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INNOVATIVENESS IN PROCESSES OF STIMULATION OF REGIONAL DEVELOPMENT ON EXAMPLE OF ŚWIĘTOKRZYSKIE PROVINCE

Abstract: The article presented below has theoretical – research character. The achievements of literature in the scope of innovativeness, regional development and enterprise have been used here. The article also presents the results of research on innovativeness and enterprises, regional economy and competitiveness carried out by Jan Kochanowski University in Kielce. Its objective is depicting theoretical and practical determinants of regional development example of Świętokrzyskie Province (Voivodeship) in the light of innovativeness.

Key words: Innovativeness, regional development, Świętokrzyskie Province.

Introduction

Poland which in 2004 became a member of European Union entered to existing structures as one of the poorest countries of Central Europe, expecting that the membership will facilitate achievement of improvement competitive capabilities of country. Contemporary global transformations signify a progressing process of integration national and regional markets into one global market of products and manufacturing factors, force searching conditions, which favour enforcing of competitiveness. It is expressed by striving to take up actions in EU in order to stimulate the growth of economies and employment, through changes on economic, social and environmental planes. Realization of these assumptions is supposed to strengthen competitive position of EU towards such countries as US or Japan (but also more and more stronger competition on the side of India and China). The aim of European Union in the scope of maintaining economic growth (defined in Lisbon Strategy enacted by European Council in march 2000 and amended in march 2005) is to be carried and thanks to development of the economy based on knowledge. Such economy must achieve appropriate development of sectors recognized as carriers of knowledge, such as: education, science and research – development activity, branches of industry of so

called high technology (where expenditure on research and development constitute 4% of selling value) aviation industry, production of computers, pharmaceutical and electronics industry) and business services connected with knowledge economy.

Practical application of knowledge enables using of physical, financial and social capital as well as potential of natural environment the notion of economy based on knowledge in strictly connected with innovative activity conceived, according to OECD terminology as a sequence of activities of scientific, technological, organizational, financial and commercial character, the aim of which is working out and implementation of new and sophisticated products and processes. The paradigm of development driven by knowledge and innovations create in modern economy basis for searching practical solution enabling acceleration economic growth based on knowledge and innovations.

Interception of economic advantages obtained from implementation of novelties take place in enterprises recognized as the centre of innovative process. Working out conditions enabling creation and absorption of innovations in enterprises thus it is one of crucial elements of conception of based on knowledge economy. The consequence is the outlay in Lisbon [Pastuszka 2012, p.135-138] strategy tasks for Union and member states servicing development of innovations. Member states are supposed to develop pro innovative policy trough supporting small and medium innovative enterprises, promotion of common research of entrepreneurs and universities, improvement of access to high risk capital, development of innovative centres on local and regional level.

Conducting uniform innovative policy is hampered by differences between individual regions and spatial disproportions of development economy based of knowledge. Poland falls behind from the average for EU in terms of amount of expenditure for research – developmental activity, constituting one of the principals source of innovation in enterprises. The region in Poland, in which expenditure on research – development activity is the lowest compared to other provinces is Świętokrzyskie Province. What makes up the amount competitiveness of the country is competitiveness of the regions. It is in the interest of Polish economy that the grates amount of regions be competitive of global market. In accordance with conception of economic based on knowledge, it can be accepted that crucial element of competitiveness of Świętokrzyskie Province is innovative activity of enterprises, in particular MSP sector. The awareness that in the retarded regions small and medium enterprises have limited possibilities (in particular financial ones) of growth and institutional infrastructure is often insufficient, raises, doubts, however, as for possibilities to created competitive advantage of Świętokrzyskie Province, on global market based on innovative activity of enterprises.

1. Innovativeness vs. regional development

Despite more and more recognized relationship between science, innovations and economic development a comprehensive depiction and mutual connections be-

tween then seems to be difficult and complicated. It's a result of complex reactions and phenomena in the science itself as well as a multiple set of elements which have effect on the process of economic growth. [Kot, Stawasz 2006, p. 1]. It is widely assumed that the science is a causative factor of the process of national, regional, social and legal transformation. Modern conceptions of economic development accept accumulation of growing scale advantages resulting from human capital for basic, endogenic factor of economic growth in longer periods. Accumulation rate of human capital is proportional to time allotted to education and development of qualification. They on the other hand, determine the capability to and absorb innovations [Grudzewski, Koźmiński 1997, p. 25].

Spreading of knowledge and technological information plays part in the economy of OECD countries, going in recent years from industrial economy to that based on knowledge [*Technology...* 1998, pp. 36-37]. In the economy of these countries there was a shift towards the service sector and growing demand for services rendered by this sector. In many cases activities in the service sector have, up to now, realized within individual enterprises. Owing to technological and organizational innovations it was possible to set up manufacturing and servicing activity *e.g.* financial or book-keeping services. At the same time the service sector becomes the most important user, and even developer of new technologies.

In Kukliński [1995, pp.181-182] opinion, the system science–economy–technology should be recognized as a main element of development. He calls for necessity of holistic look and approach. The system has dynamic character, starting in the process of creation and diffusion of innovations, presented as a complex mechanism of creating new production processes.

There are many definitions of innovation. The notion was introduced to economical sciences by Schumpeter [1960, p. 60].

In his point of view innovation are as a follows:

- introduction to production new products or improvement products,
- introduction new or refined methods of production,
- opening new market,
- applying or new methods of sale or purchase,
- applying of new raw material and semi-finished products,
- introduction of new organization of production.

The object scope in this approach is wide and includes, in principle, changes of technical organizational and economic character.

Equally widely innovations are comprehended by Drucker [1968, p. 58] who is accepting, that innovations are penetrating all spheres of activities of the company. That can be changes of the model of product, marketing method, offend price of services for the customer or changes in the organization and managements methods. The similar approach is presented by Porter [1990, p. 45]. According to him the innovation means both technological improvements and the best methods and ways of making the given

thing. That can be revealed in changes of the product, new approaches for marketing, new forms of distribution or new concept of management.

One should notice that innovations are perceived as the process rather than as the one time act. A dualism is included in presented definitions. It consist in looking at innovations from the side of the product (product innovation) or the process (technological or organizational innovation). In the first case it is involving the launch of new or improved products, in the second with applying new manufacturing techniques or the substantial change of their mechanization and the automatization [Gruchman 1999, p. 7]. Innovations are tied however, with changes and risk.

It can be assumed that economic – social benefits should be a result of technological progress, as the process of improving means and methods of producing the product themselves and working conditions. In this meaning the technological process is a notion broader than innovations.

The process of improving methods and manufacturing techniques carried out with the help of technical innovative changes concerns both means of the work and objects of the work. Innovations and technological progress have their source in knowledge and science, and commercialization of knowledge and science is expressed through applying new solutions. This one can make an assumption, that organized work of specialized teams (rather seldom of individual persons) is the source of modernity and progress, giving profits in economics sphere within short time as well as the possibility to start competitive or simply to remain in the market.

The phenomena occurring in the economy defined by Drucker, Schumpeter, Porter and other authors always have spatial dimension. Therefore one can say about innovativeness with reference to country, region, city, one can analyse the level of innovativeness, identify factors influenced on transformation of social-economic territorial structures directed towards innovativeness according to principles of economy based on knowledge. The factors that have influence on the level of innovativeness of regional economy are as follows: accumulation of capital, the level of social education, organizations and spheres B+R, university centres, strong economic units functioning in branches counted into high-techno, social propensity to resourceful innovative behaviour, economic activity structure, existence of net connections between economic objects, diverse relations between regional society, enterprises, organizations, national and regional institutions.

Matter of importance for regional economy is development of net of connections between objects located in the region strongly tied and directed towards innovative processes. Terms used for such connections usually are, *e.g.* cluster, network, island and archipelago.

According to principles of forming and functioning of new production areas and spaces of high grade of economic activity, while examining the issues of technological progress and utilization of innovations in regional economy, instruments of regional policy are of significant importance. In literature of subject and strategic pro-

grams thesis about necessity of structures at provincial (voivodship) level Regional System of Innovation (RSI) is launched.

National System of Innovation (KSI) can be defined as system of production sub-systems, scientific – technological and relationships between them. RSI makes a kind of specific conglomerate of co-operation of various organizations and institutions located in the region, their aim is development of resourcefulness and innovations. To those units belong: public authorities (provincial government and self-government authorities), regional development agencies, agencies promoted technical and technological progress in given sectors, universities, scientific and research institutions, centres of technology transfer, consulting firms, production objects, commercial and service units B+R, *etc.* RSI is institutional system conditioning realization of innovative policy in the region.

Regional development policy should perceive the relationship between scientific centres public and private research centres, development agencies and the level of technology, scientific and educational centres and the level of technology used by regional objects which stimulates growth of regional economics.

Equally important is supposition that growth and diffusion of innovation as well as technical and technological progress contribute to economic growth, and on other hand scientific centres are “product” of economic development of the region [Dresch, Pelts 1989, pp. 47-48]. According to this view RSI, if they are formed in the region, will testify of high level of regional economy.

2. Economy and innovations in Świętokrzyskie Province

Świętokrzyskie Province, as EUROSTAT reports, is one of the five poorest regions of European Union. In terms of (GNP), counted *per capita* with a figure of PLN 27.333 per person. Świętokrzyskie Province was placed in 12th place in the country, with country’s average of PLN 35.201 per person. A low position of the province results from the structure of regional economy which is dominated by not very effective branches of production. In EU countries there are 288 regions NUTS, from which 70 achieved in 2010 (GDP) indicators lower than 75% of EU average measured among 27 member countries Świętokrzyskie Province achieved only 39.3 of the average. Disproportions between the reaches region (inner London 302.9 %) and the poorest one (Nord-East, Romania 23.6%) are almost 13-fold.

The measure of competitiveness of individual regions, countries and enterprises is to a large extent innovativeness of economy. Enterprises, if they want to function in conditions of competitive environment are obliged to take part in creation of knowledge. Knowledge, apart from labour and capital, is the most important determinant of economic success of economic objects in times of global economy.

The appraisal of the level of innovativeness in enterprises is extremely difficult. Świętokrzyskie Province is not very innovation region. The proof is very low capital

investment per one resident: PLN 5319 in 2010, while the average for Poland in the same year amounted to PLN 5690. In results from the research that innovative solutions at the scale of European and world marked are located only in regions of the highest investment attractiveness, while Świętokrzyskie Province is counted into provinces of the lowest attraction. From the report of research concerning perspectives of development small and medium sized enterprises it results that in the map high-technologic branches Świętokrzyskie Province looks rather poorly. It shows that enterprises working in Świętokrzyskie Province will never be leaders in technological innovations. We can find out about similar statement from *Regional Operative Program for Świętokrzyskie Province for years 2007-2013*, where we can learn that more than a half the most important products industrially manufactured belongs to the low- technology sector.

Regional development begins more and more often to be subject to such processes as : globalization, technologic revolution, and transformations concerning developing paradigm, which consists transition from industrial to information economy [Olechowska 2004, p. 43]

Data clearly show that in the structure of economy in Świętokrzyskie Province dominate, among enterprises employing more than 9 persons, enterprises of industrial manufacturing. They are decided leader in the sector of small and medium size enterprises and together with small objects they make more than 35% of population. A significant group constitute also commercial enterprises connected with construction industry. In these three mentioned above branches are concentrated over $\frac{3}{4}$ enterprises in the region.

In the group of industrial manufacturing enterprises dominate food processing and beverage enterprises, which make up over a quarter in the branch of objects. The production of metal ready-made products and products from other non- metallic row – materials are significantly represented in the region (over 10% of branch enterprises).

In the group of large enterprises the most comes from the branch of products from other non-metallic materials and in the sector of medium objects ready-made metal products.

The branch of food and beverages industry are represented by small enterprises.

3. Innovativeness of enterprises in Świętokrzyskie Province¹

Świętokrzyskie Province is characterized by a big innovative potential of industrial enterprises expressed by implementation in many areas of activity, a great amount of slight changes possessing hallmarks of novelty. This potential however has only small correlation with implementation of innovative solutions reinforcing competitiveness of enterprises on markets, where they are present.

¹ Research Project Z/2.26/11/2.6/27/U/7/06 sponsored by UE, Structural analysis of Świętokrzyskie Province in terms of improving its innovativeness and competitiveness.

Industrial enterprises of the region declare small real demand for “hard” innovations. In the range of research and developmental work and licence the demand though very slowly, but rises, what means growth of consciousness of entrepreneurs and the role of research – developmental centres as potential source of innovation.

Industrial development of the region doesn't play any significant role on the market as tenders of new technologies. The changes taking place in time imply, however, slight enforcement in position of enterprises in this range.

In the region progresses a process of isolation and reinforcement of the group of innovative enterprises, which is accompanied by with draw all form activity of innovative enterprises, mainly medium-sized.

A substantial part of entrepreneurs in the region, despite starting innovative activity now, doesn't plan reinforcement innovativeness of their enterprises within next three years. It can signify about lack of possibilities of continual development because of lack of conviction about possibility to achieve success or lack of belief in possibility of leading further activity whatever. The development of the region in conditions of pessimism of entrepreneurs will be hindered. It will be justified taking up such activities, which will form belief in possibility of steady development, especially among small and medium enterprises.

The innovativeness of industrial enterprises in Świętokrzyskie Province is conditioned by such branches as: manufacturing products from non-metallic materials (26 PKD), manufacturing of ready – made metal products (28 PKD), production of machines and appliances not classified in any other place (29 PKD) and production of food-stuffs and beverages Large enterprises in the region are more innovative than medium enterprises.

The activities taken up in the region directed towards the help in surmounting barriers of innovativeness of enterprises should be adjusted and addressed to each segment of the size of enterprises separately, with consideration dissimilarities of proposed necessities.

There is too low awareness of benefits resulting from the co-operation with other market participants in industrial enterprises of the region. However the awareness of the regional market is growing in the development goal of the innovation of enterprises.

In the region there is lack of sufficient institutional conditions supporting the development of innovative processes in the industry. And so building of the favourable environment for the innovative activity by reinforcing the role of subjects supporting business centre and the enterprise is essential, as well as of entities dealing with research developmental activity, but also stimulating the initiative of small and medium enterprises in using supports from all available sources. The increase in the activity of enterprises in incurring expenditure affects such changes in the area of production of enterprises which are shaping their market competitiveness and in consequence contribute to the rise in the sale value of industrial products.

This seems beneficial both increasing the amount of expenditure on the innovative activity and taking the initiative even at currying slight expenditure.

4. Recommendation

It is possible to achieve the improvement in the existing state taking such action in the region as:

1. Strengthening of leaders of the regional innovativeness and active large enterprises and including them into the Regional System of Innovation, through:
 - Lobbying of the region and its large enterprises on foreign markets, led by authorities of the region, the politicians associated with the region, entrepreneurs tied up with Centre Business Club and others.
 - Creating incentives to implement own research developmental activity in enterprises, by building and expanding the awareness of resulting benefits from applying innovative solutions among entrepreneurs. Employing institutional forms such as: Loża BBS, Targi Kielce, UM for popularizing enterprises achieving successes on this field.
 - Supporting and initiating by institutions supporting market associating partners in the purpose of creating projects enabling the mutual co-operation of scientist and entrepreneurs. Triad composed of the Marshall Office, the Polish Chamber of Industry and Commerce and Świętokrzyskie Centre of Innovation and Technology Transfer can be one of forms of comprehensive supporting such initiatives.
2. Creating the network of connections between big and medium –sized enterprises for the transfer of new technologies and the development of innovations in the region. This way will be supporting the directed diffusion.
 - Promotion of the development of industrial clusters in the region in the widely comprehended metal industry and the industry of promotion of non-metallic products by initiating by self – government authorities institutions of supporting the business and large enterprises enabling meeting and forming tie between them (conferences, fair, picnics).
 - Encouraging the development of scientific – industrial parks by self –government authorities in the region and initiating the formation of scientific and business consortia for the purposes by the realization of the common research projects.
3. Action in favour of limiting barriers of implementing the innovation with particular reference to financial barriers in enterprises of MŚP sector:
 - Strengthening of the role of regional institutions, of innovativeness and enterprise and their role in the process of offering consulting and training services, and search for sources of financing innovative activity in the scope.

- Working out of conception and implementation of preferential system of financing innovative activity of enterprises enabling them access to financial capital.
4. Undertaking of broad actions promoting enterprise and innovation enabling creation in the region atmosphere of social acceptance serving for building innovative climate encouraging to enterprise and innovative activity through:
 - Organizing of contests, presentation, conferences, fairs, exhibitions promoting results of innovative activity and attitudes based on such institutions as Marschall Office, *etc.*
 - Promulgation of information and supplementation of education in secondary schools and Universities as for problems connected with innovativeness and enterprise engaging teachers and local authorities in this process.
 - Promotion of problems of innovativeness and enterprise via information campaign based on local media, broadcast, TV, press.
 5. Creation conditions to raise qualifications of entrepreneurs and employees in fields favouring innovativeness of enterprises trough:
 - Supplementation of market offer of education as for courses of financing with active participation in the process of education of practitioners in economic life.
 6. Undertaking of actions enabling of building high technology sector in the region treating it as a complementary path of innovative development of the region through:

Undertaking by self – government authorities of the region actions attracting domestic and foreign investors to Świętokrzyskie Province from the branches of high technology sector through creation of competitive conditions of functioning of enterprises (also through financial incentives).

Conclusions

The propensity of Polish economy to polarized development (the symptom of which is the development of metropolitan centres at the expense of smaller towns) and also a phenomenon comprising a significant part of significant part of Polish area which “Succumbs to marginalization regarding European area and is not in position to meet competitors requirements” enforces taking activity for limiting this tendency [Piotrowski, Rakowski 2005, p. 222]. Świętokrzyskie Province is characterized by a low level of social–economic development in comparison with the rest of the country [Pastuszka 2008, pp. 119-123]. Endangered with peripherization requires actions enabling breaking negative trends. It disposes endogenic potential based on natural resources and experience of enterprises of traditional branches.

The development of economy of Świętokrzyskie Province on basis of enterprises and they are currently potential “MŚP sector finds no confirmation in carried out research. The leaders of innovations are large on enterprises and they are currently potential “locomotives” of development of Świętokrzyskie Province.

The realization of assumptions of the regional strategy is giving the chance of seeking the own path at the development and exploiting the potential of the region to the innovation of the Świętokrzyskie Province. Possibilities of financing which means from structural funds are giving, mainly Operational Program of Innovative Economy, can contribute to the growth of the innovativeness in the region and give bases for long – lasting strengthening the competitive position of the Świętokrzyskie Province in a long stretch.

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