

EVALUATION MODEL OF REGIONAL POLICY'S INFLUENCE ON SOCIAL AND ECONOMICAL DEVELOPMENT OF THE REGION

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Abstract

The subject of the article is the evaluation of achievements in regional policy in the context of the European Union. Without common approach as to evaluating progress and development based on integral indices and calculus as well as the authentic source of information, there is always room for subjectivity. Integration into the European Union accelerates to solve the difficulties of regional policy in Lithuania. To pay attention to the regions – is constant part of the policy of European Union countries. The article focuses on working out an effective evaluation method, which could be applied to achieve reliable results and would be effective in solving problems of regional development. The prepared evaluation methodology of regional policy influence in the context of NUTS 2 statistical regions of the European Union, situated in the territory of twelve new the EU member states is applied empirically.

Keywords: region, regional development, evaluation model, synergic effect model for weaknesses' of development and regional policy's means.

Introduction

Relevance of the topic. After joining the European Union (hereafter the EU), Lithuania participates in the implementation of the EU regional policy, the base of which is financial support of Structural Funds. As Lithuania has already become a full member of the EU, the evaluation of regional policy's effect of this association is relevant issue for the country. Though the EU regional policy, its influence on national and public policies of the EU member states, the EU promotion effectiveness of economical and social compaction, as well as requirement to reform this policy attain more and more attention of researchers lately, its implementation effect in a case of specific country should be adapted individually, preparing the integrated methodology. The methodology should comprise system of analysis indicators of regional development level, the purpose of which would be differentiation of regions by the level of social and economical development, identification of strong and weak aspects of the regions and displaying regional policy's influence on regional development. For the present, there are no established and academically motivated evaluation methodology of regional development and prepared recommendations for raising the effectiveness of regional policy in Lithuania. A blind-spot of regional control is complex evaluation of social and economical results of a region. Consequently, this topic is so actual and important for the entire economical and social development of the country. Without unanimous evaluation methodology, reasoned by the material of objective source of information, there is much subjectivity in evaluation of results. These results are of little suitability for interregional comparisons. Therefore, the purpose of this paper is to prepare the evaluation methodology, ensuring objectivity and adaptability of the results while solving problems of regional development.

Objective of scientific research – to represent the integrated evaluation methodology of regional policy's influence on the evolution of regional development and to put it in practice in the context of the European Union after generalization of problem interpretation on regional differences policy in the regional development territories.

Methods. On purpose to systematize realization trends of regional policy substantiated in the theories of regional development, as well as to prepare evaluation methodology of regional policy's influence substantiated academically, it was referred to systematic and comparative analysis of scientific literature, synthesis, methods of logical abstraction and inferences' generation. During the process of methodology's preparation it was referred to evaluation method of results of experts' questioning (interview) in pursuance of scientific substantiation of selection of indicators, which characterize regions' development level, as well as on purpose to evaluate its scale, applying calculation system of total indexes. The following methods were applied for the research: systematic and comparative analysis of the documents, method of data normalization when fixed coefficients are entered (constituent dimensions) for the data, which exceed or do not exceed the average of the EU (or group of regions, where there is no appropriate indicator in the context of the EU), correlation and regression analysis, prediction, modelling and inferences' generation.

Scientific problem. Evaluation methods of regional policy's influence, met in scientific literature, permanently are based on analysis of economical influence and are applied to analyze influence on both national and regional policy. The principal authors are Quesnay (1758), Leontief (1986), Weiss and Gooding (Weiss, Gooding, 1968) and Bradley at all (2007), etc. However, on purpose to evaluate consistent patterns of regional structure and economical development of the counties as well as peculiarities of regional policy's formation, it is essential that the model of regional development of regional policy's influence could be applied to the specific theory. Region's problematic, as social – economical system, balanced for regional development and its influence on country's economy, Lithuanian scientists started analyzing rather lately, only after the recovering of Independence. However, implementation of regional policy as a process and its evaluation is feebly investigated sphere. There are several scientific studies prepared, wherein influence of regional policy on different fields of activities is shaped: Public Administration of Lithuania – Brožaitis, Linartas, Nakrošis and Petkevičius (2002); for Lithuanian Municipalities in the fields of environmental defence – Semėnienė and Stanikūnienė (2003); and field of regional development – Dumčius and Šiupšinskas, (2003); economical and social development – Mačys and Stungurienė (2005); competitiveness of economics – Kriščiukaitienė (2008), Pukelienė and Maksvytienė (2008), government's support for farmers – Jasinskas and Simanavičienė (2008) and so forth .

Therefore, there is no accord formed in scientific literature concerning selection of indicators of social and economical development for interregional comparison and there was insufficient consideration on analysis of evaluation problematic of evolution of development level of quantitative and qualitative influence on regions and country.

Theories of regional development

The first theorists' trials to motivate the growth of regions' economy, decrease of regional differences were the interpretation of upgrowth theories of neoclassical international trade and national economy. It was up for specific theories, starting with theorem of Heckscher-Ohlin-Samuelson (Heckscher, 1991; Ohlin, 1933; Samuelson, 1953; 1949; 1948), wherein convergence of prices of international actions is detailed, and applying static models of trade equilibrium. It also supplements theory of Ricardo (1817). To continue further, there are models of upgrowth theory of Harrod (1939) and Domar (1946), explicated by Solow (1956) and Swan (1956), wherein relational and absolute convergence is analyzed. Works of originators of regional science were mostly named as criticism and response to hypothesis of convergence and neoclassical economy, the main representatives of which were Weber (1929), Hoover (1937), Greenhut (1956), Isard (1956, 1960), Hotelling (1929), Devletoglou (1965), Eaton & Lipsey (1978) Christaller (1933), Losch (1954) and other.

Two major attitude trends of scientists and their works towards development of regional differences and necessity of regional policy are met in scientific literature: the theories of regional economy's convergence and divergence. Representatives of theories of regional economy's convergence Tiebout (1956a; 1956b) and North (1955; 1956), Borts & Stein (1964), Williamson (1965), who maintained that economical policy is meaningless, as free market can compensate differences of development itself. Representatives of regional convergence theories disprove the necessity of regional policy, therefore, in the models, prepared on the grounds of supply and demand, the ability of mechanism of free market to solve discontinuity problem of state's regions naturally (without intrusion of state's political means) is emphasized. Theories of regional economy's divergation, the main representatives of which Myrdal (1957), Kaldor (1970), Dixon & Thirlwall (1975), Perroux (1950), Hirschman (1958), Boudeville (1966), Friedmann (1966), affirming increase of regional differences, arguing that regional policy is necessary. The theories of regional divergence, stating the obvious necessity of regional policy, points out the promotion of the development of poor regions by improving production conditions and increasing the effectiveness of factors of production.

Other representatives of theories of regional development maintained problems' solving of increase of regional differences through the promotion of regional development. They analyzed economical development as a process of structural changes inside the region and out of its boundaries. The main promotion trends of regional development are emphasized in the works of representatives of other regional development theories (structural changes, models interaction between political institutions and regional development, and derivative neoclassical perspectives): development of investment into more efficient economical sectors, industry sector and new territorial methods of production, development of more effective

exploiting of land in poorer regions and investment into internal factors (technology, innovations, geographical location and so forth).

Evaluation model of regional policy's influence on social and economical development

The analysis of present situation in 50 NUTS 2 statistical regions of the European Union, situated in new member states, it was determined, that strong and obvious differences of development are typical for the EU, moreover, when new member states joined the EU, differences of national and regional level became even more sharper. In the structural viewpoint, differences of particular regions shows up, as people, living in different regions of Europe, has different income, living standards in particular states also differ, there are unequal possibilities to find well paid job, etc... It is relevant for weaker regions of the expanded EU to intend regional policy's means, the implementation of which is promoted by support of Structural Funds. Therefore, the evaluation of regional policy's effect is of a great importance for Lithuania. Since Lithuania patently stays behind comparing its level of development with the average of the EU, the EU regional policy usually is prescribed for Lithuania as one of the most obvious advantages of membership in the EU: however, as the implementation of the EU regional policy is considered to be the responsibility of member states, the gauge of this political aims implementation highly depends on preparation of Lithuanian public administration to use the financial support, given by the EU Structural Funds. On purpose to evaluate consistent patterns of regional structure and economical development of the counties as well as peculiarities of regional policy's formation, it is essential that the model of regional development of regional policy's influence could be applied to the specific theory.

After generalization of variety of indicators of development level in the scientific literature and experience of foreign countries, four main groups of indicators are distinguished in the work. They characterize social and economical situation of a region in the strictest precision – that are indicators defining the evolution of demography, social and economical development, accessibility of traffic system, social and tourism service, labour market, public infrastructure and service (see Kilijonienė & Simanavičienė, 2008). During the process of expert evaluation the set of indicators, measuring level of development was composed after evaluation of experts' accord; they calculated the value of Kendall's concordance coefficient W that was closest to figure of one). They are of a significant importance for interregional comparison.

Evaluation model and process scheme of regional policy influence is also represented in the methodology. They prescribe the sequence of evaluation process performance and usage possibilities of research data's analysis methods for the influence of implemented regional policy means in order the social and economical development could be evaluated. These 4 stages are represented in Evaluation model of regional policy's influence on social and economical development of the region (see Figure 1).

The first thing in the first stage the normalization of indicators of regional development level is accomplished. Indicators' normalization method, when fixed coefficients for the data which exceed or do not exceed average of the EU, is chosen for calculating index of social and economical development level evaluation of the EU regions. The cause of choosing this method is results of experts' questioning. So, positive, negative or neutral evaluation on indicators of social and economical regional development can be established. For the final evaluation total values of indexes of every group of indicators are compared where a region which is defined with higher index, in the context of comparative base is treated as the most developed region in social-economical sense. In order to achieve objective results, social and economical indicators of not less than five-year old should be evaluated, comparing average values of yearly total indexes. When the normalization of indicators is accomplished and social and economical regional development level is evaluated, regional classification according to factual average values of yearly indexes is performed. Since maximum possible index is (+29) and minimum index is (-29), taking number of collected scores into consideration, regions are classified into leading, progressive, average, problem-orientated and depressive regions. Considering possible maximum and minimum evaluations of each evaluated year, weaker and stronger parts of a region are identified. II-IV stages of evaluation process provide evaluation of indicators of social and economical regional development and influence of regional policy; the pace of regional development during the regional policy implementation period is examined using analysis of time lines, correlation and regression. In order to evaluate regional policy's influence effect on indicators' development, characterizing development weaknesses, analysis of regional policy's support handling, estimation of type and volume of linear indicators' interdependence and interpretation of the function of linear interdependence is performed. When all the evaluation steps of regional policy's influence

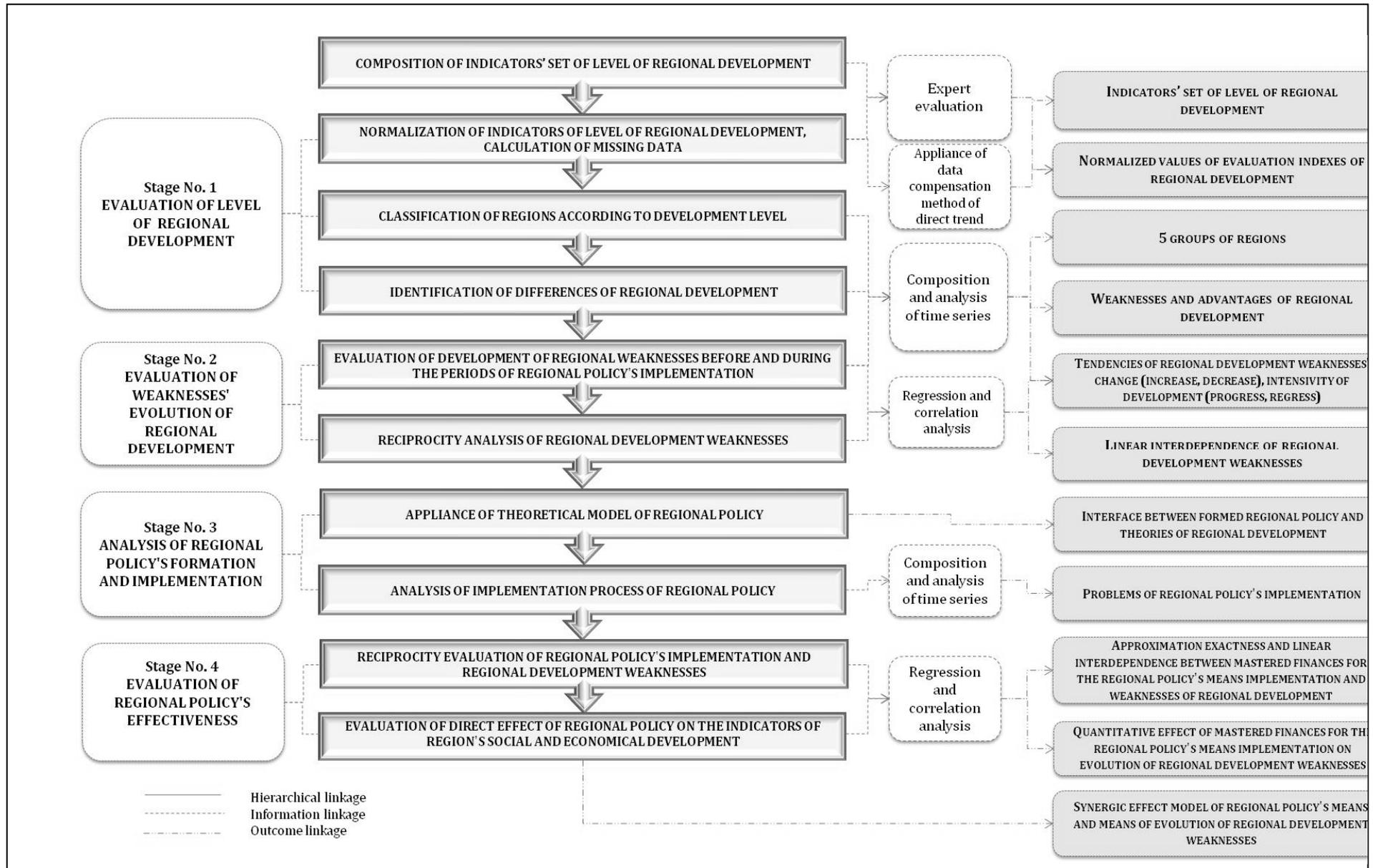


Figure 1. Evaluation model of regional policy's influence on social and economical development

are accomplished, it is essential to present generalized evolution of development weaknesses and evaluated regional policy's influence in a single "system of axes", i. e. to form a synergic effect model, which would interrelate tendencies of regional development with implementation of regional policy's means.

The prepared methodology of evaluation of regional policy's influence on evolution of development weaknesses can be applied for regional researches of various magnitudes, interregional comparisons of different level, it also objectively evaluates development level of the regions in national and international context; evaluation and generalization of strong and weak aspects of the regions, determining the regions, which require support most of all and the most problematical spheres of social and economical development of the region, which regional policy's means should be concentrated on primarily; to prove and evaluate regional policy's influence on economical development results of regions, that has already been implemented, using statistical methods of data's analysis as well as to predict the influence of regional policy's implementation.

Evaluation of influence of the European Union's regional policy on social and economical evolution of Lithuania

The prepared evaluation methodology of regional policy influence in the context of NUTS 2 statistical regions of the European Union, situated in the territory of twelve new the EU member states, is applied empirically. After the situation evaluation in 50 NUTS 2 statistical regions of the European Union, it was evaluated, that: in the context of the European Union Lithuania is referred as a problem-orientated region and stays behind comparing factors, defining demography (yearly depopulation, negative natural fluctuation negative net migration), social (increasing number of suicide, conditional expenses' decrease for the development of scientific inquiry and technologies) and economical (gross domestic product, volume of investment for gross fixed capital formation, adverse structures of households' earnings, adverse sectoral structures of gross value-added creation) development and labour market (decreased employment, adverse employment structures under economical activity fields) public infrastructure and service development (underdevelopment of transport network and tourism infrastructure).

During the process of the EU regional policy's implementation, the development of Lithuania has intensified in the following social and economical fields: negative natural change of population, net migration, decrease of number of suicides; growth of volume of gross domestic product, investment for gross fixed capital formation, number of employed in service sector. Development problems remained due to regular depopulation and slow pace of traffic infrastructure's development. Evolution of mastering the EU regional policy's finances and weaknesses of Lithuanian development has the linear interdependence, except change of number of employed in industry sector, wherein estimation of linear interdependence between volumes failed.

It was estimated in the research that implementation of the EU regional policy had a positive effect on the best part of the evolution of development weaknesses in Lithuania, which were analysed. However, the ultimate positive effect of regional policy is made on employment, development of investment into gross fixed capital, scientific inquiry and technologies, volume growth of households' earnings and gross domestic product. Moreover, despite the fact that it should be orientated to encourage the development of service sector, created gross value-added out of regional policy support is increasing mostly in construction sector. Evaluating the results of the research generally, it can be stated that thus far regional policy of the EU is not as effective as it is supposed to be, because of the short-term effect. That is the reason why effect of regional development means, financed by regional policy support, should be evaluated constantly (yearly) on purpose to evaluate the development of economical activity's fields being influenced.

Conclusions

1. The diversity of regions development theories enables development to be analyzed as a multiple process, which leads to the changes in social, institutional, political, administrative structures or even in a human behaviour. To sum up, it can be stated that theories of regional development emphasize the creation of opening (development of economical and physical infrastructure, support for human capital) for economical growth of a region. In these theories great attention is given to modernization of economical sectors (replacing of ordinary activities with modern and profitable ones). It is accounted, that the economy should develop systematically, to go through the sequential circuit of stages; the importance of service export for the economical development of a region is emphasized. The analysis of these theories

has revealed different attitudes of scientists regarding possibilities of regional policy's realization. It has also determined dependence of strategy (promoting interregional effectiveness) and capital volume on the actual divergence resources and ability to direct profit and expense towards the growth. Therefore, regional development theories in the work are classified by the incentive trends of regional development, which are formulated considering the principled attitude, substantiated in theories of regional differences increase.

2. The evaluation methodology, presented in this work, integrates and complements works of scientists, who has worked on this topic, on purpose to evaluate consistent pattern of regions' structure and economical development of the states, as well as to evaluate the peculiarities of regional policy's formation in the European Union and Lithuania.
3. The prepared methodology is put into practice by performing the evaluation of regional policy's influence of the EU on evolution of development weaknesses' of Lithuania. The synergic effect model for weaknesses' evolution of Lithuania development in the context of the European Union and for the European Union's regional policy's means integrates the results of methodology's establishing and empirical research. It also distinguishes developing trends of priority regional policy in pursuance of hastening the evolution of development weaknesses.

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