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Innovativeness in regional development: Selected problems

Key words: regional development, factors of regional development, innovativeness

S u m m a r y: The objective of the paper is presentation of innovativeness in regional development in the aspect of the regional development concept. Under current conditions, the development conditions of individual regions on the basis of which the directions of development of particular voivodeships should be based become significant. Moreover, the development concepts are important for individual regions, on the basis of which the directions of development of particular voivodeships should be based. This paper presents development factors found in the literature of the subject matter in the context of innovativeness. At the same time, special attention has been paid to the development concepts related to innovativeness. Innovativeness as a factor of regional development is differently analysed in the given concepts and theories. It is commonly believed that its role will increase due to the fact that this factor is perceived as the centre of competitive edge of the region.

1. Introduction

Fast progress in the growth of economy causes continuous changes in the competitive environment of modern business entities, in particular companies. For each of them, the position in the market and the capacity to quickly and flexibly react to the changes are of significance. To ensure the economic growth of the country, region or company, increasing, or at least stable demand for manufactured products or services in question should be provided. Competitiveness of the offer is decisive for the economic success or failure. Competitiveness is not a purely technical issue. Modern technologies imported from the West by foreign capital will not be sufficient. Com-

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petitiveness means that the society is organised in a certain way, that it can not only absorb, accept all novelties, but also produce them within a certain scope. Therefore, the issue is not only in imitating foreign solutions, but in innovations as well: technological, organisational, and cultural, created by own entities.

Competitiveness depends not only on the absolute value of the product or service, but also on attractiveness of the offer and on the method of its promotion. Assigning and exhibiting those features of the product which competitive bids do not have is important. Competitiveness is thus a function of innovative actions which decide about both success of individual entrepreneurs and economic development of the country. That is why in the countries actively supporting competitiveness of their economy, innovative policy is becoming part of the area of state administration operation.

Innovative activities include the works related to preparation and starting manufacturing new or improved materials, products, equipment, services, processes or methods, planned for introduction into the market or for another practical use. Innovative activities means also enhancing the level of organisation and management, improving effectiveness of business undertakings and quality of their results. Innovative activities or activities supporting innovativeness stand for improving the level of education, the development of the infrastructure, especially in IT-related areas, standardisation, establishing norms, and activities for protection of industrial and intellectual rights, improving performance and quality of activities of public services, in particular those established for protection of health and natural environment, to prevent the consequences of phenomena and events which pose hazard to life and property. In a different approach, this is a view of innovations as creative changes in the social system, in the economic structure, in technology and in the nature.

Innovations are exceptional tools in entrepreneurship, the activities which give new economic possibilities to the resources. In this respect, they are related to new products, services or knowledge. Thus, innovations create new resources. This new resource is not taken into consideration until practical application for execution or meeting of needs are found. In this way, the new resource gains economic value in the market.

Innovative activities are at present viewed as the basic condition or maintaining and strengthening the position of the entity in the market (most often a company, but also a region).

The objective of this paper is presentation of innovativeness in regional development in the aspect of selected theoretical problems.

2. Innovativeness in theoretical concepts and as a factor of regional development

Every project that is executed affects first of all the changes in theory and in practice in the economic development, as well as in the territorial status and institutional conditions of regional policy.

The literature defines regional development in a number of ways. Ryszard Brol (1) emphasises that the most synthetic are the three definitions by Jacek Szlachta, Tadeusz Kudłacz and Andrzej Klasik. They define regional development in the following way:

- “regional development” is a continuous improvement in competitiveness of business entities and in the quality of life of residents and increase in the economic potential of the regions, contributing to social and economic growth of the country (2);
- permanent increase in the quality of life of residents and in the economic potential in the scale of a specific territorial unit (3);
- this definition has been expanded for the task force for elements of regional development in Poland as “permanent increase in three elements: economic potential of regions, their competitive strength and the level and quality of life of residents” in the context of permanent growth which contributes to the development of the whole national community (4).

The society should have a positive attitude to effective adaptation to changes, continuous striving to improve quality, performance of activities, as well as satisfaction with the achieved objectives, which consciously employs development processes at the individual, group and system level. Table 1 presents the classification of the factors of regional development proposed by the author. It takes into account the view of the regional development, and in this case it may also be used in a local scale from the point of view of the development of economy in which innovativeness of the economy is included.

Table 1
Factors of regional development with innovativeness included

Development factor	Traditional view	Modern view	Economy based on knowledge
Employment	more companies = more work places	companies which create new work places adjust them to the qualifications of residents	intellect growth with training events and learning for the needs of the labour market and for the development of the company
Development facilities	development of the existing sectors of economy	creating new economic institutions	development of new sectors and introducing innovativeness in the existing ones
Benefits from place	comparative benefits based on tangible assets	comparative benefits based on quality of the environment	comparative benefits based on quality of the environment and intellectual capital
Resources of knowledge	knowledge of the existing personnel	knowledge as a generator of social and economic development	knowledge, information, innovativeness and mobility as the base for development

Source: (5).

It has to be emphasised that the policy of innovativeness is the instrument which, owing to new technologies, promotes increase in quality of the provided services.

As a result of the increased development and global interactions, openness to changes and new technologies and various global conditions as well as international factors increases rapidly. All individuals, social groups, companies and public institutions must faster adjust to the global market of exchange of knowledge, information, services, products and technologies. It may even be the case that quality of Internet communication will be more valuable for some entrepreneurs than quality of any other type of infrastructure. In this case, that commune will win a new investor which is more competitive in these terms, even if its location is worse. Innovativeness means implementation of novelties in business practice. However, this definition must be more detailed. Thus, the innovative activity stands for introduction of a new or significantly improved solution (in reference to a product, goods, services, a marketing process or an organisation) (6).

The definition of innovativeness refers directly to the definition of the new investment included in the Ordinance (EC) of 24 October, no. 1628/2006, on application of Articles 87 and 88 of the treaty in reference to regional economic and investment aid.

Within innovativeness, those investments will thus be mostly supported as a result of which new or significantly improved products arise. Innovativeness should feature novelty and degree of spreading or diffusion. The factors of regional development and the related theoretical concepts in the scope of education and innovativeness are presented in Table 2.

Table 2

Factors of regional development and related theoretical concepts in the scope of education and innovativeness

Education	<ul style="list-style-type: none"> – human capital as a factor of production in the new theory of growth, E. Lucas (1988, 1990); R. Baro, X. Sala-i-Martin (1991); – the result of learning by doing in the new theory of growth, E. Lucas (1988, 1990); – promotion of general education, professional skills, organisational and management skills for creating a sector of high technology in the concepts of policy of endogenous regional development, R. Camagni (1992)
Process innovations	<ul style="list-style-type: none"> – process innovations as an exogenous factor in the neoclassical development model, G.H. Borts, J.L. Stein (1964); H.W. Richardson (1973); – the result of information spreading (<i>spillover</i>) in the new cumulative causality concept, N. Kaldor (1970); – innovations as the basic development factor, with support from scientific and technology parks, the concept of policy of endogenous regional development, E.J. Malecki, P. Nijkamp (1988); – the theory of endogenous increase: the technological progress from development of research and development activities, B&R, P. Romer (1990); – the concept of learning regions in the concept of the policy of endogenous regional development, B. Asheim (1995); – the process of spreading knowledge and skills (<i>knowledge spillover</i>) in the new theory of growth, G. Tondl (2001)

Source: (7).

Innovativeness results from cooperation of persons and institutions with various possibilities and classifications, that is why it is successful when introduced into the market.

The mechanism of stimulation for innovation results in the following classification (8):

- **supply innovations:** discoveries, inventions, the ideas of creators of new techniques resulting from own inquisitiveness.

Supply innovations are very expensive, thus only large corporations or companies can afford financing research or patenting inventions.

- **demand innovations:** stimulated by the needs of the market, that is finding solutions which respond to the demand for the given product or service.

Demand innovations are more valuable in business practice, as they more positively affect business growth.

Innovativeness results from cooperation of persons and institutions with various possibilities and classifications, that is why it is successful when introduced into the market, but it also creates specific economic values. Classification of the sets of the innovativeness system is presented in Figure 1.

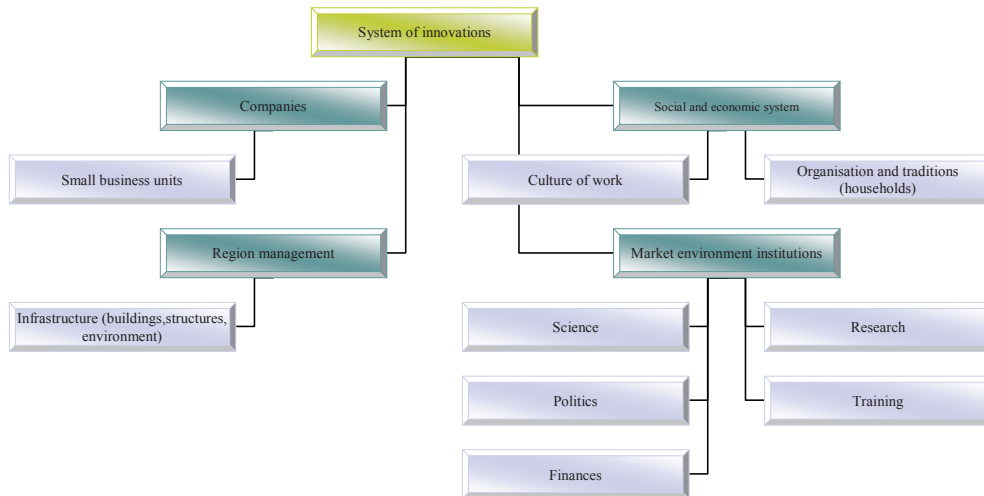


Figure 1. Classification of the sets of the innovativeness system

Source: (8).

Classification of innovations and development is based on the functioning of the market economy. The system of innovations has significant effect on development of a company and the level of the technical and economical infrastructure in the region. On the other hand, the system of innovations supports social and economic activi-

ties and requires the interest on part of the institution to have support in the region. Institutions are not always willing to incur expenditures for this support, in particular companies. In the last 10 years, the best situation in this respect in Slovakia is for small and medium business units. In the companies which promote and are open to innovativeness, its various forms are implemented. It is done by employing new, creative and educated persons in the companies which do not have development problems even in crisis times, unlike in the companies where they are not implemented. It is also important for the political authorities, including regional, and financial institutions to support innovations with aid for execution of investments conducive to progress in science and technology.

Development of innovativeness is considered to be the basic condition of development of the given region. Owing to relevance and application possibilities, the following concepts of regional development are interesting in this respect (1):

- the basic product (*stale theory*);
- the production cycle (*product-cycle theory*);
- the learning region;
- flexible production.

The basic product theory (by Harold Innes) constitutes an evolution from the economic base theory. It finds the source of regional development in export activities. The road to regional development is through gradual specialisation in production, aiming at “developing *the basic product* for the economy of the region, i.e. a product which may be most competitive in external markets. The benefit from specialisation in production are: reduction of transaction costs, improving the production process and quality of the produced *basic products*, which makes these products very competitive. The example of this comes in the success of Nokia in Finland.

The discussed concept assumes commitment of public authorities aimed at supporting the specialisation process and reducing transaction costs in production. This support comes in the form of infrastructural institutions, development of business environment services, co-financing research and innovative activities, as well as commitment of financial institutions in financing production specialisation (9).

The production cycle concept combines economic development of the region with the three-stage cycle: origination of a new product—its improving—standardisation. The first stage (origination of a new product) is done in highly developed regions which have the appropriate potential for creating innovativeness, i.e. the scientific facilities, the best market information, marketing instruments, and have demanding and affluent market of consumers, capable of absorption of innovative, expensive products. In the second stage of the cycle, the product is improved, it is cheaper (produced in larger series) and exported into external markets. In the third stage of the cycle, a standard product is created whose production may be transferred to peripheral regions of weak development, with less affluent consumers in the market, but with cheaper work force, thus affecting development of less developed regions.

Pursuant to this concept, public authorities should support both innovative activities in rich regions and the capacity of taking over standard production by poorer regions (9).

The learning region concept is one of several theoretical and application structures which recognise the dominant role of process, organisational and marketing innovativeness as the key factor in regional development. On this basis, Richard Florida (9) spread the *learning region* term, where the main inspiration and stimulation of development comes from permanent innovativeness and the ability to accept changing market conditions. Under these conditions, the task of entities in regional policy is to stimulate all factors responsible for development of science, research, improvement of personnel and application of high technology in the companies of the learning region. The public method of supporting the private innovative sector comes from creating a regional system of innovations which includes public and private institutions operating in a shared network of cooperation between the centres of science, expert institutions and business entities. Regional centres of innovations and science parks are used for this purpose.

The flexible production concepts make references to the transformation of development, as they were established in 1980s, during the crisis period of the mass production system. The creators of this concept, Michael Piore and Charles Sabel, on the basis of research in dynamically developing Italian regions (especially Emilia-Romagna) focused their attention on the regional system of flexible production and specialisation. It is based on a numerous group of small and medium companies, capable of quick changes in production consistent with the requirements of the market. The system is based on the territorial cooperation with the source in social relationships resulting from mutual trust. The source of this cooperation is the historically developed integration of regional community and entrepreneurship traditions. The system of flexible production in small companies and the tradition of social cooperation are the source of reducing transaction costs and increasing effectiveness of the whole production group (9).

Other important concepts and theories of regional development which take innovativeness into consideration are:

1. The theory of Joseph Schumpeter, where the source of the historical change comes from technical inventions, and economic development is similar to the process of creative destruction. Entrepreneurs are the most important factor of changes, as they develop a new combination of the system, open new markets, cooperate with new business partners and test new raw materials and methods of transport. That is why it is immensely important on part of public authorities to create social and institutional climate for innovative activities of companies. Agriculture in Slovakia provides an example of such processes. Innovative modernisation processes and improvement in many actions in the scope of management and organisation of companies have been recently initiated, especially in agricultural cooperatives, in Slovakia. These transformations come

in the forms of: returning farms to the cooperative, commitment of additional stockholders and capital, participation of land owners and other entities in innovative technologies which will allow farmers to differentiate their activities and many new products, as well as introduce effective activities in the area of technical and organisational progress (production of bioenergy, food processing and trading, etc.). It has to be noticed here that the process of creative destruction caused many failures in companies, which were replaced with new ones, more flexible, and adjusted to the conditions of the market economy;

2. The new growth theory of Romer: this theory assumes the possibility of accumulation of the factors of growth, which means:
 - the possibility of gaining permanent growth and
 - maintaining or even increasing differences between regions.

Moreover, long and stable growth is based on endogenous development, and growth is based on human and material capital and process innovativeness. National and regional authorities should build internal potential of the given region instead of investing in the export base. Poor regions may catch up with the delays by investing in human resources and enhancing the technological level;

3. The theory of institutional economic growth of North, where human being is the author of social institutions, but they evolve in a long historical process. A certain level of contradiction is interesting, as two groups of causes decide about growth. On the one hand, economic factors, such as technological change, have effect on reduction of production costs. On the other hand, growth is dependent on reduction of transaction costs, which comes from more effective political and economic institutions, and the current institutions stand for the rules of the game which limit the activities of the individual.
4. The concept of sector polarisation by François Perroux, based on the theory of growth poles. The theory of growth poles states that a region does not grow economically in the same degree over its entire area. Growth is fastest in one or many points (called the “poles”), with relatively smaller changes in other areas. Cities are these fast-growing points, especially large and medium-size ones. Their growth affects the changes in the rest of the area. The theory of growth poles explains why growth is not balanced geographically. A special role in the growth process is played by the so-called drive industry (motoric). It should be represented by a large plant (plants), important for the economy, well-prospering and branched to other industries. The drive industry stimulates growth of the entire region by increasing employment and buying capacity of people and attracting new activities. The drive industry is related to other industries, called stimulated industries. Stimulation affects also other types of activities in the region, e.g. sale of goods and services, education of employees (10; 11; 12; 13).

3. Conclusions

The presented selected concepts of regional development take into consideration the innovativeness factor as a source of regional development, but do not fully explain many problems in regional development, including the mechanism of differentiation of regions due to social and economic growth. They are only examples of the search for an answer to the question: what is the driving force of regional development with varied level of development, under varied conditions of macroenvironment, with varied resources and possibilities of development? Regional development is a multi-aspect process. A region exports goods and services, expands infrastructure, benefits from rich and varied resources: human, environmental, business, knowledge and technology, provides the market with new, technically advanced products and services, when innovative entrepreneurs and competent and active institutions of public authorities act who support these processes. All this is happening even at the local level, and that is why local government and local initiatives are of such importance, being the basic factors of development, especially with the existing entrepreneurship and institutional support under conditions of the economy based on knowledge. As a consequence, the process of concentration and specialisation of this production in the regions with the most favourable natural, social and economic conditions is deepening, with a view on the needs of often distant international markets. Concentration of expenditures in the areas which give the best results is also increasing, and problem areas are pushed to the periphery where more and more often less attractive areas are left by their residents (depopulation of the countryside), with harm to the environment and to the residents. Innovativeness in a natural way is related to the centres of growth, and not to peripheral areas, due to human and social or intellectual capital.

All in all, the largest hazard for the proper regional development comes from the weaker part of the region, losing the competition for the markets with a more efficient and better organised centre (the core, the centre of growth). The synergy effect comes into play, where faster development of the industry (sector) concentrated in a regional centre (most often with advanced innovative activities) is associated by outflow of the best qualified personnel and capital resources from the peripheries to this centre, which is not beneficial for the development of the region. The innovative processes should be present not only in the centres of growth, but also in the peripheries, e.g. in the scope of a broadly understood agricultural business.

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Innowacyjność w rozwoju regionalnym – wybrane problemy

Streszczenie: Celem artykułu jest przedstawienie innowacyjności w rozwoju regionalnym w aspekcie koncepcji rozwoju regionalnego. W obecnych warunkach istotnego znaczenia nabierają uwarunkowania rozwojowe poszczególnych regionów, na podstawie których powinny opierać się kierunki rozwoju danych województw. Ponadto istotne są koncepcje rozwojowe dla poszczególnych regionów. W niniejszej pracy zaprezentowano czynniki rozwojowe spotykane w literaturze przedmiotu na tle innowacyjności. Równocześnie szczególną uwagę zwrócono na koncepcje rozwojowe związane z innowacyjnością. Innowacyjność jako czynnik rozwoju regionalnego jest różnie rozpatrywana w danych koncepcjach i teoriach. Powszechnie uważa się, iż jej rola będzie wzrastać ze względu na to, że w tym czynniku upatruje się przewagi konkurencyjnej regionu.

Słowa kluczowe: rozwój regionalny, czynniki rozwoju regionalnego, innowacyjność
