

# THE INFLUENCE OF THE ENTERPRISE SIZE ON THE EFFECT OF EU GRANTS

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## **Abstract:**

*In the European Union there are important differences between the GDP per capita of various regions. The biggest differences are found between regions in Western Europe and those in Central and Eastern Europe.*

*To reduce these disparities, special funds were allocated to less developed countries, in order to finance various public and private investments.*

*The funds allocated to Romania were included in the seven operational programs addressing various issues.*

*This research examines the efficiency with which the funds addressed to business were used. Furthermore, this paper analyzes the influence that the size of the company has on the indicators of return on investments (referring to investments financed with EU funds).*

*Following the analyzes, we found that at micro-level, the allocated EU funds generated effects, but their intensity is very low.*

**Key words:** Structural Funds, the European Union, Microeconomic Analysis, Comparative Analysis

**JEL classification:** D200, F150, F360, F430, R110

## **1. INTRODUCTION**

In the European Union (EU) a wide gap exists between the GDP per capita of various regions, especially between those of the states that joined in 2004 and 2007. For proper functioning of EU mechanisms, particularly the single market, these disparities must be eliminated, therefore significant funds were allocated under the Regional Development Policy of the European Union. The financial resources are allocated from the Community budget and are provided in the form of grants, to simulate various types of investments in less developed regions.

In the European literature grants are considered an effective way to stimulate economic activity and to counter the failures of the market (Ioannis and Reiner, 2001).

On the efficiency with which financial grants are used, researchers are divided, some arguing in their favor (Lolos, 2009, Reiner, 1998 Puigcerver-Peñalver, 2004) while others believe that these funds do not generate noticeable effects, bringing into question the examples of Greece and East Germany, which received significant funding that did not led to increases in gross domestic product (Lammers, 2002 Alex and Tatomir, 2012).

Personally I think that in Romania, the funds allocated under the Regional Development Policy of the European Union generate positive changes although they do not reach their full potential.

This paper aims to analyze the effect that businesses experienced after received EU grants and whether firm size affects the impact of the projects. The analysis is performed only in the North-East Region of Romania.

## **2. METHODOLOGY**

In order to determine impacts of structural funds absorption in the business environment of the North-East of Romania, we have examined the financial statements of companies that benefited from this financial support (Șuşu, 2012). Beneficiary companies (group 1) were taken from the reports published by the managing authorities of operational programs (in Romania, in 2007-2013,

seven operational programs functioned, of which only two accorded direct grants to firms - Sectoral Operational Programme Increase of Economic Competitiveness and Regional Operational Programme). The financial statements have been taken from the database of the Ministry of Finance. In the analysis two main periods were considered: the period of project implementation (this was analyzed to see immediate changes arising from implementation of the project) and the operation period (this was analyzed to detect short term changes generated by the project).

In defining the influence of others factors, we selected a sample of companies that have not received financial aid (group 2), which was used as a reference. The sample has the same structure as that of the group of companies that benefited from structural funds. Such an approach (comparison over time and comparisons between groups) is seen in the work of Edward Altman, "Financial ratios discriminant analysis and the prediction of corporate bankruptcy" published in "The Journal of Finance," September 1968.

To increase the accuracy of the study, and to have a clearer picture of the situation and structure of the two groups analyzed comparatively, we proceeded to stratify the two collectivities by businesses size.

### 3. RESULTS

The size of a company can greatly influence the efficiency indicators for example large investments are expected to belong to large enterprises and have a high investment return, at least in theory (due to economies of scale). Given these issues, we decided to stratify the two groups according to the size of the firms, they are divided into four layers, namely: micro, small, medium and large enterprises (Law 346/2004 - on stimulating the creation and development of small and medium).

**Table 1 – Structure after stratification of groups**

Enterprise Category	Number of Entries		
	Group	Implementation period	Operating period
Microenterprise	Group 1	76	18
	Group 2	87	29
	Total	163	47
Small business	Group 1	65	37
	Group 2	57	32
	Total	122	69
Medium business	Group 1	17	14
	Group 2	9	6
	Total	26	20
Large business	Group 1	3	3
	Group 2	2	1
	Total	5	4
Total	Group 1	161	72
	Group 2	155	68
	Total	316	140

Source: Calculations using SPSS version 20

There are important differences between the four groups (Table 1), the most numerous are micro and small enterprises. The situation is otherwise normal, at national level these types of firms hold the majority share. In the large enterprises category there is a problem because there are too few entries, so that the results of this group should be considered with attention, there is the risk that they may not be representative.

The difference between the number of entries belonging to the group 1 and those of group 2 in each layer are not large.

**Fixed Assets**

Analyzing the results in each category of business we found that the amount of investments is proportional to the size of enterprises (which was expected, smaller businesses do not have the financial strength to implement large projects).

Businesses in group 1 had higher values in each layer than those in group 2, given the implementation of grants (EU funds).

**Debts**

Following the detailed presentation of the mean in each category of business we can appreciate that there is a difference between groups, namely, group 1 has a higher rate of debt during the implementation, but in the operating period the situation is no longer as clear. Micro and small enterprises from group 1 shows a decrease in debt, which means a repayment of loans engaged during project implementation, but this is not observed and the medium and large enterprises, for their debts recorded a growth during the operation period.

**Turnover**

Developments in each category of enterprises shows that during the implementation period, group 1 showed a higher increase than the control group, but during the operation period we can distinguish two types of developments: in the case of micro enterprise the difference between groups is very small (during operation), while in the case of small and medium enterprise, we see a relatively large difference.

This would suggest that funds were used more effectively by small and medium enterprises. Microenterprises implemented small investments, that lead to an increase of turnover only during implementation period.

**Net result**

In the category of micro enterprises both groups recorded positive values, the difference between them being very small. During the operation period the net result recorded negative change, but the difference remains negligible.

In the small enterprises there is an almost normal evolution: during the implementation period group 1 recorded a depreciation of net earnings, while group 2 a slight increase. During the operation period, the results are reversed, i.e. group 1 records growth, while group 2 record a decrease of net results. This evolution is natural because during the implementation of an investment the net result of an enterprise decreases due to investment expenses and later during operation when the investment generates maximum effect, the net result increases noticeable.

The segment of medium enterprises recorded an interesting development, enterprises from 1 group recorded a decrease in net income both during the implementation period and the operation period, while firms from group 2 recorded a slight increases over the whole period.

**Number of employees**

In the general analysis we found that there is little difference between the two groups, we can now see that the variation is proportional to size. In all layers (less than of large enterprises, where the volume is too small) group 1 showed an increase in the number of employees, while group 2 decreases. An interesting aspect is that in the first year of operation the evolution of the number of employees, of the firms in group 1 has been positive. We appreciate that the Structural Funds have had a notable impact on unemployment (creating jobs). Worryingly however, is that firms in group 2 recorded a decrease in this indicator, if we try to correlate the evolution of the unemployment rate and the absorption rate probably we would not observe any correlation, but in reality, there exists a directly proportional relationship.

**Economic return**

As a derived indicator its evolution is influenced by the fluctuations of the two determinants (net income to turnover). Developments identified in the general community (general decrease) is partially validated by analysis of three representative types of businesses. In the case of the microenterprise, group 1 recorded values below group 2 during the implementation period (values are negative during implementation period). During the operating period group 1 recorded higher values than the control group (values are positive operating period).

Small businesses from the group of companies that have received grant funding, recorded higher values compared with the control group. During the implementation period both groups had negative values, while for the period of operation, only group 1 recorded positive values. Medium-sized enterprises from group 1 recorded negative values, lower than those of group 2, in all analyzed periods.

#### **Financial return**

Different types of businesses have recorded mixed results in terms of financial return. In the general community we found that in all analyzed periods, values of group 1 were lower than those corresponding to group 2 (all values were negative).

In the case of microenterprises, during the implementation period, group 1 showed a positive value greater than that corresponding to group 2 (which was negative), but during the operating period values of group 1 are negative and lower than those recorded for group 2. In the case of small businesses during the implementation period, group 1 showed a higher decrease compare to group 2, while during operation, group 1 registered positive values, superior the control group. Medium-sized enterprises from group 1 recorded values lower than those from group 2 in all analyzed periods.

#### **Labour productivity**

Following the analysis of the general collectivity, we found that all analyzed companies registered a decrease of labor productivity, but those in group 1 decreased more than those in the control group (group 2). Analyzing the stratified collectivity, this conclusion is maintained. There are some categories of businesses that register a growth of labor productivity, but in all cases the values from group 1 are lower than those for group 2.

## **4. CONCLUSIONS**

Analysis of the two groups of companies revealed that structural funds have not generated a considerable impact on the economic environment of the North-Eastern Region of Romania. Most businesses that have benefited from grants, did not record a growth of profitability, which suggests that the implemented projects didn't had an appropriate quality level.

A significant impact was observed in the number of employees, all categories of firms in group 1 (group of companies that have received grant funding) recorded growth higher than in group 2.

Of the four categories of enterprises, the best results were obtained in small businesses. At this layer group 1 showed higher values in most cases the group 2. This does not imply that the funding should be restricted to this class.

A limitation of this study is that it was done only in one region, in order to obtain results that can be generalized at national level, this research should be extended to other areas.

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