

## **SYNOPSIS**

**of the PhD thesis with the topic**

### **CONTRIBUTIONS AT DEFINING “THE ROMANIA MODEL” FOR STRUCTURAL FINANCING INSTRUMENTS OF THE EUROPEAN UNION**

**elaborated by:**

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**Synoptic information about the PhD thesis:**

**6 chapters**

**399 pages**

**110 bibliographic titles**

**21 charts**

**97 figures**

**10 paper works in the field of the published thesis**

**(5 as first author and 5 as co-author)**

This PhD thesis focuses upon the economic and financial perspective of the structural financing instruments in The European Union for the period 2007-2013. Starting from the description of experiences of other countries in previous financing exercises, the study proposes patterns for the financial analysis from/of structural instruments, at the level of the development areas.

The thesis' objectives are tightly correlated, at operational level, with the following aspects, which also represented the guidelines of the research work:

- offering a detailed description of the architecture and functional inter-relationships of the structural financing instruments (SFI),
- presentation of various case studies from member countries of the EU,
- introduction of some modeling principles with application in the works topic,
- the detailed description of the architecture and functional inter-relationships of the operational programs (OP) in Romania,
- effectuation of an empirical research over the absorption process of the SFI in Romania,
- proposition of some econometric models (EM) regarding the absorption of SFI at OP's and the development areas' level.

Under methodological aspect, the analysis is based, on an intensive way, on lot of empirical and scientific research. Hereby, the identification and the selection of the information relevant for the descriptive parts of the paper work, implied desk research work type of the specialist literature, the EU and national legislation, in the case of Romania, but also of the documents that set issues of substance regarding the SFI. The methods of empirical research have been used for the "field research" work type over the situation of the operational programs (OP) in Romania. The research has implied not only the qualitative analysis, but also the quantitative one. In this respect, it has been opted for the econometrical modeling regarding the absorption FSI at the level of OP and area. It is thus presented, for the highlight of the complex character of the approached topic principles of econometrical modeling, as well as some representative types of successfully used patterns – HERMIN, QUEST and E3M3. There are also presented the results obtained after the application of such patterns in the case of some countries which either belong to the adherence' precursory wave (1 may 2004) - closer in time to the macroeconomic problems of Romania, or have national access systems of the FSI similar to the ones of our country. In terms of the suggested econometrical patterns, for every OP, the robustness of a model type GARCH is preferred, with a large range of relevant variables. These sections of the thesis represent the original contribution of the paper work within the specific research domain. It is mentioned that this sections have been the object of a permanent adaptation at (macro)economical, social and political realities, at country and global level, the presented models suffering significant transformations in comparison

to the ones developed in the first phases of the thesis' elaboration (this things can be observed by analyzing the works drafted by the post-graduate, in temporal dynamic, during the thesis' execution).

As structure, the paper work follows a line of the particularization from general-contextual to private-applied along 6 chapters, presented as follows.

## **CHAPTER 1 – INTRODUCTION**

This first chapter, in correlation with a 'Foreword', shows the genesis of the idea which was the base of the elaboration of the PhD thesis and makes general viewpoints over the objectives, the research directions, the used methodology and the obtained results.

## **CHAPTER 2 – THE CURRENT ECONOMIC AND INSTITUTIONAL FRAMEWORK OF THE STRUCTURAL FINANCING INSTRUMENTS IN THE EUROPEAN UNION**

### **2.1. Introduction**

### **2.2. The European framework of the structural financing instruments from the perspective of the Lisbon Treaty**

### **2.3. The current economic framework of the structural financing instruments in the European Union**

### **2.4. Partial conclusions**

The second chapter presents the current economic and institutional framework of the structural financing instruments in the European Union. This sketches an overall positioning of the theme in the marks set by the revised Lisbon Treaty (December, 2009). The main structural financing instruments in the European Union from the economic-financial perspective for the period 2007-2013 are given by explaining their operating principles, their economical and social impact, as well as the institutional architecture engaged in the European Union.

## **CHAPTER 3 – CASE STUDIES REGARDING THE IMPLEMENTATION OF THE STRUCTURAL FINANCING INSTRUMENTS IN THE MEMBER STATES OF THE EUROPEAN UNION**

### **3.1. Introduction**

### **3.2. General presentation of the structural and cohesion funds**

### **3.3. Econometric patterns of interest – general presentation**

### **3.4. Shaping of the convergence of the regional income in the European Union-25**

- 3.5. The impact of the structural instruments – Greece**
- 3.6. The impact of the structural instruments – Czech Republic**
- 3.7. The impact of the structural instruments – Poland**
- 3.8. Partial conclusions**

The third chapter is centered on the presentation of some case studies regarding the implementation of the structural financing instruments in the member states of the European Union. After a general presentation of the structural and cohesion funds, the main issues relating to the econometric patterns of interest are introduced, followed by an exercise of shaping of the regional incomes' convergence in the UE-25.

The impact of the structural instruments is described in this chapter, for the purpose of establishing a comparative referential, for three member states of the EU: Greece, The Czech Republic and Poland. To choosing this three case studies have contributed aspects which take into account the structure of the economy, the architecture of the development areas, the drafting of the operational financing programs which "transform" the Structural Financing Instruments of the EU in national interventions, and definitely, intercultural aspects.

## **CHAPTER 4 – THE RESULTS OF THE FIRST STAGE OF IMPLEMENTATION OF THE STRATEGY 2007-2013 CONCERNING THE STRUCTURAL FINANCING INSTRUMENTS AND THE OPERATIONAL PROGRAMS IN ROMANIA**

### **4.1. Introduction**

### **4.2. The results of the first stage of implementation of the strategy 2007-2013 concerning the structural financing instruments. Social-economic analysis.**

### **4.3. The operational programs**

### **4.4. The implementation's stage of the operational programs at 30 September 2009**

### **4.5. Perspectives of the absorption**

### **4.6. Partial conclusions**

The 4th chapter introduces the connective elements of the specific theme for Romania. The description is this way singularized through the presentation of the results of the first implementation stage of the strategy 2007-2013 in Romania based on a comprehensive socio-economic analysis: macroeconomic framework, base, environment and energetic infrastructure, competitiveness, human capital, health and welfare, executive capacity and regional aspects. Forward is presented the architecture of the operational programs in

Romania – primary axes, major intervention domains, aspects regarding the eligibility of different actions, estimative financial grants and other operational information – respective Sector Operational Programme for the Development of the Human Resources, Sector Operational Programme for the Increase of the Economic Competitivity, Operational Programme for Transport, Operational Programme for Environment, Operational Programme for the Capacity Development, Regional Operational Programme and Operational Programme for Tehnic Assistance. Taking into consideration the implementing stage of the operational programmes at 30 september 2009, there are presented the perspectives of the absorption in Romania too, followed by partial conclusions.

## **CHAPTER 5 – ABSORPTION OF THE STRUCTURAL FUNDS IN ROMANIA**

### **5.1. Introduction**

### **5.2. The absorption of the structural funds – a new challenge for Romania**

### **5.3. Integrated econometric models**

### **5.4. Econometric estimation of the educational systems - 259**

### **5.5. Acquired results after applying the econometric model of the absorption of the structural funds in the developing areas in Romania**

The 5th chapter offers a large view on the absorption process of the structural funds in Romania. After sketching the absorption of the structural funds on the coordinates of a new challenge for Romania, the analysis is concentrated on developing some integrated econometric models for the production and non-rival factors, involuntary technological progress, scientific research, human capital, charges and governmental increase and the dynamic of the process. In the same time the econometric evaluation of the educational systems is explained in detail and there are presented the results obtained after applying the econometric model for the absorption of the structural funds in the developing areas in Romania. The analysis was made for each every operational programme and was based on collecting the necessary data for this analysis, as follows: entering data, calibration data and exit data. It is mentioned that the collecting process of this data was extremely intensive and that the presented situation is recent – 31 July 2010.

Applying the submitted models on the available data, permitted us the identification of some substantial conclusions, as follows:

- The models are defined by a higher level of complexity.

- The temporal observations are limited because of the specificity of these interventions and because of the lack of reporting official data – The Authority for Coordinating the Structural Tools (ACIS) began only recently to publish global data referring the contracted amounts and the effected payments.
- Because of the proportion differences between the different considered variables it was preferred the using of a logarithmic scale, which planish these differences; the inconvenience was that the interpretation of the results doesn't present the same intuitive-comparative pattern in interpretation anymore and that regarding the numeric calculation, the possibility of overflow errors entry is raised, specially in the case of data with identical values in consecutive years. In this case the change of the variables was proceeded, without diminishing their significance grade for the correct working.
- All the used models converge, but with a higher grade of volatility. This is explained by the reduced dimension of the number of fields of time data, as well as by the impossibility of shaping some external factors, that were important in access this financing (e.g. audit of the European Commission and putting on stand-by of POS-DRU for a period of time, political factors – elections, governmental shuffles, the difficulty to ensure national co financing, etc.)
- All the applied statistic tests (Akaike, Schwarz, Durbin-Watson) and the corelograms present normal values for this type of shaping and for this dimension of time series.
- The models, despite the volatility of the convergence process, present a large coverage of the intervention of the structural tools ( through the light of the large foreshore of used variables and of their logical including in each model.)
- The models can be used for the analysis of the next situation regarding the absorption process of the structural funds in Romania.
- The models can be improved, refined through the additional introduction of other variables sets, that refer to the strictly tehcnical/financial aspects, as well as to aspects related to shaping the political, decisional factor, international context etc. In this case the modality of model solutioning can be modified fundamentally.
- The model can be used for developing the strategies for accesing structural tools in Romania and can be integrated in a good tool for improving future programming initiatives.

The chapter ends with the presentation of the tendencies in the absorption of the funds identified on analitic bases.

## **CHAPTER 6 – GENERAL CONCLUSIONS**

This chapter shows how, through the exploitation of the good progresses already registered in multiple foreground domains and through the excluding of delayings, the member states, the areas and the parts interested in programs, can assign and achieve the goals of the programs for the period 2007-2013. For this purpose the Commission asks the member states to improve the applying of the programs with increased transparency, chain work and well practice exchange, and with improvements of the politics in the frame of the priorities of the cohesion politics to bring a first very important contribution to the achiving of the Europa 2020 strategy, of their representative initiatives and of their cuantified goals. This thesis, through the set of econometric models, brings a plus of know-how in the operations of analysis and fundation specific for the construction of a more efficent programming exercise.