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Quantitative methods for sound financial management decisions in Romanian European Social Fund implementation

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Abstract

European Social Fund has to be accurately implemented by Members' States authorities through projects developed by public and private national entities, according also to the principle of "sound financial management", described as the expression of the appropriate mix of economy of assigned resources, efficient allocation of resources toward indicators and effectiveness of financed operations. As long as ESF funding is trusted for implementation through a decentralized management mechanism to the Members' State Authorities, those have to comply with reporting objectives to the EC, as set into the European Regulations, including compliance to the "sound financial management" principle whose three components are specific, measurable, achievable, realistic and timely (SMART). Identifying the most appropriate quantitative methods that could be applied to the measurable elements may be seen as a first step in assisting both: management's decision towards implementation and reporting over the EC objectives. Our study tends to appropriate some quantitative models to the ESF implementation mechanisms, enhancing connections among ESF specific variables: project's budgets and number of individuals receiving labor market related services (also called project's indicators). Conclusions lead us to a series of quantitative models that may be practically used for assisting management's decision and reporting towards a sound ESF implementation in Romania.

Keywords: Quantitative methods, OLS model, Variable costs, sound financial management;

1. Introduction

Each ESF financed project has to contribute in a sound financial manner to the accomplishment of some program SMART indicators, relating the financing with labor market oriented services. Rates of fixed and variable costs reported to total cost of intervention could mean a lot for sound financial management of the ESF financed program. Useful data for managing this program may be obtained by modeling the evaluation process results in terms of regressions between approved budgets and series of indicators – estimated results of ESF financed interventions. Data interpretation and usage belongs to Managing Authority, Romanian public institution in charged with national ESF implementation, meaning launching, evaluating, monitoring and disbursing sums in specific ESF calls for proposals. We believe, and this is the hypothesis we are now testing, that evaluation comities accomplished their role in some reasonable manner, as long as there can be established a (strong) correlation between approved budgets and proposed indicators: professional orientation and training determining the efficiency and people proposed to be

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employed after the implementation of ESF projects, determining the effectiveness of the call for proposals evaluation process. Several studies have been made to assess quality of the programmes financed through ESF (Popa, Dragos, & Mare, 2011; Mare, Dragos, & Span, 2011). However, such studies have evaluated the quality of the activities related to the programmes and not their financial aspects. A quantitative survey for Phare was published back in 2010 (Dogar, C., & Kelemen A.). The financial analysis is important as lack of efficiency and effectiveness from this point of view would lead to cuts in the amounts of money coming from the European Union. For certain countries the post adhesion funds have created important effects in some economic sectors. A sectorial analysis in the service sector, including the educational services, with effects on the economic development was realized by Dragos & Dragos (2012). So we support our hypothesis through the above described linear regression models involving: budgets versus each of the indicators (number of persons receiving labor market related services – professional orientation, and training, and number of persons that found a job in a period of six months after participating in the projects, as a consequence of this). Fixed and variable costs have their widely accepted importance for management (Horngren, C.T., Datar, S.M. & Foster G., 2006)

2. Data and methodology

The present analysis is made on a sample of 101 projects financed through the European Structural Funds, in one call for proposals addressed to the long term unemployed persons, in summer 2010. Total budget of the sample population is 45,970,402.5 euro, representing 23.16% of the total amount available for this type of interventions.

The classical OLS econometric estimation method has been used for this cross-section of data. The endogenous variable is the budget of the projects, while the factors are given by the projects' indicators - the number of persons involved in the counselling activities, training activities and the number of participants in the first two groups that found a job in a period of maximum 6 months after (as a consequence of the participation in the project). Simple linear models were estimated to find the relationship between the budget and each of the exogenous variables.

$$y_i = b_0 + b_1 x_{1i} + \varepsilon_i \quad , \quad \hat{b} = (X'X)^{-1} X'Y$$

Diagnosis tests were run to insure the validity of the models obtained.

The variables are:

BUDGET$_i$ – the budget of the project, in euro.

PROF_OR$_i$ – the number of persons that participated in the professional orientation activities.

TRAINING$_i$ – the number of persons that participated in the training activities.

EMPLOYMENT$_i$ – the number of persons counseled or trained that found a job in a period of maximum 6 months after, as a consequence of the participation in the programme.

Regressions were constructed both with un-standardized and standardized coefficients. The latter variant transforms all the units in standard deviations allowing for comparisons between variables.

3. Results

A total of 45,970,402.5 euro was allocated for the analyzed sample of projects dedicated to the development of the human resource in Romania (SOPHRD-POSDRU). Throughout the activities there had to have been oriented as many as 28,843 individuals and similarly trained 17,980. However, only 1813 persons were declared as they will have found a job as a consequence of participating in the projects. Table 1 presents some other descriptive statistics of the four variables under analysis. The average project budget is 455,152.5 euro, but with more than half of the values situated above the mean. One can also see in table 1 the discrepancy that exists between the number of persons that had to have been oriented or trained and the impact of such program – finding a job. On average, the number of persons that will have found a job as a consequence of participating in the project is ten times smaller than the number of persons proposed to be trained. The difference is significantly higher when speaking about the orientation activities. The minimum values presented show that all the analyzed projects had the first type of