MODELS OF REGIONAL ASPECT AND DEVELOPMENT UNDERDEVELOPED REGIONS

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Abstract

Questions of importance and content of undeveloped areas are elaborated in this paper, as well as models of applicability and conductive development factors, and possibility of growth of undeveloped areas. The subject of research in this work defines the importance of regional aspect of growth on one side and models as basic tools of regional development on the other side. The time dimension of research subject is long-term time horizon, up to three decades in retrospective, and a decade in perspective. Considering the defined subject of research, the general goal is evaluation undeveloped area of economy and possibility of improvement their development. Theoretical analyzes gives clear direction of improvement and overcoming regional inequalities in economic lagging of certain areas. Through analyzing theoretical aspect of regional development, the result is that theoretical coverage of previous policy is very important in procedure of applying policy of regional improvement, since it gives basic modalities and optimal solutions in realizing activities of reducing regional lagging of some regional units.

Keywords: Regional Development, Growth Models, Undeveloped Areas.

INTRODUCTION

In the period of the 19th and 20th century in the world, particularly in today’s developed countries of Europe and USA as well as others, different models of regional improving growth have been developed such as: model of poles growth and development, model of misbalanced development, model of circular cumulative causality, dependence model, model of exporting base, model of central place and gravity and model of production speciality. It’s a fact that differences between development of regions and close areas are inevitable. Disproportions in development of regional areas, appeared as result of different factors: the difference in the level of knowledge and talent of human factor, unequal usage of technical-technological progress, diversity of natural resources, availability of financial capital, unequal level of investment, the nature of the existing economy structure and etc. The main goal is to bring closer regional policy by applying regional theories (models) that are used for development and improvement of regionally backward parts-units of some regional areas. By the research methods of analysis and by reviewing known research results, it is realized the importance of the theories of regional development, which, in the last ten years have been reaching huge popularity due to bigger unequal economy development in some regional areas. Economy theory, particularly the economy thought on (automatic) market regulating misbalance has been significantly dealing with problems of regional development. Choosing (structural) sectoral aspect of development over a spatial aspect resulted in growing regional inequality jeopardizing the stability of overall development and the level of social care. The data analysis showed that the importance of regional policy is getting more significant since regional inequality has been spreading in the world. Therefore, the regional policy by using tool (model of regional development) became the leader in solving crisis in the countries members of European Union as well as in other countries of the West.

LITERATURE REVIEW THEME OF ECONOMIC DEVELOPMENT OF THE UNDEVELOPED COUNTRIES

In the economy development of any region, sector or structural dimension, it is quite important the spatial component as well. Most of the authors agree about the that many questions about economy-regional developing subject are effectively solved in the close regional frame than within sector approach, at the level of entire economy. So, academician Hadziomerović H., when determining regional dimension of economy development, preferred three components as required: “optimisation of location of economic capacities; achieving goals of economy policy and export orientated production” (Hadziomerović, 1984). Kubović B., the content of economy-regional aspect is reducing on all relevant developing character questions connected to economy structure, economy system and economy policy. In other words, regional component is treated as separate aspect of developing process which takes place in close areas of national space and it is...

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determining factor of achieving optimal sector and global development at the level of country and region (Kubović, 1974).

Development itself (in regional dimension) is considered as dynamic process of transformation and improvement regional structures in order to create new potentials in economic and social field (Bogunović, 1991). Papić K. and Kamenica S. pay attention to the fact that so far, “regional aspect of development was usually limited to problem of economic undeveloped areas”. For a reason they are warning us about the importance of understanding regional component, where regional aspect would contain development of settlement systems, developing centres, basis of development and etc. (Papić, 1977; Kamenica, 1976). According to Ibreljić I. regional policy contains “all measures of national, regional or local authorities who affect on economic state one or more regions” (Ibreljić, 1994). Differentiate on the economic and political. Economic motifs and politics motifs. Economic motifs are identified in the need of equal development, resolving the inequality and optimisation of profit based on adequate allocation of capital into production. Political motifs are manifested in eliminating people’s dissatisfaction in undeveloped areas, lowering population migrations etc. (Osmanković, 2001). In effective managing of economic regional development, Šverko M. recognizes “possibility to mitigate regional inequality (economic and social inequality); the need for accelerating development of the region and national economy; possibility of optimum usage of specific developing and other potentials at the local and regional levels; the possibility to establish rational sectoral and territory division of labour” (Šverko, 1993). The significance of regional development dimension Stojanović R. sees in “the possibility overall development intensification and in more adequate territory division of labour i.e. rationalisation of production” (Stojanović, 1981). Kantalić M. sees the essence of regional development in “increasing efficiency of national economic development and reaching balanced development between the regions”. He emphasizes that regional policy needs to create optimal conditions for regions development in order to increase economy power of the whole regional area” (Kantalić, 2005). If we take a look at the results of the research on the influence of EU policy and the analysis of the results, we come to the following conclusion.

The success of regional policy can be seen in giving help undeveloped areas which, due to given help, moved from the category of undeveloped and reached the status of developed region. However, on the other side, the effects of regional policy of EU haven’t been the same in other fields. They were far less. This confirms the research (House of Lords, 2008) which showed that “in the period 1995 – 2005, the growth rate was 4 pp above the EU average in Ireland, while Greece with 1.5 pp and Spain with 0.7 pp, had significantly lower effects of regional policy”. This phenomenon is present in other members of European Union which had different levels of regional development in the same or similar form of help. The known authors of regional economic thought from the Former Yugoslavia Kubović B. and Bogunović A., in order to reach interregional optimum, they suggest the compatibility of the next inter-regional questions: (1) between regional resources on one hand and capital for their usage on the other hand. (2) between production factors and economy infrastructure, (3) between production and non-production activity, (4) between production factors of some activities/business (compatibility), (5) between production factors and other factors, (6) between requests (needs) for location (space) of economy capacities, on one hand and available physical space and other location factors, on the other. (7) between the levels of concentration economic content and population (urban concentration) on one hand and material and other lifestyle conditions, on the other (Kubović, 1974; Bogunović, 1991). It can be concluded that besides the sectoral/branch aspect, it is quite important regional aspect as well, i.e. territory dimension of development. The fact is that reaching rational economic development and effect of development at the level of one country or close territory i.e. regional level, is possible only by taking into consideration the regional component. Empirical studies have confirmed that the transition and integration processes in the countries of Central and Eastern Europe led to the creation of a new image of regional development marked a significant and growing regional inequalities. Bachtler et al. (1999) have identified some common characteristics of the process of growing regional disparities: accentuated the contrast of urban and rural areas, a division of center and periphery. Empirical studies that would identify the key drivers of regional growth in the countries of Central and Eastern Europe are still rare. Tondl and Vuksic (2003) analyze the factors of regional growth in the countries of Central and Eastern Europe and found that foreign direct investment, the situation along the border with the European Union, metropolitan status and high level of education of the most important factors for regional economic growth.

Models (theories) regional development

Model of growth and development poles

One of the most important models (theories) of regional development is definitely theory of growth and development poles which has got a special meaning in interregional and regional relations, and which shows the process of polarisation and its effects on social-economic development. The theory of growth poles started and developed in France in the 1950s, and its founder is F. Perroux, who set foundations of this
theory. In poles of growth it is included the activity of grouping inside of regional unit with the aim to reach coordination of economy effects and region in order to accomplish balance in the development of regions. On the other hand, the poles of development include dynamic economic sectors which achieve significant developing promotion and serve as factors of general stimulus in economy which is achieved by spreading developing effects i.e. polarisation. Polarisation as a process takes place in the surroundings of high concentration of resources and transformation economic structure in specific centres. The gravity area itself (as a field of developing effect) is identified as space which can be, homogeneous (with even development), polarised (one activity dominates in specific area) and planned (defining and implementation of regional plans for the second deadline)”. Perroux defined the process of polarisation as “process where economic activities are put in groups in different points of the space (centres, poles) in different intensity and in different ways are spread over the effect zone by affecting the economy in general” (Perroux, 1969). This interpretation implies that the process is working at different levels of development. Therefore, at the lower levels, it is necessary to do the concentration of production activity in the fewer number of poles, centres and in that way to use the advantages of the process. In this way, it comes to spreading of the development effects and lowering the differences in development. After reaching certain level, development has started in the wider gravity area, which resulted in more equal development, which will result in optimal economic development. According to M. Šverko, theory of poles says that economy growth is “integrating and cumulative process which implies the existence of two types of polarisation: pole growth and cumulative causality (Šverko, 1995).

According to Hansen, the phenomenon of polarisation inevitably implies the fact that “any industry development is intended to industrial centres and areas because of effects of external economy which moves them” (Hansen, 1967). In modern and advanced lifestyle, in the middle of growth and development of technical-technological processes, in one regional rounded area can be seen influence of more growth poles which are consequence of that contemporary achievement. Those poles can be specific industrial sectors, production complexes, which horizontally or vertically are effecting development in their gravity area. The growth pole “gets its strength from concentration of enterprises which are connected to exporting business” (Vresk, 1990). When revising previous analyses, it can be concluded that moving forces as in charge of growth, in poles of development are differently defined as: companies, some industrial sectors, concentration of interdependent businesses, export activities, industrial complexes, urban centres and etc. The importance of theory poles of growth and development for improving economic structure of the region can be seen in its advantages and disadvantages, which represent the standard of the theory itself.

Model of unbalanced development

The main founder of theory of unbalanced development A. Hirschman emphasizes that “investment injection is important, but not sufficient. It takes technical complementary of different sectors at different levels of production and he names that vertical connection” (Hirschman, 1958). There are different types of unbalance in economic development of region; we will emphasize the two important ones: structural unbalance and market unbalance. Structural unbalance implies nonconformities which appear in the structure of economy itself in the relations between certain sectors of economy. The most famous model of structural changes is model which is based on studying empirical model of developing countries. As results of this research there are: (1) changes from agriculture to industrial production process, (2) continuous accumulation of capital as physical, as well as human, (3) the flexibility of market, (4) increasing number of urban centres (i.e. growth of cities) and industry as well, and (5) oscillations in birth-rate. Second form of unbalance in economic development is market unbalance. This form of unbalance depends on the following factors (Jednak, 2006):

- Development deficit financing which usually leads to inflation,
- Large fluctuation in agriculture production which leads to unbalance of commodity and retail funds in the market. The analysis show that participation of agriculture in some developing countries is around 50%, and in some even around 90%, therefore, the fluctuation in agriculture products leads to fluctuation in economy in general,
- Changes in the market and prices of primary products in the world market are transferred to the market of undeveloped countries in the sense of balance.

According to Hirschman, the main issue of unbalanced development is connected to public capital in different forms such as: law and public order, education, health, public transport, telecommunications, water and energy, which is necessary for development. M. Prašo among the disadvantages of traditional theory indicates what the theory doesn’t include (Prašo, 2001):

- that the necessity for capital is unlimited,
- that exists export orientated production,
- that industrialisation is often growing at the detriment of agriculture and that negative external effects are present.

When it comes to balanced or unbalanced economy growth of the region, it can be concluded:
• maintaining the structural or market balance is almost impossible in undeveloped economy which is moving towards rapid industrialisation,
• insisting on strict and permanent balance would not useful when it comes to efficient strategy of rapid economy growth,
• in the policy of economic development of undeveloped countries, the question is not about balanced or unbalanced growth but about allowed and prohibited unbalance.

The concept of balanced development demands simulative growth of complementary activities:
• determining maximum (critical) point of unbalance and regulating developing process is not possible without integral planning. Market mechanism itself cannot automatically regulate proportions of balance,
• the significance of theory is undeniable which leads to noticing differences between regions noting their advantages and disadvantages, which are gradually lowering.

**Model of circular cumulative causality**

This theory according to many theorists is specific in highlighting structures of regional development. In the middle of 1950s Hla Mynt and Gunnar Myrdal claimed that “social-economic system has an automatic tendency of stabilisation”. Gunnar formulated the circular cumulative causality principal as basic principal of economic inequality (Prašo, 2001). The base of theory is the claim that in regional aspect, economy does not move toward balance, but other way around, which is illustrated in the example in figure 1.

**Figure 1: Exogenous direct negative effect on the region**

![Circular Cumulative Causality Diagram]

By analyzing theory of circular cumulative causality, Gunnar noticed that “in systems which are mutually connected, the change of one variable affects the change of other which acts in the same direction” (Gunnar, 1957). This implies that cumulative process is spreading in one circular flow and it can cause positive effects in one place, while in the same time, brings negative effects in some other place. The authors of this concept especially emphasize that opposite centripetal and centrifugal forces act in circular cumulative process act which cause two types of effects:

- **Effects of attraction**, which are under the influence of centripetal force and which are manifested in interaction of developed and less developed area. The effects of that interaction can be seen in labour influx and influx of raw materials which enforces its development,
- **Effects of spreading**, which are the result of centrifugal force, and its effects can be seen in collecting revenues from farms to centre or industrial developed area, and from incomes of labour migration. This effect contributes to development of the entire area and country.

Gunnar finds the most significant conclusions through analyzing development of developing countries. He realizes “that labour migration from undeveloped to developed regional centres has got the key role in relating effects of undeveloped and developed regions” (Gunnar, 1957).

**Dependence model**

In literature this concept is appearing as theory of imperialism, economic structuralism, theory centre-periphery, theory of developing the undeveloped etc, and it was created on the fact that it is not enough to remove the development obstacles and ensure funding in order to revive the region. Theory is based on connection of region and surroundings, i.e. developing countries surrounded with institutional, political and economic boundaries, local and international. The relation between centre and periphery is more dependant of defining labour division, exchange of goods, which contributes to improvement of interregional relations and improvement economical power among the regions, which can be seen in figure 2.
Both central and periphery region have got their centre and periphery. In general approach, some authors explain three main thoughts:

- Model of neo-colonial dependence,
- Model of wrong paradigm and,
- Thesis of dual development.

According to theory of dependence, from the aspect of territorial arrangement, there are central (dominating) region and periphery (dependent or dominated region). Centre of central region dominates its own periphery and peripheral regions, combining political, economic and cultural powers. The centre has got supervision over its territorial unit, and periphery is controlled by centre. The theory analyzes three relations: exchange, structural changes and submission, which increase dependence and slow the periphery growth and widen the gap between the periphery and central region.

**Model of exporting base**

D. D. North, L. Klassen, W. Thompson, created the theory of exporting base during 1960s (1964-1968), especially emphasizing reaching regional development and improvement of region. The main guidelines for developing, according to this theory, are the factors of foreign market for good regions, which initiates exporting orientation. Theory of exporting base, explains export as basic starting mechanism region development. Other activities serve for satisfying local economy and population needs. Search for resources in surrounding region is growing, which influences trading and transport connecting of region with outer world, and then their usage as well. According to this analytical division there are: active, passive and balanced areas. Among active regional areas are the ones which achieve surplus of goods i.e. export over domestic production, i.e. import. Passive regions are the opposite ones, they achieve deficit of export over import, while balanced regions achieve balanced export-import process. Demand for products from the region, according to this theory, is present in the surroundings and, as primary impulse, reflects only on export sector in the region. Effects which export orientated companies have on local economy can be presented as in figure 3.
The main goal is to create such economic mechanisms which can enable greater scope of export since export orientation has been the base of this theory considering the correlation with economic growth of the region. The export growth in one region means that, in regional economic surrounding, income is generated from local goods and costumer services out of that region. On the basis of those incomes, the new local consumption is enabled, which therefore, increases the income of local bidders who parts of that income spend in the local area. Economic strength of the region is measured by production specialisation in those sectors where there is interregional exchange, i.e. excess of export over import. The main activities that are export-orientated are: trade, industry, extractive industry (Osmanković, 1999). It can be concluded that according to theory of external base, in order to reach economic growth, important thing is specialisation in production structure i.e. basic goods and their export, and factor of external demand, which will stimulate regional growth and improve interregional functions.

**Model of central place and gravity**

This theory appeared two centuries ago in the first version of fon Tinena (Thunen) and brings seal of time and space in which was developed. Its contribution to spatial distribution is more historical then practical. This theory, also known as theory of central settlements, was developed by W. Christaller in the 1930s. It is very significant theory when it comes to arrangement of cities and their developing influences. Importance of theories is the tertiary activities and setting the rational settlement network and their connection, or identification “focal points” in space and gravity area around them. On the basis of that, Christaller set the theory “that the main role of the city is to supply surrounding area with goods and services” (Christaller, 1993). The main goals of his researches are set at the specific model of space organisation of service industry and forming the hierarch- functional system of central settlements of different size (Klapić, 2002). This is not just a criterion which “borders the territory where there is need for given central goods or service”, but at the same time “spatial statement of the market size, complementary region”. The starting point of the theory is that entire space has got equal traffic conditions and the quality of the land and other resources. On the other hand, consumers are evenly spread; have got the equal purchasing power, taste and needs.

That kind of region is called isotropic, and since the demand for products or services will decrease with distance- it is possible to define demand limits. If the market is isotropic, the limits will be defined by circular made around centre of the offer whose radius represents the longest distance between demand and centre of the offer. If in isotropic place exist more centres of the same goods, and then the layout of primary market centres is equal. According to theory, since the consumers buy at the nearest centre, under other equal circumstances, the complete cover of market space can only give six-angle form of individual markets, without overlaps or gaps between certain markets. Centres of the second raw in, function as centres first raw for the goods of lower value and as centres which offer certain goods services, in the area bigger then primary market. The principal of gravity is principal in which, cities dominate its zone (Klapić, 2002). Rapid urbanisation in the worlds, and more significant role of cities in developed countries, affected on conceptions of forming the regions. Regions, formed according to gravity principle, are set for researching relations:
centre-periphery, migration, monograph and other researches. Theory is applicable for three sections: (1) as a frame for understanding spatial arrangements and setting of cities, (2) as a relation between size of the cities and structure of their services and (3) in planning region development. Disadvantage of the theory is that it takes services as a measure of importance of the city, which this theory takes as equally distributed. Second disadvantage is that idealizes situation which does not match the practice. Furthermore, it does not explain dynamic changes in the cities structure. It is quite arguable which are goods and services that determine the importance of centre, which makes it difficult to determine the servicing coefficient. The population is not considered as strong parameter. The main function of this theory is contained in researching causes and removing differences at the level of developing undeveloped areas.

**Model of production speciality**

The main characteristic of the theory is its development and usage in social-political system dominating state ownership. In the economy of the former Soviet Union, this theory carries remarks of special social-political circumstances and spatial-geography conditions in that country. Namely, region was “independent economy unit which possesses its own territory, administrative integrity, administrative chain of command and defined authorities”. Theory emphasizes some significant factors which influence process of specialisation. Those factors by their activities, contribute to specialization of production. One of them is transport, as a significant element in resolving issue of spatial location, as well as technical factor for forming a region since it forms interregional and intraregional relations which is the foundation of their specialisation.

In order to provide adequate solution which will reduce the disadvantages of theory, I. Ibreljić claims: “it has to be provided the development of regional forms of ownerships for protection of regional interests” (Ibreljić, 1994). Besides researches and empirical analysis, certain tradition as well as customs of everyday life will be removed. Therefore, many economic ideals, based on economy romanticism and territory feudalism with inefficient planning, will be left in the past. Positive sides and contributions of this theory, when it comes to regional aspects, refer to analysis of interdependent locations of some industries and territory regional aspects. In practice, territorial development takes place more in sectors then in regions.

**DISCUSSION AND RESULTS OF RESEARCH**

Models of economic growth take significant place in realizing improvement of regional development. Today, it can be claimed that models of regional development are integral element and one of the main tools which solves problems of uneven economic growth, among certain regional areas. Model of poles growth and development is one of the most important theories in regional development which is based on principal of polarisation. Process of polarisation is a process where economy activities are grouped in certain points (centres, poles) of the area. They are in different intensity and are spread in the zone effect in different ways with different effects on economy in global. The importance of this theory is rational choice of economic activities, devotion for reaching comparative advantage. The weaknesses of this concept are in abstraction and undeveloped mechanism effects of development. Model of unbalanced development is directed towards structural and market unbalance in development. This theory growth of undeveloped areas sees in unequal development which can stimulate economic growth through creating stressful situations which would affect on change regional developing value, and which actually comes to problem of comparative allocation. In this theory, one of the premises is denied, that is the premise about existence of high flexibility of prices, high flexibility in demanding and expressed substitution of producing factor. Model of circular cumulative causality defines development on the assumption that growth of one centre will affect the other i.e. change of one variable effects the changes of some other variable which leads to the same direction. The main processes of this theory are effects of attraction which are affected by centripetal force, and are manifested in interaction developed and less developed area, as well as effects of spreading which are the consequence of centrifugal force. Model of dependence is based on connection of region and surroundings and includes traditional methods of production in urban and rural sectors based on existing resources. It claims that higher value can be achieved. The theory analyzes three relations: exchange, structural changes and submission, which increase the dependence of regions in global. Model of exporting base considers export the basic mechanism of region development. The aim is to create such economic mechanism which will enable bigger scope of export. The criticism for this theory is in its static and dereliction of dynamic changes and effects of those changes on structure of regional development. Model of central place and gravity is based on assumption that the main role of the city is supplying surrounding area with goods and services. The key element is settlement arrangement in the area, range of goods and services. The disadvantage of the theory is idealizing activities and situation which does not match practice. The key elements of the theory are distance of goods or services and limit offer. Model of production speciality is based on the principal of equal industry placement. It directs development through specialisation with optimal usage of regional resources.
The theories of regional economic development went through a series of evolutionary stages. Consequently, many of the regions are not ready for competition in the post-industrial global economy. In order to successfully compete and to build a flexible strategic infrastructure, regional organizations and the business sector need to understand the implications of changes in paradigms that occur in economic policy and strategy. The process of regional development, in the present conditions of functioning market policies, is perceived through the prism of the need for investment, production, employment, wages and profits and consumption. Countries and regions that seek to achieve sustainable development and growth need to balance policies and strategies implemented by the business sector. These include: a focus on productivity growth; greater competitiveness and reduction of production inputs; conservation of resources; and economic development driven by demand and focused on export. One of the toughest challenges faced by holders of regional development is to achieve the necessary knowledge in order to develop and maintain the competitive performance in keeping with the strategy of regional economic development. The identification and implementation of best practices for improving the performance of regional economies presents a great challenge. Many practices are taken from the West. It can be said that under these circumstances, a lot needs to be forgotten first for the regional institutions and business sectors to learn how to adapt and apply the best practices for achieving sustainable regional development. Global changes in economic and other relations in the last two decades were accompanied by changes in the treatment of the development factors. New approaches also focus on the process of creation and dissemination of knowledge with a special accent on the role of intangible factors of development, such as trust, image, etc. In addition, most of the new concepts of development underline the importance of the site as one of the factors of development, giving them a regional or, spatially-grounded character. What still remains unclear is a better understanding of the ways to correct the dissemination of knowledge takes place on the ground, which follows from the above mentioned problems with applied measures. Today, almost all researchers agree that there is the effect of the spread of knowledge and that it was geographically limited. However, it still lacks empirical studies that clearly demonstrate the mechanisms of the spreading of knowledge. When it comes to the challenges of the European Union towards the future regional development, the EU particularly insists on the introduction of NUTS 3 division, that is, the division into territorial units that have between 150,000 and 800,000 inhabitants, as a condition for a country to access structural funds. NUTS 3 division, in particular, is a requirement for the purposes of cross-border cooperation, with a prominent role in local communities. NUTS 2 divisions is most cases the same or similar nature, "Why do some regions progress quicker than others", "How does a regional development, optimal expansion of economic development, minimizing potential internal conflicts in line of "current regionalization" beg the question of whether the region's ability to secure sustainable growth?", and "Why there are differences in levels of prosperity between regions". A careful analysis of "current regionalization" bring the question of whether the region's ability to secure sustainable development, optimal expansion of economic development, minimizing potential internal conflicts in line with functional gravitational principles, competitive advantages, sustainable development principles, rules and instructions of the European Union as well as the question of the relationship of the region that are the expression of the interests of local Communities for regional connectivity.

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