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## INNOVATIVENESS OF THE ECONOMY AND INNOVATION POLICY OF REGIONS

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**Summary:** National innovation policy is implemented at two levels: central and regional one. For self-government authorities this is a relatively new area of activities. The aim of the article is to present the basis and to reveal the importance of regional innovation policy in increasing the economy competitiveness.

**Key words:** regional innovation policy, competitiveness, innovation

### 1. Background for activities

The paradigm of development undergoing growing changes in the 1990s, is more and more determined by knowledge-based economy and new technologies, as well as increasing differentiation in research, development, and military areas of the economy. These issues stimulated undertaken at the supranational level decisions to stimulate changes and accelerate development. Among social reasons there were effects of ageing of European societies and its consequences<sup>1</sup>. Accordingly, in March 2000 in Lisbon, basic premises of Lisbon Strategy have been accepted. This strategy was meant as an instrument to accelerate development of the European Union.

Due to difficulties in achieving assumed goals by member countries, European Commission undertook in November 2004 the initiative to review the Strategy and introduce appropriate changes. The result of those actions was subsequent operational document, concerning next stage of the Strategy realisation. It is characterised by focusing on two goals: the first one to ensure accelerated economic growth, the second one to increase employment. On July 20<sup>th</sup> European Commission approved the Community Programme for Lisbon named „Common Actions for Growth and Employment: The Community Lisbon Programme”<sup>2</sup>. It contained complementary actions in the framework of new „Partnership for Growth and Coherence”.

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<sup>1</sup> J. Bieliński, *Strategia Lizbońska a konkurencyjność gospodarek (Lisbon Strategy and economies competitiveness)*, Cedewu, Warsaw 2005, p. 13.

<sup>2</sup> Commission of the European Communities, *Communication from the commission to the Council and the European Parliament – Common Actions for Growth and Employment*, The Community Lisbon Programme, SEC (2005) 981, COM (2005) 330, Brussels, 20.07.2005.

Primary goals and renewed ones will not be achieved by all countries. The assumed goals could possibly be achieved as an average for EU, not by individual member states. It concerns, among other things, the R&D financing at the level of 3 percent of GDP, where not only some countries, but also EU as a whole did not make considerable progress. Similarly, little progress could be noted concerning the emission of greenhouse gases. The achievements in the field of labour market are also unsatisfactory, particularly concerning women employment<sup>3</sup>.

Currently proposals are made to continue the realization of assumed goals, with simultaneous need to change names of undertaken goals and define new ones. The reasons behind this are economic and financial crisis, social problems, accelerated globalization processes, need for further adaptation in internal market functioning, energy policy, demographic trends, and migrations. Thanks to the new strategy for the years after 2010, there could be possible<sup>4</sup>:

- a) to cope with current challenges;
- b) to remove shortcomings in implementation;
- c) to undertake common European responsibility for realisation;
- d) to link coherently all EU strategies (economic reform, Lisbon Strategy, sustainable development strategy, and climate change strategy).

## 2. Innovation policy and regional innovation strategy

The aim of structural changes is economic growth, together with increased social well-being and quality of life. These changes occur through increased competitiveness of the economy. According to OECD definition, competitiveness means the ability of enterprises, industries, regions and countries, and now also multinational groups to cope with international competition and to assure, in durable manner, high rate of return for production factors used with high employment level<sup>5</sup>. Similarly defined by the European Commission is the competitiveness of regions, as the ability of regions to keep relatively high employment level under the circumstances of open international competition<sup>6</sup>. Until recently, basic factors influencing economic growth and competitiveness were capital, work, and land. Now, competitiveness is more and more determined by qualitative factors connected with technological progress,

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<sup>3</sup> Cese 40/2008, *Odnoviona Strategia Lizbońska 2008–2010. Rola zorganizowanego społeczeństwa obywatelskiego (Renewed Lisbon Strategy 2008–2010. The role of organized civil society)*, summarising report for European Council, 13–14.03.2008.

<sup>4</sup> European Economic and Social Council, ECO/CMSL 267, *Lisbon Strategy after 2010*, Brussels, 4.11.2009; *Opinion of the European Economic and Social Council on Lisbon Strategy after 2010 (diagnostic opinion)*, in: *Lisbon Strategy after 2010. Proposals for organized civil society*, integrated report for the European Council, January 2010, p. 15.

<sup>5</sup> OECD, *Industrial competitiveness*, Paris 1996.

<sup>6</sup> European Commission, *Sixth periodic report on the social and economic situation of regions in the EU*, Brussels 1999.

innovations, human capital quality, or economies of scale. This is confirmed by observations that sustainable development, in the presence of increasing globalization processes, can be obtained by creating competitive advantage based on innovation activities.

The guidelines of the coherence policy for the years 2007–2013 stress the need of dynamic growth of knowledge- and innovation-based economy, more intensive and effective use of resources serving innovation, and strengthening of regional innovation systems.

Along with systemic changes and accession of Poland to the EU new, favourable conditions appeared to raise competitiveness in all spheres of life. It has been reflected in goals formulated in strategic documents, plans, and programs prepared both at the central level and at regional or local levels. The aim of innovation policy is to exert the influence on economy and its players that stimulates continuous and sustainable growth in technology, science and innovations. The main object of this policy are enterprises, and among the realised goals there is creating appropriate climate and environment for innovations.

According to the European Commission definition innovation policy is “a set of actions to raise the quantity and efficiency of innovative activities, whereby »innovative activities« refer to the creation, adaptation and adoption of new or improved products, processes or services”<sup>7</sup>.

Such policy is in Poland realised at the central level by fixing and transferring defined budget expenses to R&D activities. Central dimension characterises also some tax regulations (also those concerning innovation activities). Another element of innovation policy, realised at the highest level, is the organisation of science and research.

Besides, the regional dimension of innovation policy can also be pointed out, taking e.g. the form of regional innovation strategies. The regional dimension of innovations has been discerned by EU in the 1990s, when some actions to stimulate innovations at the regional level were undertaken, accompanying the concept of strategic approach to innovativeness and competitiveness of regions. Financial means from structural funds have been directed into this level. Increased importance of regions that shape the economic and social life makes a kind of counterbalance for globalization processes. The reason for this is a fact that many interactions between enterprises and the R&D sphere that are accompanying innovation processes take place at the regional level. Strategy developed at this level enables optimal adjustment of support instruments to the needs of a given region and its potential<sup>8</sup>.

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<sup>7</sup> European Commission, *Innovation policy in a knowledge based economy*.

<sup>8</sup> G. Gorzelak, A. Bąkowski, M. Kozak, A. Olechnicka, *Polskie regionalne strategie innowacji: ocena i wnioski dla dalszych działań (Polish regional innovation strategies: Evaluation and conclusions for further actions)*, Warsaw, January 2006, s. 2.

Another reason of increased role of regional innovation policy can also be pointed out. This is the commonly accepted principle of subsidiarity, together with continuing process of management decentralization.

Basic link in innovation processes are regional authorities. They become a coordinator that makes systemic and institutional framework for the course and diffusion of innovations in the region. The aim of innovation policy is to create the regional innovation environment that contributes to increased absorption and innovation abilities of regional entities<sup>9</sup>. Regional innovation strategy (RIS) should define directions of innovation policy and the ways to optimise the regional infrastructure that supports innovativeness. Its aim is to support regional or local authorities that organize regional development contributing to increased innovativeness of this region.

### 3. Stimulating competitiveness growth through innovation policy

According to the economists, innovation is now the factor that determines the competitive position, development and growth. Its importance for social and economic development is still growing. Assuming that innovativeness of the economy is the main source of economic growth, translated next into the position of country's economy in the global rank, it gains priority importance, in particular when we analyse its level.

The value of the index (ratio of R&D expenditures to GDP) that in 2007 equalled 0,56 percent, places Polish economy at the end of rank, not only among EU countries (where the average for EU-27 was 1,84 percent, and for EU-15 – 1,91 percent), but also among OECD countries<sup>10</sup>. When we analyse this index in Polish regions, we can also notice great disproportions across the country. The share of R&D expenditures in GDP does not actually change. Among the regions an increased value of this index can be observed only in Malopolskie and Podlaskie regions, from 0,8 percent in 2000 to 0,92 percent, and from 0,2 to 0,25 percent, respectively. The highest expenditures for R&D are in the Mazowieckie voivodship, though during last years a continuous decrease of this index is observed. The lowest expenditures for R&D occur in the Swietokrzyskie voivodship, amounting to only 0,08 percent (see figure 1). The leaders in EU at the national level are Sweden – 3,64 percent in 2007 with the regions (at NUTS 2 level) Sydsverige 4,45 and Mellersta Norrland – 0,89, as well as Finland – 3,47 with regions Pohjois-Suomi – 4,75 percent and Åland – 0,15 percent<sup>11</sup>.

<sup>9</sup> A. Nowakowska, *Regionalna polityka innowacyjna – bilans dziesięcioletnich doświadczeń (Regional innovation policy – balance of ten-year experience)*, in: M. Klamut, E. Szostak, *Jaka polityka spójności po 2013? (What cohesion policy after 2013?)*, Scientific Papers of Wrocław University of Economics, no. 95, Wrocław 2010, p. 146.

<sup>10</sup> *Science and technology – Research and Development (R&D) – Expenditure on R&D*, OECD Factbook 2008: *Economic, Environmental and Social Statistics* – ISBN 92-64-04054-4 - © OECD, 2008.

<sup>11</sup> Eurostat 2009.

When analysing this index and drawing conclusions it should be kept in mind that the full view of the situation requires an analysis made in nominal values. The reason is a great differentiation of budget magnitudes for particular European regions and various number of inhabitants.

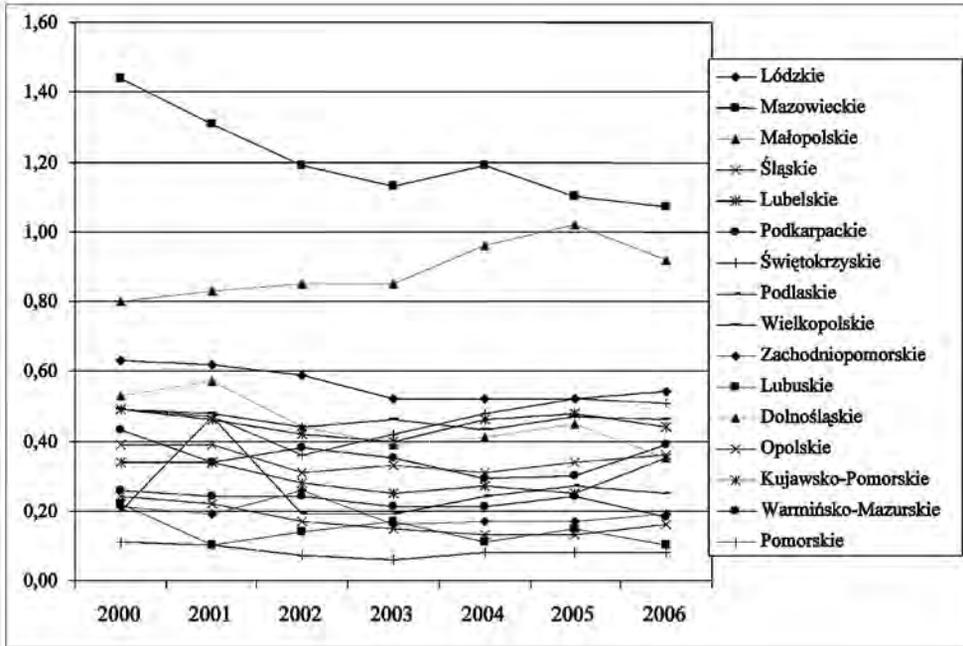


Figure 1. Ratio of R&D expenditures to GDP (GERD) at the NUTS 2 level as percentage of GDP

Source: own, based on Eurostat 2009.

Among main factors that influence the economic growth dynamics is the innovation capability of enterprises. Unfortunately, in Polish regions the sources of competitive advantage are still low labour cost and great market for the goods. In the era of globalization and development of knowledge-based economy, these factors lose their significance. It is important therefore to increase innovation capabilities of enterprises by raising awareness and knowledge concerning innovation, to underline its importance in enterprise activities and to stimulate increased investment expenditures<sup>12</sup>.

<sup>12</sup> National Strategic Reference Framework 2007–2013 supporting economic growth and employment. National cohesion strategy, document accepted by the European Commission decision, approving some elements of National Strategic Reference Framework, Ministry of Regional Development, Warsaw, May 2007, p. 35.

For higher development level and economy competitiveness important are not only innovative enterprises but also appropriate environment consisting of modern research infrastructure, highly qualified personnel, culture of innovation activities as well as level and quality of services offered by the public sector.

Particular elements together with their interactions and links combine together at the regional level to create the already mentioned regional innovation system. The better ability to “extract capabilities” that are embedded in enterprises, public institutions, research centres, training institutions, and other institutions making the business environment, the greater the chance to achieve higher competitiveness level. The instrument that helps to create such a system is well prepared and well realised regional innovation strategy. At the same time the need to maintain continuous realisation of this strategy should be stressed. The basic condition to guarantee this is permanent dialogue, engagement and co-operation between all partners of regional economy. Partnership built on these bases enables active and prompt reactions to changes, elastic adjustment to emerging opportunities and threats.

From the analysis of European experiences it comes out that it is insufficient to develop the strategy itself. The success expressed as increased innovativeness level of enterprises depends on an appropriate choice of priorities and on their efficient realisation<sup>13</sup>.

#### 4. RIS in Polish regions

As already mentioned before, one of the ways to increase competitiveness of a region through innovation policy is developing, implementing, and evaluating the regional innovation strategy. Now, in all 16 voivodships such strategies exist, and they are being realised. Already in 2000 the European Commission undertook the initiative addressed to candidate countries and in the 5<sup>th</sup> Framework R&D Programme a competition has been launched for projects under the Regional Innovation Strategy in Newly Associated Countries – RIS NAC. From Poland there were 9 regions that presented their programs, and 5 (out of 16 taking part in the project) have been subsidized (there were the voivodships: Zachodniopomorskie, Wielkopolskie, Slaskie, Opolskie and Warminsko-Mazurskie).

In 2002 the Committee for Scientific Research addressed to remaining voivodships its subsidy offer to create regional innovation strategies. Ten out of 11 voivodships took advantage of this offer, and the Mazowieckie voivodship submitted its project and received financing in the framework of the 6<sup>th</sup> Framework R&D Programme. Since that time a number of reports and studies have appeared, concerning the importance, methodology of creation and evaluation of regional innovation

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<sup>13</sup> S. Szulika, *Czy regionalne strategie innowacji zwiększą innowacyjność polskiej gospodarki? (Will regional innovation strategies enhance Polish economy innovativeness?)*, <http://www.rsi.org.pl/dane/download/crsizipg.pdf> (access: 27.07.2009).

strategies in Polish regions<sup>14</sup>. Due to the fact that the developed model of strategy creation corresponds to political, economic and social aspects of innovation in the region, it becomes easier to make analyses and comparisons between particular strategies. Nevertheless, they are characterised by great diversity, unequal quality, and some are abstract. They are of complex character, being the combination of many elements, both from the side of region, and of the project team<sup>15</sup>.

Conclusions that can be drawn from the performed analyses and literature studies indicate the role of small and medium enterprises that should be played in enhancing economy competitiveness. It is however important not to limit their role to the functioning in the market based merely on outdated management methods, imitations<sup>16</sup> or making use of cheap workforce. A contemporary innovative enterprise is the one that makes use of wide access to knowledge, new technologies, information databases (concerning technologies, potential contractors or co-operators). It is an enterprise characterised by high level of intellectual capital, capable to exploit the gathered knowledge in an appropriate manner. Therefore one of the tasks necessary to accomplish through the very regional innovation strategy is better relation and stronger cooperation between the enterprise sector and the R&D sphere<sup>17</sup>. Of key importance is here better utilisation of the outcomes of research and development studies by businesses, including increased transfer of technology, product, and organisational solutions. Another important task, directly applying to SME, is increased awareness and activities towards cooperation and partnership with other entities.

Parallel to these tasks that should be realised by SME through the mentioned strategies, there is a need to create in the regions appropriate conditions to stimulate innovations inside the enterprises. In the current analyses the environment (its quality, complexity, accessibility etc.) is often indicated as the stimulator of innovative behaviour of enterprises. It is precisely the environment that has appropriate in-

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<sup>14</sup> Important analyses concerning RIS in Poland are: M. Klepka, *Raport z inwentaryzacji regionalnych strategii innowacji w Polsce (Report on inventory of regional innovation strategies in Poland)*, Warsaw 2005; M. Klepka, *Efekty regionalnych strategii innowacji w Polsce. Rekomendacje do analizy szczegółowej (Effects of regional innovation strategies in Poland. Recommendations for detailed analysis)*, Warsaw 2005; G. Gorzelak, A. Bąkowski, M. Kozak, A. Olechnicka, *Polskie regionalne strategie innowacji... (Polish regional innovation strategies...)*, op. cit.; *Ewaluacja procesu wdrażania regionalnych strategii innowacji 15 regionów Polski pod kątem implementacji projektów wynikających ze strategii (Evaluation of implementation process of regional innovation strategies for 15 regions of Poland with special attention to implementation of projects resulting from the strategy)*, WYG International Report, Warsaw 2006; M. Klepka, M. Opieczyński, *Przywództwo, współpraca i doskonalenie, czyli co świadczy o sukcesie wdrażania regionalnych strategii innowacji (Leadership, cooperation and improvement, or what proves that regional innovation strategy is successfully implemented)*, PARP, Lodz 2009.

<sup>15</sup> M. Klepka, *Raport z inwentaryzacji regionalnych strategii... (Report on inventory of regional innovation strategies...)*, op. cit., p. 16.

<sup>16</sup> Introduction and adaptation of solutions already invented and used.

<sup>17</sup> S. Szulika, *Czy regionalne... (Are regional...)*, op. cit.

fluence and support instruments at its disposal<sup>18</sup>. Here, the awareness of the authors of the strategy and its participants should be stressed, manifested in defining the vision of RSI role and sustained partnership in the regions<sup>19</sup>. For public authorities, the goal should be to create and favour initiatives, particularly in partnership arrangements. The scope for self-government engagement is extremely broad. Great role is attributed to regular meetings of the regional market actors, creating an opportunity for current reaction and strategy adaptation to the changing reality.

Another important question is still the need to enhance the awareness of decision makers as to the comprehensive way of innovation policy, continuous monitoring of RSI implementation and realisation, and investigating innovation needs of the region<sup>20</sup>. Lack of actions in this area makes serious barrier that limits the application of effective tools for RSI management and monitoring. At present, it is the most serious obstacle in implementing RSI. Knowledge concerning importance and possibilities to make use of partnership aimed at realisation of strategy goals and vision, as well as the way in which innovation policy is realised in the region, together with other kinds of policy, creates the need for support coming from regional authorities and other players. Mechanisms of RSI implementation should be perceived as functions of a good governance model<sup>21</sup>.

Extremely important is keeping continuity of undertaken actions. This is crucial for their effectiveness. Relevance and realisation of specific “line of thinking” contribute to the possible success. Action plans, being the instruments of RSI implementation, serve the process of updating and monitoring the information on RSI current needs and state of its realisation. Particular attention has been drawn on this instrument in the report on Polish RSI: “Intervention instruments should be defined in action plans accompanying strategy. Each intervention instrument should be well thought out, in the context of strategic goals to be realised, and precisely described. Shortage of well defined intervention instruments is second basic reason, after lacking management structure for strategy implementation, that can cause failure in strategy implementation”<sup>22</sup>.

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<sup>18</sup> M. Klepka, *Raport. Efekty regionalnych strategii innowacji w Polsce. Rekomendacje do analizy szczegółowej (Report. Effects of regional innovation strategies in Poland. Recommendations for detailed analysis)*, PARP, Warsaw, 31.10.2005, p. 3.

<sup>19</sup> M. Klepka, *Raport z inwentaryzacji regionalnych strategii... (Report on inventory of regional innovation strategies...)*, op. cit., p. 45.

<sup>20</sup> J. Bauer, B. Bębenek, P. Czyż et. al., *Przeprowadzenie ewaluacji procesu wdrażania regionalnych strategii innowacji 15 regionów Polski pod kątem implementacji projektów wynikających ze strategii (Evaluation of implementation process of regional innovation strategies for 15 regions of Poland with special attention to implementation of projects resulting from the strategy)*, WYG International IMC Consulting, Warszawa 2006, p. 13–16.

<sup>21</sup> M. Klepka, M. Opieczyński, *Przywództwo, współpraca i doskonalenie... (Leadership, cooperation and improvement...)*, op. cit., p. 7–11.

<sup>22</sup> G. Gorzelak, A. Bąkowski, M. Kozak, A. Olechnicka, *Polskie regionalne strategii innowacji... (Polish regional innovation strategies...)*, op. cit., p. 167.

## 5. Conclusions

Regional innovation systems, together with their elements like regional innovation strategies, should considerably accelerate the creation of knowledge-based economy, effectively contributing to increased competitiveness of the economy. EU guidelines and financial instruments facilitate the innovation policy.

Problems with the realisation of this policy will appear already at the central level. Goals appointed in EU strategic documents are inaccessible in short term, and most probably also in longer term. This is proved for instance by the relation of R&D expenditures to GDP.

At the same time lacking knowledge, competences, and awareness among lower level decision makers moves the responsibility for innovation policy to the central level. In Poland, regional innovation strategies have already been created, but their realization across the country is very much differentiated.

Another negative phenomenon is the level of awareness among entrepreneurs and their contribution to innovation policy creation and realisation, as well as the creation and implementation of innovation themselves. These infringements are of systemic and structural character.

## Literature

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## INNOWACYJNOŚĆ GOSPODARKI A POLITYKA INNOWACYJNA REGIONÓW

**Streszczenie:** Polityka innowacyjna może być prowadzona w kraju na dwóch poziomach: centralnym i regionalnym. Obszar ten jest dość nowy w działalności władz samorządowych. Artykuł ma na celu przybliżenie podstaw i znaczenia regionalnej polityki innowacyjnej w podnoszeniu konkurencyjności gospodarki.