Stuckler and Basu (2010), Easterly (2003, 2006, 2009) which recognize the role of foreign aid but also doubt the methods through which the foreign aid system is implemented or its sustainability. On the other side, authors such as Moyo (2009) pose radical opinions against foreign aid since she is considering the foreign aid as "the perfect way to keep an inefficient or simply bad government in power" and also considers that "the aid system encourages poor-country governments to pick up the phone and ask the donor agencies for next capital infusion".
But, when analysing foreign aid system all over the world, some of the specialists like Shleifer (2009) and de Renzio (2011) recommend that the foreign aid programs operating in Africa, Asia or Latin America should be restructured and should take the model of European Structural Funds.
In the same time, we have found no approaches regarding the investigation of the absorption capacity, sustainability and efficiency of the SMEs programs, financed through EU funds and which must have a significant impact over the cohesion targets, since the indicators of the cohesion targets are based on economic development, jobs creation and increased competitiveness.

2. Assessing the sustainability and efficiency of European funding allocated towards the SME sector

The main questions which were raised after reviewing the relevant literature and which were at the basis of selecting the elements of the case study were:

- Are the SME projects financed from European Union Structural funding sustainable and efficient? Are they having a net positive impact over their beneficiaries?
- Can we establish a link between the efficiency of accessing European funds and the economic development of certain regions? Are the inter-regional development differences important when assessing efficiency of European funding?

Taking into consideration the above-mentioned factors the authors focused on analyzing the usage efficiency of the European funds, as well. First, similar case studies have been under a process of selection and valuation. The case studies are from new member states and from old member states, as well. The first conclusion, after analyzing these studies, was that in the last years, the studies regarding the efficiency of using European funding in order to increase the cohesion were mainly national or regional studies. In the recent years flourished the studies regarding the efficiency for usage of European funds at the level of a country or at a level of a specific region: Mirošník K., Petkovová L. and Čadil J.

(2014), Daszuta, A. (2005), Sumpikova et all (2003) Bourdin (2012) or Ramajo et all (2014).
The case study will be focused over several indicators which can prove the programme sustainability, are relevant at the level of SME analysis and also have a close link with the absorption capacity. The indicators selected for analysis were:

- Productivity Analysis
- Job creation
- Business Efficiency:
  - Return on Equity
  - Solvency

- *Productivity analysis indicator* has the goal to analyze the efficiency of production or the efficiency of usage one or more factors in order to create wealth for the company. From the numerous models of productivity analysis we choose: the average productivity ratio.

$$Pr=\frac{\text{Net Revenues}}{\text{Number of employees}}$$

- *General solvency ratio* was chosen to reflect the ability of the beneficiaries to cover the total debt out of the total assets held in property. Solvency it is generated by an efficient activity and ability to pay. Increase in the results of this indicator should be realized since the companies implemented projects financed with non-reimbursable aid.

$$Rsv=\frac{\text{Total Assets}}{\text{Total Liabilities}}$$

- *Return on Equity* **–** measures the company's ability to make profit from the usage of its own capital. This rate should register values above the average bank interest rate in order for a business/a company to be considered profitable.

$$ROE=\frac{Net\ income(After\ tax)}{Shareholder\quad Equity}\times 100$$

3. Identification and construction of the case study (Phase I)

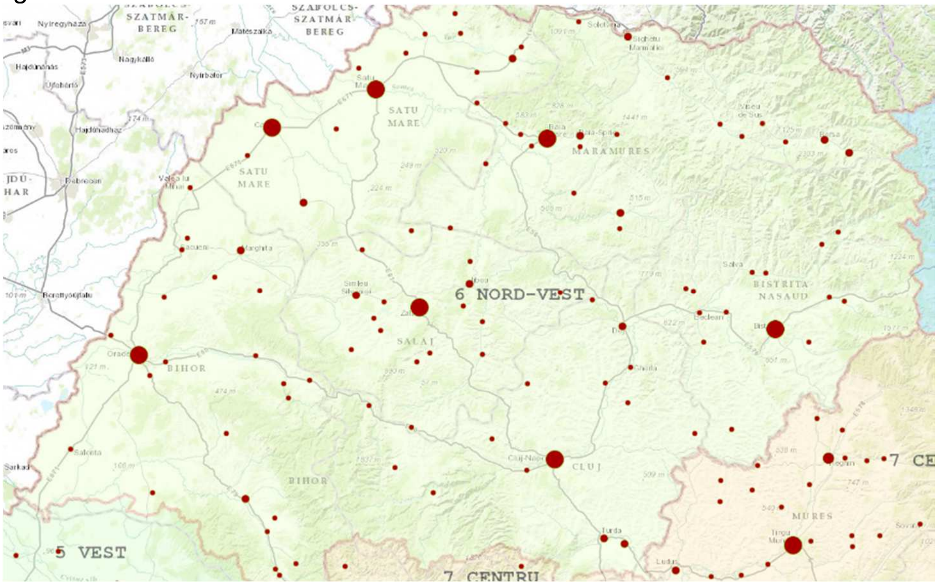
The case study was constructed using data which was provided by the Romanian Ministry for European Funding and was compared with data provided by Ministry of Regional Development and by the Ministry of Finance. Since the current analysis wants to study the efficiency of SMEs financing programs in the North Western region of Romania the analysis was concentrated on the most common SME financing program: the Regional Operational Programme operating in Romania in the period 2007-2013.
The region taken into consideration for this study is the North-Western region of Romania (NUTS 2) and is considered a highly dynamic region, having a surface of 34,159 sqkm, accounting for 14.3% of the total surface of the country and being inhabited by 2,7 million inhabitants. The region comprises six counties (NUTS 3): Bihor, Bistrița-Nasaud, Cluj, Maramures, Satu Mare and Salaj.
The region was selected since, according with the official data, the region has a great economic discrepancy between the counties of Cluj and Bihor, which are

more developed, and the counties of Salaj and Bistrita Nasaud which are considered less-developed. As observed from the statistical data the counties of Cluj and Bihor have the biggest GDP levels and the lowest unemployment from the region. The counties of Maramureș and Satu Mare are situated at the near the median GDP/capita, while the counties of Salaj and Bistrita Nasaud have the lowest level of GDP and the highest rate of unemployment in the region.
The reason for selecting the Regional Operational Programme (ROP) was the fact that within this program an important component with a high level of European funding absorption, is the Axis 4.3, which concerns the financing of micro-enterprises. The Regional Operational Programme 2007 - 2013 (REGIO) is one of the main Romanian operational programmes agreed with the European Union and a very important tool for implementing the national strategy and the regional development policies (Droj, 2010). The programme was eligible to all development regions of Romania and did not made any differences between regions or counties when assessing the contracting possibilities.
The data used for the case study was collected from several databases:

- The database which was published by the Ministry of Regional Development and Public Administration in September 2015 on the website: http://administratie.gisportal.ro/mdrap/.
- The database published by the Ministry of European Funding on the websites: http://fonduri-ue.ro and http://inforegio.ro
- The database of Romanian Ministry of Finance, www.mfinante.ro, which held the data regarding the financial results published by companies located in Romania

From these websites, using different queries the authors were able to identify and collect data regarding the applicants: 493 subjects, mainly micro-companies which submitted funding applications and contracted the implementation of investment projects in the North-Western region of Romania. These projects were financed within the framework of the Regional Operational Programme - Axis 4.1 Development of Business Infrastructure and Axis 4.3 Support for Development of the Microenterprises.
Based on the databases from the Ministry of Finance: www.mfinante.ro were collected additional information regarding the financial results of these companies before and after the implementation of the projects. The analysis was based on data collected over a period of 6 years, but with an emphasis in the years: 2009 (prior to European funding) and 2015 (the year when most of the projects were already implemented or were at the final implementation stage). The data was collected in the months of November and December 2015.
In order to proper distribute the data on the counties was used an Esri ArcGIS application which was made available on the website: http://administratie.gisportal.ro/mdrap/. As mentioned before, the data used for the spatial distribution modelling is declared to be valid at the end of September 2015 and it shows a clear spatial distributions of projects towards the most developed national and regional economic centers: the big cities. Usually these cities are the county capitals, which contract most of the European funding and attract more businesses than smaller locations. Also big differences can be observed between the different county capitals as well. The largest amount of European Funds seem to be attracted by beneficiaries from Cluj and Oradea.

Figure 1 Spatial distribution of the beneficiaries of ROP in the North-Western Region of Romania



Source: Generated using ArcGIS on the website http://administratie.gisportal.ro/mdrap/ (Data updated September 2016)

As initially expected, a large number of projects were implemented by private entities from Cluj and Bihor counties both on Axis 4.1 and on axis 4.3, these counties being the most developed economically counties in the region with significant business development tradition. More than half of the projects were submitted these counties on Axis 4.3. On axis 4.1 the disequilibrium is even more evident since 85,71%, of the projects which are focused on big infrastructure development, are contracted from these two counties. The lowest number of projects are developed and submitted by the less economic developed counties, within the region, Bistrița-Nasaud county have contracted the lowest number of projects: only 22 and Salaj 43 projects.

Prior to analysis the database went through a correction process by eliminating duplicate companies and the companies which had their financing contracts cancelled. The **Analysis of the statistical and financial data** was the most difficult element of the study since it was analyzed the data reported to the Romanian Ministry of Finance in their financial statements, by the companies who implemented projects within ROP. Since the goal of the study was to analyze the results of the programme the base year was selected 2010(the first complete reporting year since the programme was approved) and the final year was selected 2015 (the last financial year).

Afterwards the study continued with the calculation of the following indicators in order to determine, on each county, the unweighted arithmetic average of the:

- Evolution of Workplaces created by SMEs beneficiary of the programme
- Productivity Analysis
- Business Efficiency - Return on Equity and Solvency

As can we see, in the table below, the unweighted arithmetic average of the projects implemented in the six counties for the four indicators mentioned above were:

Table 1 Unweighted arithmetic average of the efficiency indicators for SMEs

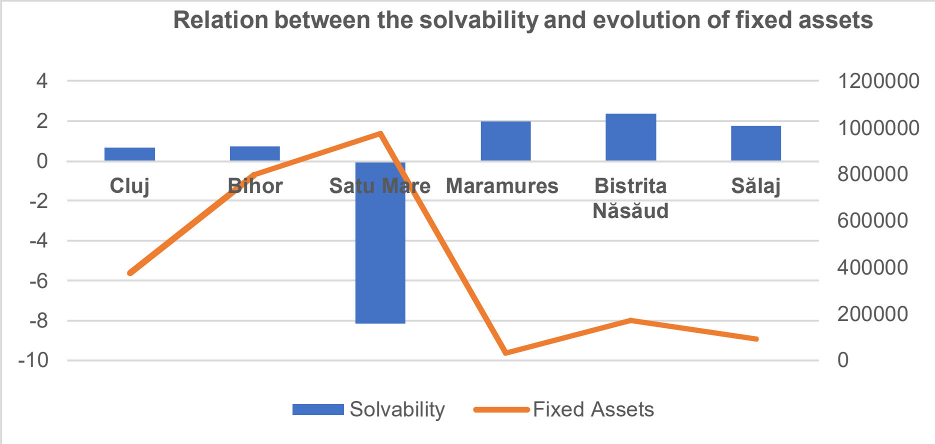
Indicator (Evolution 2010-2015)	Counties (Evolution 2010-2015)					
	Cluj	Bihor	Satu Mare	Maramures	Bistrita Nasaud	Salaj
Return on Equity	0,1022	0,072582	-0,014424	-0,09624123	0,129935078	0,105435
Economic efficiency	62898	19981,7	-19508,62	-3393,70943	5735,583333	15656,75
Number of employees	1,8	4	3,5	1	1	0
Solvency	0,6721	0,743479	-8,138828	2,004169507	2,377897371	1,757087

Source: Own calculation based on data provided by the Romanian Ministry of Finance www.mfinante.ro

The data was obtained by analyzing statistically and by calculating the arithmetic average on each county. Since the ROP programme had one of its objectives improvement of productivity and competitiveness for the beneficiary companies a special emphasis has been taken in analyzing the evolution of Return on Equity, evolution of solvency and evolution of fixed assets that constitute the base for the activity of a company. The results were unexpected and in total contradiction with the objectives of the programme: the companies from Satu Mare and Maramures county had a decrease in the values of the Return on Equity from 2015 comparing with those of 2010.
The problem seems even higher when analyzing the solvency in Satu Mare, which plummeted to a significant negative value in 2015 comparing with 2010, even if the increase in the value of total assets is much higher in this county than everywhere else in the region. These seem to be linked with a high level of debts, probably credit loans, contracted in the project implementation period and in the first years after the project completion. On the other side, even if the companies from Bistrița-Nasaud and Salaj submitted the lowest number of projects, obtained excellent results in the evolution of Solvency and Return on Equity, while having the lowest increase in the level of fixed assets. This seems to be linked with the fact that some of the projects implemented in these counties have lower values than those implemented in other counties.
In the same time, companies from Cluj and Bihor County obtain excellent levels of all three indicators. The companies that not cancelled their contracts performed well and obtained healthy results. What is remarkable is that some of the companies used the momentum given by accession of European funding in order to increase their competitiveness and the fixed assets further more than requested within the indicators of the programme.
An increase in economic efficiency and an increase in number of employees were the main objectives of the Axis 4.3 and 4.1 of the programme. However, in some cases the results were inconclusive: in Salaj County the companies, which contracted European Financing, did not increase the average workplaces reported in their financial statements (from 2010-2015) even if one of the measurement criteria for the success of the programme is new job creation.

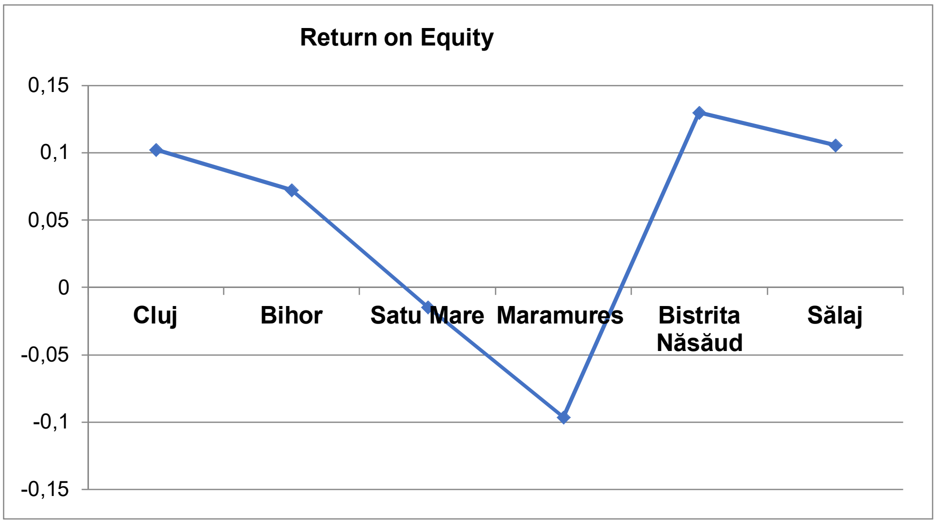
Moderate results were obtained by companies located in Maramureș and Bistrita Nasaud which increased the average number of workplaces with 2 employees.

Figure 2 Relation between solvency and fixed assets for SMEs (2010-2015)



Source: Own calculation.

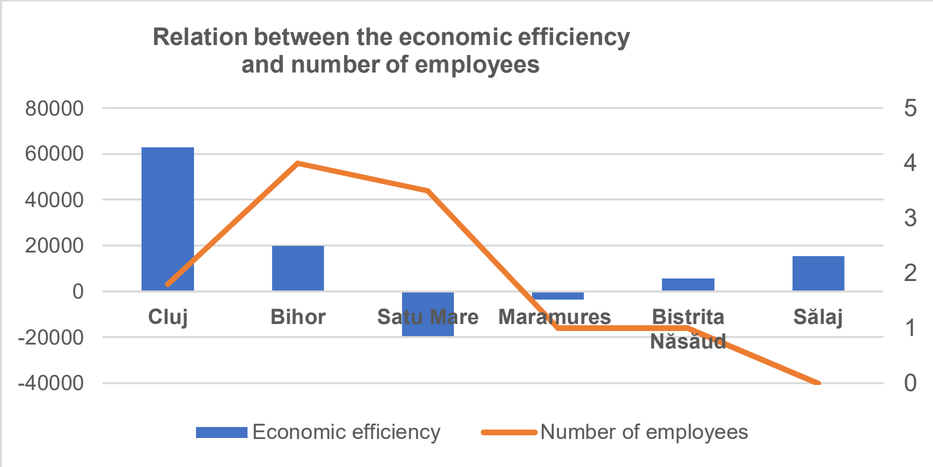
Figure 3 Evolution of Return on Equity (2010-2015)



Source: Own calculation.

The companies from Bihor County improved greatly increasing their average number of employees with 4 new employees. The economic efficiency (productivity) puts Cluj in a much better position, with an increase of 62.898 RON/person in the period of 2010 and 2015. An unexpected negative growth of the productivity was obtained when analyzing data from Satu Mare County.

Figure 4 Relation between solvency and fixed assets for SMEs (2010-2015)



Source: Own calculation.

Conclusion

Based on the two research questions and on the analysis we will draw several conclusions. As observed from the general data, the SME projects financed from the European Structural Funds seem to be a good opportunity for SMEs to increase their economic competitiveness. In general, with few exceptions, we observed that projects seem to have net positive impact over the beneficiaries. But the results differentiated significantly between counties: in Cluj and Bihor the beneficiaries increased their economic competitiveness, obtained better financial results and created new jobs. In the analyzed period (2010 and 2015) the financial indicators were on the rise, obtaining excellent results and contributing also to the improvement of their region economy.

Instead, in counties such as Salaj and Bistrita Nasaud the efficiency for using European funding was low, since the numbers of employees remain constant or increased very slow. Also when analyzing the arithmetic average for the proposed sustainability financial indicators we can observe that the results are moderate, despite benefiting from the EU support, and have brought a small contribution to the local and regional economic growth. But a comparison with companies which not benefitted from EU funding, from the same region, showed that the companies contracting European funds had much better results.

References

1. Barry, Tom, Carlsen, Laura, Gershman, John - *The Good Neighbor Policy—A History to Make Us Proud* (Silver City, NM: International Relations Center, April 2005), online at: http://www.irc-online.org/content/commentary/2005/0503ggn.php, 2005

2. Bourdin S. (2012) Modeling and simulation of European Structural Funds: convergence or divergence of regions with the enlargement ?, available online at: https://ideas.repec.org/p/wiw/wiwrsa/ersa12p163.html#author

3. Daszuta, A. (2005) “The Problem of the So-Called Readiness as the Determinant of the Effective Absorption of Structural Funds, Based on the Example of the Podlaskie Region in Poland.” Retrieved from http://www.nispa.org/conf_papers_list.php?cid=2
4. Droj L. (2010), The Analysis Of Absorption Capacity Of European Funding In The North Western Region Of Romania, presented at the International Conference "European Integration – New Challenges”, 6th Edition, 28-29 May 2010, Oradea, Romania
5. Easterly, W. - Can Foreign Aid Buy Growth?, Journal of Economic Perspectives 17: 23–48, 2003
6. Easterly, W. - The White Man’s Burden: Why the West’s Efforts to Aid the Rest Have Done So Much Ill and So Little Good, New York, Penguin Press, 2006
7. Easterly, W. - Can the West Save Africa?, Journal of Economic Literature 47: 373–447, 2009
8. Moyo, Dambisa - Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa, Penguin Books, New York, United States, 2009
9. Mirošník K., Petkovová L., Čadil J. (2014) Statistical Analysis of Cohesion Funding in the Czech Republic, published in Procedia Economics and Finance 12 (2014) 437–444 Retrieved from: http://www.sciencedirect.com/science/article/pii/S2212567114003657
10. Ramajo, Julian, M. A. Márquez, and Francisco Javier De Miguel Vélez (2014) "Economic impact of the European Funds in Extremadura during the period 2007-2013." Investigaciones regionales 29 (2014): 113-128
11. de Renzio, Paolo - Buying Better Governance: The Political Economy of Budget Reforms in Aid-Dependent Countries, GEG Working Paper 2011/65 (September 2011), University of Oxford, GEG’s Governing Aid programme, Oxford, http://www.globaleconomicgovernance.org/wp-content/uploads/DeRenzio.Buying-Better-Governance1.pdf, 2011
12. Sachs, Jeffrey - The End of Poverty: Economic Possibilities for Our Time, Penguin Group, New York, United States, 2005
13. Shleifer, Andrei - Peter Bauer and the Failure of Foreign Aid, Cato Journal,Vol. 29, No. 3 (Fall 2009) , http://www.cato.org/pubs/journal/cj29n3/cj29n3-1.pdf, 2009
14. Šumpíková, M., Pavel, J., & Klazar, S. (2003). EU Funds: Absorption Capacity and Effectiveness of Their Use, with Focus on Regional Level in the Czech Republic. Conference on Problems facing the New Member States. Retrieved from Stuckler, David and Basu, Sanjay - *Six Concerns about Data in the (Dead) Aid Debate* GEG Brief, University of Oxford, GEG’s Governing Aid programme, Oxford, http://www.globaleconomicgovernance.org/wp-content/uploads/Stuckler-and-Basu-Six-concerns-about-data-in-the-dead-aid-debate.pdf, 2010
15. Woods, Nguen - The International Response to the Global Crisis and the Reform of the International Financial and Aid Architecture, European Parliament Briefing Paper, September, European Union, Brussels, http://www.globaleconomicgovernance.org/wp-content/uploads/Woods-EU-briefing-International-Response-to-the-Financial-Crisis.pdf, 2009
16. http://administratie.gisportal.ro/mdrap/
17. www.fonduri-ue.ro
18. www.mfinante.ro