

REGIONAL ECONOMIC DEVELOPMENT UNDER THE PRESENT GLOBAL CRISIS' CHALLENGES

Abstract

Ionescu Romeo-Victor

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REGIONAL BUSINESS ENVIRONMENT UNDER THE PRESENT GLOBAL CRISIS' CHALLENGES

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This habilitation thesis is made in the context of the complex global crisis. The paper is divided into two sections. The first one is focused on the scientific, professional and academic achievements. It covers five chapters.

The 1st chapter deals with the economic development under a regional context. For the beginning, the theoretical approaches and the author's contribution to the development of the economics are presented. More of them are connected to the market mechanisms, unemployment or the algorithm of the scientific analysis in economics. These contributions are related to both micro and macroeconomics, as well. They consist of a new circular flow of the economic activity, a scientific analysis algorithm or the unemployment train's approach.

A distinct part of the chapter points out the importance of the economic analysis under risk and uncertainty. As an addition, the role of the forecasting procedures is pointed out, as well. Our contributions are related to the planning-forecasting connection or the bio economy's impact on the economic development.

The chapter is finished by a synthesis of the author's contributions regarding books, research articles and research and economic contracts.

The 2nd chapter is focused on the economic development in a regional context within the European Union. An interesting contribution in this regard was the anticipation of the new global economic crisis and many of its effects on the European regional economy. Moreover, we anticipated the change in the globally balance of power as a result of trade wars between the US and China or between the US and the EU. Since 2019, we have concluded that the latest challenges at EU level (refugee crisis, Grexit, Brexit, enlargement difficult to anticipate) and the economic difficulties in many Member States will put the EU in a new unfavorable position. Specific models have been used to quantify key global and regional economic developments.

In order to achieve economic cohesion and to fight against the present global crisis, the EU uses specific economic and social policies. We proposed a new approach regarding these policies. As a result, we have eliminated the "classical" approach based on the resources - social problems - global evolution trinomial and replaced it with a new more realistic and complex diagram. A distinct analysis covers the political independence vs. supranational decision-making and is

quantified into a new chart. Various common policies are analysed under a critical approach: the transport policy, the R&D policy, education, environment, investment, etc.

On the other hand, our contributions consist of: a new approach on the regional innovation, learning and development management; an analysis on the Romanian post-Bologna educational system, a comparative analysis regarding the accreditation modalities: ARACIS vs European Universities Association (EUA) and a SWOT analysis of these two accreditation procedures; a climate change & energy diagram; an approach regarding the impact of the European Structural and Investment Funds. Moreover, we defines the NOP model based on the reality of the financial executions of the non-reimbursable projects in Romania (OP-Environment 2007-2013 and OP-Large Infrastructure 2014-2020). According to NOP model's implementation, we defined the modified fraud triangle and realised its chart.

The same synthesis of the author's contributions regarding books and research articles is presented at the end of this chapter.

The 3^{rd} chapter defines and analyses the influence of socio-economic developments at regional level on the European Union's economy. The whole chapter is dominated by the crisis'

impact and analyses the regional disparities between Member States. The refugees crisis is analysed as well, but not under an optimistic approach. The newest challenge facing the EU is the medical crisis caused by Covid-19. This crisis has multiple implications for the regional economic environment, as well. As a result, we analysed the effect of Covid-19 on the Member States' economies across the Danube region. Moreover, we quantified the national defence capacity against the present global crisis using six indicators: GDP (PPP) / capita, net exports, hospital beds / 1000 inhabitants, employment and gross public debt. The implementation of this model led to the conclusion that the impact of the pandemic is very important and economic recovery will be more than difficult. Economic development in the Danube Member States will lead to the creation of large regional disparities. These disparities will not be eliminated in 2022 if the current trend continues.

The author's contributions to this chapter are presented at the end of the chapter.

The 4th chapter is more complex and presents socioeconomic regional models able to be implemented in Member States. There are some interesting personal contributions related to RIV and RIV-2 models, which are able to quantify the



regional socio-economic disparities using the concept of regional sphere.

The technical progress is described using modified production functions. On the other hand, we have developed a regional localization model based on the potential energy of the connections between the involved factors. This model goes beyond Weber and Richardson's approaches, who place as a main criterion of a company location the minimizing of the transportation costs. These approaches are also overcome by the solutions proposed to solve the location problem by Perreur.

A distinct model covers the modelling the disparities' impact in the context of sustainable development. This model uses indicators taken from Objective 10.8 of the Europe 2030 Agenda: GDP per capita adjusted for purchasing power; gross adjusted household income per capita; the relative average value of the poverty risk gap; Gini coefficient equivalent to disposable income; the share of incomes below 40% of the average of the population; asylum applications by stage of the procedure; the population at risk of poverty after social transfers; EU imports from developing countries by income groups.

Finally, we developed a model based on the spatiality of the distribution of deviations from the concentration point. The model is based on a hexagonal diagram of regional development. The 5th chapter deals with the academic and research career. There are information related to awards, medals and international visibility.

The second section of this thesis is focused on the career evolution and development plans. Our future academic and scientific research evolution will be materialized under some *hypotheses* such as:

- continuation of the global crisis in all its complexity, with strong implications for the socio-economic development;
- changing the power balance between the main global economic actors;
- accentuation of the centrifugal tendencies across the European Union;
- seeking solutions to mitigate the negative effects of the crisis more at national and regional level than at the regional organizations' level;
- accentuating the difficulties for the Romanian business environment.

The above approach orients our future career towards the achieving of the following general *objectives*:

• O1. Acquiring new skills, knowledge and competencies regarding the research and educational activity through the process of continuous training.

- O2. Development of solid economic skills as well as in related areas (statistics, mathematics) for a better interdisciplinarity.
- O3. Applying, testing, modifying and consolidating through practical experience the acquired skills and knowledge.
- O4. Further fulfilment of all criteria related to the position of university professor.

The same chapter presents our professional experience, our scientific research activity and our academic career development.

Finally, this thesis is just a modest contribution to the economic science's development.

Author

