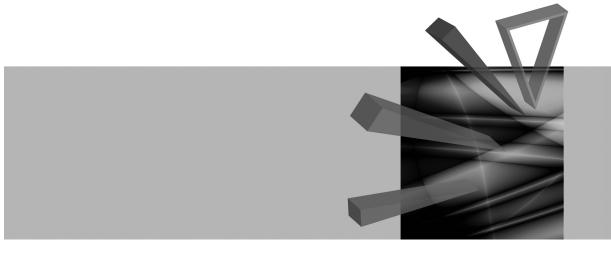
PRACE NAUKOWE Uniwersytetu Ekonomicznego we Wrocławiu RESEARCH PAPERS of Wrocław University of Economics

286

# Regional Economy in Theory and Practice



edited by Elżbieta Sobczak Andrzej Raszkowski



Publishing House of Wrocław University of Economics Wrocław 2013 Copy-editing: Elżbieta Macauley, Tim Macauley, Marcin Orszulak Layout: Barbara Łopusiewicz Proof-reading: Barbara Łopusiewicz Typesetting: Comp-rajt Cover design: Beata Dębska

This publication is available at www.ibuk.pl, www.ebscohost.com, and in The Central and Eastern European Online Library www.ceeol.com as well as in the annotated bibliography of economic issues of BazEkon http://kangur.uek.krakow.pl/bazy\_ae/bazekon/nowy/index.php

Information on submitting and reviewing papers is available on the Publishing House's website www.wydawnictwo.ue.wroc.pl

All rights reserved. No part of this book may be reproduced in any form or in any means without the prior written permission of the Publisher

© Copyright by Wrocław University of Economics Wrocław 2013

ISSN 1899-3192 ISBN 978-83-7695-345-8

The original version: printed

Printing: Printing House TOTEM

## Contents

Introduction	9
Part 1. Theoretical aspects of regional economy	
Ryszard Brol: Innovation vs. regional development	13
Ewa Glińska, Anna Kononiuk: The concept of regional strategy of smart specialization	27
Hanna Kruk: Resilience, competitiveness and sustainable development of	
the region – similarities and differences	35
Andrzej Sztando: Regional innovation strategy implementation – system	
model covering the results of the analysis of the Polish experiences	43
Andrzej Raszkowski: Creativity in the context of regional development –	
selected issues	52
Yuliya Melnyk: Regional peculiarities of the global art market	62
Elżbieta Załoga, Dariusz Milewski: The impact of transport on regional	
development	71
Alina Kulczyk-Dynowska: Diversified spatial neighbourhood – a metropolis and	
a national park	79

## Part 2. The results of European regional space research and analyses

Małgorzata Markowska, Danuta Strahl: Polish regions against the	
background of European regional space with regard to smart growth -	
aggregate perspective	89
Beata Bal-Domańska: Does smart growth enhance economic cohesion?	
An analysis for the EU regions of new and old accession countries	100
Elżbieta Sobczak: Typology of European regions vs. effects of workforce	
changes by the level of research and development activities intensity	111
Małgorzata Karczewska: Gross domestic expenditures on research and	
development in GDP of European Union countries – changes in trends	121
Marzena Grzesiak, Anita Richert-Kaźmierska: Educational engagement of	
the elderly – the experiences of selected Baltic Sea Region countries	133
Ewa Coll: The classification of EU and Eastern Partnership countries	
regarding economic development level – a dynamic approach	144
Anetta Waśniewska: The potential of the population in the Baltic Sea	
Region in the years 2001–2011	157
Alla Melnyk: Modernization of regional structural policy mechanisms in	
Ukraine in the process of its EU integration	169

## Part 3. Selected problems of polish regions functioning and development

Dariusz Głuszczuk: Barriers to innovation activities in industrial enterprises	
by Polish regions in 2004–2006 and 2008–2010 1	81
Piotr Hajduga: Special economic zones as stimuli to regional development	
during a crisis	91
Adam Przybyłowski: Sustainable transport development prerequisites in	
selected Polish regions	99
Mariusz E. Sokolowicz: The impact of transnational corporations' activity	
on regional human capital. Case study of the Łódź metropolitan area 2	10
Anna Jasińska-Biliczak: Interregional cooperation as the stimulation of	
-	22
Franciszek Adamczuk: Cross-border cooperation of Lower Silesia and	
Saxony – current results and prospects	30
Agnieszka Barczak: Managing the production process of a group of	
agricultural farms of the Pomorze and Mazury Region and their	
economic development 24	40
Tomasz Dorożyński, Wojciech Urbaniak: Experiences of county	
employment agencies in the use of EU structural funds to promote	
employment. The case of the Łódź voivodeship 2-	49
Małgorzata Golińska-Pieszyńska: Contemporary innovative practices in a	
regional context of the Łódź region	60

## Streszczenia

## Część 1. Teoretyczne aspekty gospodarki regionalnej

26
34
42
51
61
70
78
86

## Część 2. Rezultaty badań i analiz nad europejską przestrzenią regionalną

Małgorzata Markowska, Danuta Strahl: Polskie regiony na tle europej- skiej przestrzeni regionalnej w kontekście inteligentnego rozwoju – ujęcie agregatowe	99
Beata Bal-Domańska: Czy inteligentny rozwój sprzyja spójności ekono- micznej? Analiza dla regionów państw Unii Europejskiej nowego i sta-	
rego rozszerzenia Elżbieta Sobczak: Typologia regionów europejskich a efekty zmian liczby	110
pracujących według poziomu intensywności prac badawczo-rozwojowych	120
Małgorzata Karczewska: Udział nakładów na badania i rozwój w PKB krajów Unii Europejskiej – tendencje zmian	132
Marzena Grzesiak, Anita Richert-Kaźmierska: Zaangażowanie osób star- szych w edukację – doświadczenia wybranych państw regionu Morza	132
Bałtyckiego	143
<b>Ewa Coll:</b> Klasyfikacja państw UE i krajów Partnerstwa Wschodniego ze względu na poziom rozwoju gospodarczego – ujęcie dynamiczne	156
Anetta Waśniewska: Potencjał ludności regionu Morza Bałtyckiego w la-	
tach 2001-2011	168
Alla Melnyk: Modernizacja mechanizmów regionalnej polityki strukturalnej Ukrainy w procesie integracji z Unią Europejską	177

## Część 3. Wybrane problem funkcjonowania i rozwoju polskich regionów

Dariusz Głuszczuk: Przeszkody działalności innowacyjnej przedsiębiorstw	
przemysłowych według regionów Polski w latach 2004-2006 i 2008-2010 . 189	9
Piotr Hajduga: Specjalne Strefy Ekonomiczne jako stymulator rozwoju re-	
gionalnego w dobie kryzysu 198	3
Adam Przybyłowski: Przesłanki zrównoważonego rozwoju transportu w	
wybranych polskich regionach	)
Mariusz E. Sokołowicz: Wpływ korporacji transnarodowych na rozwój kapita-	
łu ludzkiego w regionie. Przykład łódzkiego obszaru metropolitalnego 22	1
Anna Jasińska-Biliczak: Współpraca międzyregionalna stymulantem dzia-	
łań proinnowacyjnych – przykład województwa opolskiego 229	)
Franciszek Adamczuk: Współpraca transgraniczna Dolnego Śląska i Sak-	
sonii – aktualne wyniki i perspektywy 239	)
Agnieszka Barczak: Zarządzanie procesem produkcji grupy gospodarstw	
rolnych regionu Pomorze i Mazury z uwzględnieniem poziomu rozwo-	
ju gospodarczego 248	3

Tomasz Dorożyński, Wojciech Urbaniak: Doświadczenia powiatowych	
urzędów pracy w zakresie wykorzystywania funduszy strukturalnych	
UE w celu promocji zatrudnienia. Przykład województwa łódzkiego	259
Małgorzata Golińska-Pieszyńska: Współczesne praktyki innowacyjne w	
kontekście regionalnym w oparciu o region łódzki	267

#### PRACE NAUKOWE UNIWERSYTETU EKONOMICZNEGO WE WROCŁAWIU RESEARCH PAPERS OF WROCŁAW UNIVERSITY OF ECONOMICS nr 286 • 2013

Regional Economy in Theory and Practice

ISSN 1899-3192

#### **Ryszard Brol**

Wrocław University of Economics

## **INNOVATION VS. REGIONAL DEVELOPMENT**

**Summary:** The innovative cycle triad *invention* – *innovation* – *diffusion*, can be identified with reference to economic subjects and sectors, and territorial systems in global, national, regional and local dimensions. The article defines innovation as well as the innovativeness of a region as a category of economics. The author has specified relations between regional development and innovativeness of the regional economy. He has also identified regional innovativeness stimulation instruments within the confines of regional policy created by the European Union and regional self-government units.

Keywords: innovativeness, regional development, region.

## 1. Introduction

The objective of the this paper is to transfer the category of innovation to the level of local and regional territorial units. In order to carry this out, it was necessary to specify the concept of *invention and innovation* as economic categories, to discuss the relationship between regional development and regional economy innovation and also to identify *innovation stimulating* instruments within the framework of regional policy.

Innovation represents, in its core concept, an economic category. J.A. Schumpeter introduced the term of invention and innovation to the theory of economics [Schumpeter 1960], having defined invention as the application and dissemination of new solutions in practice, distinguished three subsequent stages comprising an innovation cycle: *invention – innovation – diffusion*. This definition differentiates an invention from an innovation, with the latter understood as the process of a new product, procedure or an operating pattern implementation and practical application – if they meet novelty qualities. Innovation diffusion represents the stage which closes an innovation cycle within sectors of the economy and also the inter-sector and spatial diffusion by means of their adequate adaptation. *Schumpeter's triad* concept relates the category of innovation to transformations underlying the process of commercialisation. This means that we come across innovation when

transformations result in products or processes presenting an economic value. Therefore, it is possible to put forward a market concept of the innovation process which defines innovation as the capacity presented by entities to participate in Schumpeter's triad cycle. An innovator participates in this process, taking on the role of an *inventor* or an entity which is capable of absorbing innovation – innovation *beneficiary*. In such a perspective, innovation should be observed as a tool of entrepreneurship. It may appear as part of a project, product marketing technique, customer oriented service, management methods or its organisation; therefore, while discussing innovation we do not refer to a technical category only, but also to economic, social and special ones.

The suggested definition of innovation may constitute the background for an innovation cycle triad interpretation in the aspect of relations occurring between regional innovation and regional development.

## 2. Relations between regional innovation and regional development

Relations between innovation and competition are analysed in the aspect of globalisation processes and economic integration, they require a territorial approach covering global, national, regional and local determinants of an *innovation* triad, i.e. invention – innovation – diffusion. Innovation represents the greatest challenge of the 21<sup>st</sup> century. It defines the competitive position of not only economic entities and sectors, but also groups of integrating countries, particular states, regions, local territorial units (communes), as well as – formally undelimited – regional and local functional and spatial systems, e.g. clusters. Such an approach is presented by M. Porter, according to whom the competitive advantage of particular territories is accomplished through innovation oriented activities [Porter 2001].

In professional literature, different definitions of regional development are presented and prepared as the result of conducted research work, as well as the application of procedures referring to the regional economy. These definitions – depending on the research objective – differ in the scope of the, so called, *regional development fields* as well as methods for identifying the major *driving forces* of regional development and also the explanation of their mechanism influence on particular *regional development fields*. The scope of such *fields*, and the criteria for development factors identification, depend on the context to which due research and application procedures refer. Most frequently this context is defined by issues present within the scope of such problems as: economic policy, systemic transformation, intra and inter-regional policy, strategic planning and development programming in regions, as well as European integration and globalisation processes.

This study discusses regional development problems in the context of *regional innovation* – understood as the capacity of regional economy entities to participate

in the innovation cycle: invention - innovation - diffusion. It refers to both the ability to participate in this cycle by playing the role of an innovation creator – *inventor*, and as an entity capable of innovation absorption – *absorbent*. The change introduced by an inventor becomes an innovation if it meets certain important qualities determining that the changes made can be referred to as innovation. In particular, innovation results from an alteration introduced purposefully and permanently – which either modifies or introduces new components to both the methods and effects of the creating entity functioning, as well as entities involved in the application of these innovations. Innovation – understood in this way – may appear e.g. in relation to a project, product, organizational structure; in all sorts of services, both commercial and publicly available social ones; in management methods and marketing strategies; in spatial order construction, as well as in the exploitation and protection of natural resources featuring a given ecosystem. The concept of invention and innovation may be placed, similarly to the category of regional development, in a broad spectrum of transformations occurring in the spheres of economy, space and regional community. In order to define relations between regional innovation and regional development, it is required to identify both endogenous and exogenous factors, which are responsible for creating and stimulating regional development and innovation in the spheres listed above, referred to as regional development fields. Within the scope of each presented sphere it is possible to identify reasons, factors, manifestations and effects presenting qualities common for both regional development and regional innovation. Each regional development field applies (characteristic for different scientific disciplines) methods and tools useful in the identification and measurement of the advancement of such changes in the course of innovation and regional development processes.

The broad spectrum of phenomena and processes responsible for social, economic and spatial issues, which add up into the form of *regional development* category, make an impact on regional development resulting from diversified activities performed by various entities – companies, institutions, public authorities, regional residents – as well as mutual relations and interactions occurring between these entities. On the one hand, the processes identified as regional development constitute the effect of *microeconomic* attitudes presented by businesses and investors operating in a market economy, on the other hand, however, they result from purposeful, planned, strategic activities carried out by the entities responsible for regional and local policy. In a situation when the results of regional economy entities' market behaviour and the implemented goals of regional economy are not contradictory but complementary to each other, the conditions for regional development, understood as the process of positive, regional quantitative growth transformations and the qualitative advancement, are created. A similar relation may be identified with reference to regional innovation perceived as the capacity

presented by regional entities – functioning in the sphere of the economy, society and regional ecosystem - in order to create and (or) absorb inventions. Regional innovation understood in the above way, may therefore result from both regional entities' market behaviour and the effect of policy, followed by self-government entities equipped with competencies and the means for exerting an influence on regional space, society and economy. Therefore, one may accept that regional progress related to innovation, and also regional development, represent complementary and mutually stimulating processes. A higher level of regional growth results in the greater wealth of regional economy entities and therefore increases the economic – and indirectly also organizational and technological - capacity of such entities' involvement in the triad invention - innovation - diffusion. This refers to regional business sector's entities and self-government economy entities, as well as local and regional public authority units - responsible for local and regional policy construction. At the same time, the higher level of regional entities capacity for creating and absorbing innovation represents the crucial factor influencing endogenous (economic, social and spatial) regional development potentials. This factor also stimulates the ability of such potential to take advantage of exogenous opportunities for regional development resulting from, among others, both globalization and European integration processes.

The dynamics of regional development constitutes the derivative of endogenous and exogenous factors' influence, as well as the determinants defining endogenous capacity ingrained in a particular region for reacting to changes in its macroenvironment.

Regional development is an example of an autonomous development model, i.e. growth based on internal potential typical for a given territorial unit. Endogenous factors constitute the main driving forces responsible for development. This group consists of factors determining the development capacity of resources constituting the regional economy. It can be assumed that the regional economy is composed of the following types of capital (understood as resources generating both quantitative and qualitative advantages): natural capital (space location advantages and ecosystem resources); physical capital (manufacturing and infrastructural capital, financial resources); human capital (demographic resources and their structure) and social capital (social organizations, relations and interactions which make up regional civic society).

Among regional development factors responsible for stimulating the stream of benefits generated by regional natural capital the following, among others, may be listed: pro-ecological infrastructure development potential, exploitation of natural environment resources in line with eco-development principle (in the, so-called, protected areas) and the principle of sustainable development (in urban areas), ecological awareness, space location value resulting from its physiographic conditions, functionality and the location of regional space, and also the effectiveness of spatial marketing.

Regional development strategies, prepared in the form of participation planning and implemented in all Polish regions, refer to the concept of sustainable development covering three major dimensions, i.e. the economic, social and spatial spheres. The endogenous ability to create eco-innovation, understood as proecological novelty in technology, organization, management, promotion, ecological education, spatial planning, spatial marketing, which reduce or prevent negative influence of regional entities on the natural environment, constitute conditions for strategic development goals' accomplishment in the sphere of regional ecosystem. Eco-innovation can take the following forms: product innovation (e.g. a new product which reduces or eliminates environmental damage); process innovation (e.g. changes introduced into technological processes and resulting in higher environmental quality); organizational structure innovation (e.g. a new structure which integrates environment protection with other tasks carried out in the region); innovation in relation to management methods or procedures (e.g. environment oriented management in line with ecological values system); innovation can also take the form of new legal and economic mechanisms application which stimulate the participation of regional economy units in the *invention – innovation – diffusion* cycle regarding spatial order and the costruction of a regional ecosystem balance.

In the field of regional development covering production, infrastructural and financial potentials, the following factors are, among others, responsible for development: regional economy structure flexibility and job market flexibility, the scale of regional investment demand influenced by the investments made by economic entities operating in the market and also the investments undertaken by the social public services sector, the capacity of the regional and local budget, as well as self-government stimulating entrepreneurship – the offer of external benefits. The key factor of development, in this case, is represented by the ability of regional economy entities to participate in an innovation cycle. The direct effect of a such capacity takes the form of both the creation and absorption of innovation, i.e. new products, manufacturing processes, management methods, organizational structures (*reengineering*), as well as legal and economic instruments for regional and local influence exerted on the regional economic sphere. The level of economic entities innovation, as well as self-government entities equipped with regulatory powers referring to economic sphere, are decisive regarding the overall level of regional innovation.

In times of globalization, innovation in the sphere of the economy represents the initial, causative stage of the regional economic development cycle triad which covers regional innovation – regional competitiveness – regional development. In this case, innovation does not represent a means to an end, but constitutes the method for regional economy competitiveness' enhancement and therefore, in its final stage, for regional economy development.

Not every novelty can be perceived as an innovation. Rationalism is the condition for recognizing a particular *novelty* as innovation, which manifests itself in meeting one of the three following conditions [Świtalski 2005, p. 172]:

- costs reduction: a producer or a service provider, while guaranteeing the currently offered product or service quality, may sell the effects of his/her work at a lower price having preserved the so far obtained profitability level, or, by keeping the same price, achieve a higher level of cost-effectiveness – the result of meeting such a condition is the improvement of companies' competitiveness which opens up opportunities for development;
- higher quality: higher quality by improving practical usage advantages, durability, reliability, aesthetics of a given product (service) at an unchanged price level which results in better competitiveness and facilitates extending the scale of production and sales and therefore obtaining benefits which stimulate company development in the regional economy structure;
- price commensurability and product quality: upgraded product quality, higher price, unreduced relation of a particular quality measure compared to the assessment, resulting in a better competitive advantage of a given company on the regional and supra-regional sales market, which opens up development opportunities for a company.

Meeting each of the rationality conditions listed above, with reference to product (service) innovation, results in the construction of a specific, for particular economic entities operating in regional economy, individual competitive potential. The sum of these potentials defines the regional competition level in an economic sphere. Higher regional competition level is the key determinant of regional development. In the discussed case it is the innovation advantage of companies functioning in the regional economy structure which represents the driving force influencing the increase in regional competition and, consequently, also regional development.

Human capital and social capital resources in a given region represent endogenous driving forces which create both regional (and also local) territorial unit innovation, as well as regional and local development. Regional human capital covers knowledge, skills, experience and intellectual creative capacity ingrained in particular units, which are of economic value for entities functioning in the regional economy. In this case such economic value is represented by the ability of the regional community to innovate in the process of performing due tasks in diversified regional, endogenous conditions, as well as the skill of responding to innovative transformations in the regional macro-environment - for which the adequate diffusion carrier takes the form of e.g. globalization processes as part of European integration. Knowledge is, by all means, the most important resource of the contemporary economy, since it is the product of human capital, while learning represents the crucial process, the effect of which is creating knowledge resulting in the higher value of human capital. The major quality of dynamically developing regions is the advantage of resources related to knowledge creation and human capital over those physical and natural. Simultaneously, the structure of human capital keeps changing in these regions - the role of quantitative dimension of labour resources and basic uncreative skills and qualifications is diminished in favour of creativity and innovation. Such transformations facilitate conducting research and high-tech application in the regional economy, as well as the establishment of strong internal economic, social and institutional cooperation relations, and therefore enhance the construction of an innovative environment in which a regional knowledge-based economy is offered the opportunity to thrive. The theory of endogenous development assumes that all regional capitals (natural, physical, human, social) come into being in the process of accumulation. With reference to human capital, the process of knowledge accumulation, in the form of *knowledge capital*, is crucial from the perspective of innovation sources, since it is the background of innovation understood as the capacity to create innovation within all *fields* of regional development.

Human capital, perceived as a regional development factor, is the object of research discussed in numerous scientific publications. The significance of regional human capital is also recognized and appreciated by local communities. It is manifested by local and regional development strategies prepared with the participation of the particular community, and takes the form of *collaborative planning*. The vast majority of strategic development plans adopted and implemented in regions, districts and communes depend on quality oriented development of human capital resources understood as the strategic goal of development.

In both professional literature and strategic planning practice of local and regional territorial systems development, the importance of social capital, as the determinant of regional development, is less valued, as well as that of the factor influencing regional innovation potential. The concept of local social capital covers the sum of the current and potential regional and local social resources presenting the ability for creating advantages accomplished in particular fields of regional development. These resources cover the following [Brol 2009, p. 58]:

- permanent social order understood as the set of values, standards and attitudes influencing regional (local) social interactions;
- permanent, institutionalized network of relations with regional (local) entities as its components which function in the commercial, social, public services sectors and also in the, so called, *third sector* covering grassroots type of initiatives undertaken by local communities, such as associations, unions, foundations and other formal and informal organizations typical for a civic society;
- local and regional social relations and interactions occurring between local (regional) inhabitants of a territorial system, between local community and self-government institutions, and also the *third sector* entities; these types of relations and interactions are the source of a new value – the cementing agent linking local (regional) social *actors* together and establishing a regional (local) community made up of all these units.

Regional (local) social capital is considered the crucial factor of regional development. The on-going nature of this development represents the derivative of the capacity of the regional entities towards constructing certain *platforms* for mutual understanding and cooperation in regional economic, social and spatial spheres. The effects of such agreements and cooperation stimulate the establishment of all sorts of institutions and organizations which results in the fact that regional development is not just the function of diversified activities performed by dispersed entities, but also a well-organized cooperation process between regional economy entities grouped around the implementation of socially acceptable strategic objectives of development and the regional mission. Therefore, it may be assumed that regional development (local) represents an example of a new logic in the development stimulating policy consisting more in mobilizing the local and regional environment rather than the policy of direct support for different types of operations or selected entities. Social capital plays the role of a stimulating agent for endogenous potentials aimed at regional development. The power of local (regional) influence of social capital is, among others, influenced by: regional community active participation; the manner of the, so called, third sector organization; the type of defined goals based on mutual trust and their common implementation - the network on diversified interrelations, interactions and interdependencies between regional residents, self-government entities, the third sector organizations, as well as other regional economy entities.

Local social capital, understood in the above way, can become the component of *Regional Innovation System* (RIS) if social capital activity covers relations focused on stimulating regional innovation. Regional innovation strategies represent the fundamental activities aimed at regional economy innovation. Such strategies are supposed to establish a partnership for *Regional Innovation System* (RIS). Presented synthetically and targeted at the core concept of the matter, the definition of RIS [Markowski 2008, p. 22] specified *regional innovation systems* as "the separated and independent system of relations occurring between organizations which function for the benefit of an overall system and cannot exist without it". The above quotation – in its literal phrasing – can also be accepted as the definition of regional social capital. In its first understanding, this definition refers to the system of functional relations between regional entities operating in the sphere of innovation and technology transfer. The second meaning refers to the system of relations, interactions and interdependencies functioning for the benefit of regional development in economic, social and spatial spheres.

Regional economy entities constitute the components of regional innovation systems. Their taxonomy allows for the identification of the so called *golden triangle* vertices which schematically symbolize RIS [Gorzelak 2006, p. 20]. Such triangle vertices are represented by: entities functioning in the regional economic sphere; research and development entities (universities, research and development

institutes); support institutions offering financial, consultancy, educational, promotional services and other forms of regional entities stimulation for regional innovation support. *The golden triangle* – the symbol of RIS – is constructed of three types of institutions constituting *the triangle* vertices, i.e. mutual, multivariate, diversified regarding level and type, interactions occurring both inside a particular *triangle vertices* and between them, as well as RIS relations with the supra-regional environment. The scale, scope, quality and effectiveness of interactions responsible for RIS depend, to a great extent, on the scale and nature of non-material social values represented by a particular regional (local) community, i.e. on regional social capital resources, the implementation of which multiplies economic benefits – in this case manifested by regional innovation enhancement.

The regional economy, just like RIS, cannot be confined to administrative borders. These systems do not operate as coherent, closed and internally balanced structures. Their organization and development dynamics are influenced not only by endogenous development potentials of economic, social and spatial spheres, but also by exogenous development determinants. Such factors gain in importance in conditions of an ongoing intensification tendency for globalization processes, European integration, changing macroeconomic conditions, systemic transformation (e.g. country decentralization), changing economic prosperity, national and EU regional policy transformations, or the competitiveness represented by surrounding regions, etc.

## 3. Stimulating innovation as the goals of economic policy

Currently, in conditions of globalization processes becoming intensified and taking place in both economic and social spheres as well as in ecosystems, the commercialization of innovative changes is not necessary (even though it is still crucial) condition for their implementation and dissemination. In the new circumstances of European integration and the *global village* stimulating innovation of both entities, organizations and, most of all, territorial socio-economic systems, becomes the crucial macroeconomic instrument of economic policy focused on the improvement of economy competitiveness at national, regional and local level. The support for innovation referring to territorial systems becomes a form of public aid addressed - by the institutions which create economic, social and spatial policy in inter-regional and intra-regional dimension - to regional and local economy entities. In the European Union scale it is, among others, the Lisbon Strategy Competitiveness and Innovation Framework Programme and EU regional policy (for the period of 2007–2013) which specify both strategic goals of such support and pro-innovation support criteria and also procedures regarding regional development. The proposal of guidelines for national scale pro-innovation implementation is put forward in the Operational Programme Innovation Economy prepared within the framework of National Strategic Reference Framework for the period of 2007–2012. The activities listed under this programme and co-financed by the European Union cover both the direct support for enterprises, institutions, business environment, research and development units, and also systemic support referring to R&D sector potential and its capacity to create innovation, as well as the stimulating capacity of economic entities to absorb changes of an innovative nature.

At regional (voivodship) level, the preparation and implementation of Regional Innovation Strategies (RSI) represent basic activities aimed at regional economy innovation. These strategies are supposed to establish a partnership for the regional innovation system. The role of the public authorities is focused on the construction of an effective Regional Innovation Strategy implementation system and on the concentration of public means granted to these activities. The role of research and development units active in this area is to focus research projects on the needs of economic practice. Regional Innovation Strategies are supposed to stimulate the establishment of consortiums made up of research teams and a group of enterprises, or an overall regional economy sector, interested in the implementation of particular research projects. Regional Innovation Strategies have been prepared for all regions. Their common feature is an implementation programme and its monitoring system for the purposes of verification and adjustment to the dynamically changing situation in a region and its environment. The purpose of RSI is to construct regional innovation systems covering the following components: Science and Technology Parks, Clusters, Technology Incubators, Technology Platforms, High-Tech Centres and Excellence Centres. The listed organizational structures, which integrate activities performed by regional authorities, research and development units and also economic entities (or their unions), require highly qualified personnel, capital-intensive material base in R&B centres, public financial means, private investment in R&D as well as public – private partnership in carrying out the set objectives. All these efforts result in the fact that entities covered by the regional innovation system are spatially concentrated and located in metropolises or big cities. The implementation of tasks defined in RSI, facilitates the accumulation of pro-innovative activities regarding the first two phases of the innovation triad in regional capitals and also in cities forming conurbations (Silesia, Tricity). The majority of Regional Innovation Strategies indicate the need for concentrating both power and adequate means, in order to strengthen innovation creating potential referring to products, processes and organizations included among primary innovations of a ground-breaking, fundamental or incremental nature. To a lesser extent these strategies identify tasks referring to the third innovation triad phase, i.e. innovation diffusion and its spatial range influencing the capacity of local economy entities to absorb innovation changes. The local economy is composed of the peripherally situated small and medium size enterprises, communal entities of a self-government economy, local self-government units, local communities, as well as communal and district social organizations active for the benefit of local development. Local economy entities are mainly

interested in supporting their endogenous ability to absorb exogenous development factors, including process and organization oriented innovations of both a primary and secondary nature. Such support may become an intra-regional policy component, but also an element of local (communal) economic, spatial and social policy. The objective of such a policy should focus on influencing the following:

- local space attributes and local economy structure qualities as the *localization* determinants of innovation;
- local social capital as the component of innovation potential featuring local communities and, understood as the range of opportunities and abilities for creating, but most of all absorbing innovation solutions.

*Regional Innovation Strategy (RSI)* represents the basic tool for regional innovation policy specification and, in line with the *European Commission* definition, identifies goals and activities aimed at extending the scale and upgrading the efficiency of innovation processes. RSI is supposed to establish partnerships for the benefit of *regional innovation system* (RIS).

Regional Innovation Strategies (RSI) cannot represent a single-use planning document. The changing endogenous and exogenous determinants, responsible for the implementation of goals set in Regional Development Strategies and RSI, impose the need to correct not only the implementation procedures, but also the development priorities, strategic and operational goals' adjustment and updating.

Regional Innovation Strategies were prepared and approved for realization in all Polish regions. The earliest adopted RSI, in September 2003, referred to Silesia, while the latest, approved in April 2008, to the Mazowieckie region. In the other regions, adequate Regional Innovation Strategies were prepared and accepted for implementation in the period of 2004-2005. Almost all RSIs (except for the Mazowieckie region) were prepared in the period of EU budget implementation and EU regional policy goals in force, i.e. 2000-2006. New EU regional policy objectives and priorities adopted for implementation in the period of 2007-2013 were, compared to the previous time period, extensively modified and adjusted to the needs of the enlarged European Union, as well as the new challenges presented in the Lisbon Strategy priorities. Within the framework of each of the three current EU regional policy goals there are listed priorities referring to regional innovation strategy [Zbiór aktów prawnych... 2006, pp. 7–10]. As part of the first goal, i.e. its continuation from the previous planning period (2000–2006) related to problematic regions' development stimulation (underdeveloped and of small population density) a new priority was distinguished: research and technological development. This priority facilitates the application procedure, by particular regions, for means from the European Regional Development Fund (ERDF) to be allocated to: infrastructure development which extends research and technological development capacity and their integration in the European Research Space structures; establishing relations between the small and medium-size enterprises (SMEs) sector and higher education institutions, research institutions and R&D centres;

support for public-private partnerships and clusters as the form of research environment integration and economic practice; enhancing funding by means of financial engineering instruments – innovation absorption in SME groups; technological entrepreneurship promotion and enhancement.

Within the framework of the discussed priority, i.e. research and technological development the, so-called, soft non-investment projects financing from the European Social Fund (ESF) is also possible with reference to: information and communication technologies dissemination facilitating e-education; entrepreneurship and innovation promotion; preparation and dissemination of innovative work organization forms; dissemination of innovative eco-friendly technologies; stimulating activities at regional level aimed at obtaining consensus among different social groups in relation to entrepreneurship and innovation. The above new opportunities for pro-innovative projects' financial support, carried out in problematic regions do change, to a great extent, the exogenous determinants for regional innovation strategies construction in Polish regions, which require support regarding the first goal (convergence) of EU regional policy.

New and favourable circumstances for regions located along the border, regarding financial support for regional pro-innovative projects, are created by the new EU regional policy goal (no. 3) - support for territorial cooperation. This objective covers the following priorities: cross-border cooperation support (at NUTS 3 level); transnational cooperation support (NUTS 2 level); interregional cooperation support (NUTS 3 level). Regions situated along the border in EU areas are entitled to apply for cross-border cooperation support as well as also some regions located along external EU borders. Transnational cooperation support refers, among others, to two Polish areas: costal regions and the, so-called, Eastern wall. The support provided within the framework of inter-regional cooperation is of a horizontal nature – and refers to all EU regions. In line with the goal: European territorial cooperation the European Regional Development Fund co-finances the implementation of the following projects: taking advantage of joint, cross-border human resources and infrastructure for the purposes of research and technological development (RTD); establishment and development of transnational research and technological networks in order to extend RTD and the capacity for innovation creation and absorption at regional level; stimulating pro-innovative relations between universities and institutions operating in the sphere of R&D and in the sector of small and medium enterprises; facilitating access to scientific knowledge and technologies transfer between regional RTD centres and the leading international RTD creation centres; inter-regional cooperation enhancing regional innovation in economic and social spheres and also regarding regional ecosystems - which has a direct impact on the strengthening of regional policy effectiveness.

Opportunities for regional innovation support within the framework of goal no. 2 implementation referring to EU regional policy – *regional competitiveness* and employment – are of practical significance in the perspective of the next

programming period covering 2014–2020. Within the framework of this particular goal, the criterion of support qualification is defined at the level of 75% of the EU average, regarding GDP *per capita*, exceeded by a given region.

The discussed above possibilities of support for Polish regions, within the framework of new priorities, defined for implementation as part of goal no. 1 (*convergence*) and goal no. 3 EU regional policy (*territorial cooperation*), and also – in the perspective dimension – goal no. 2 (*regional competiveness*), change the previously established exogenous determinants influencing the structure of Regional Innovation Strategies (RSI), procedure and financing sources of the strategic tasks carried out, as well as Regional Innovation Systems (RIS) modelling and implementation.

## 4. Final remarks

The triad of innovation cycle *invention – innovation – diffusion* can be identified and analyzed both in relation to entities and sectors of the economy and also with reference to territorial systems of global, national, regional and local dimensions. At regional level of territorial systems innovation, as an economic category - understood as the capacity to participate in an innovation cycle – is perceived as the objective of development. Regions and, at a local level, communities, are legally equipped with self-government - administrative, planning and economic - instruments for influencing economy, space and society, which can be used for stimulating innovation in the regional and local economy. In this context, the category of innovation is observed as one covering both the structure of goals and the package of regional policy instruments. Regional Innovation Strategies represent the fundamental planning instrument in this package, since they determine the scenario for Regional Innovation Systems construction. Such strategies, prepared and implemented in all regions, should present the nature of rolling plans. The need for verifying goals, tasks and procedures defined in RIS, results from the changing endogenous and exogenous determinants of regional development. Directions for the modification of these strategies should mainly cover new opportunities for stimulating regional innovation in conditions of the global economy and European integration.

#### References

- Brol R., Innowacyjność lokalnych jednostek terytorialnych, [in:] R. Brol (ed.), *Gospodarka lokalna i regionalna w teorii i praktyce*, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu nr 46, Wrocław 2009.
- Gorzelak G., Bąkowski A., Kozak M., Olechnicka A., *Polskie regionalne strategie innowacji: ocena i wnioski dla dalszych działań*, Regional Studies Association Polish Section, Warszawa 2006.
- Markowski T., Teoretyczne podstawy rozwoju lokalnego i regionalnego, [in:] Z. Strzelecki (ed.), Gospodarka regionalna i lokalna, PWN, Warszawa 2008.

Porter M.E., Porter o konkurencji, PWE, Warszawa 2001.

Schumpeter J.A., Teoria rozwoju gospodarczego, PWN, Warszawa 1960.

Świtalski W., Innowacje i konkurencyjność, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2005.

Zbiór aktów prawnych WE w zakresie funduszy strukturalnych i Funduszu Spójności na lata 2007–2013. Komentarz, Ministerstwo Rozwoju Regionalnego, Warszawa 2006.

## INNOWACYJNOŚĆ A ROZWÓJ REGIONALNY

**Streszczenie:** Triadę cyklu innowacyjnego: *invention – innovation – diffusion*, identyfikować i analizować można zarówno w odniesieniu do podmiotów i sektorów gospodarki, jak i w odniesieniu do układów terytorialnych w wymiarze globalnym, narodowym, regionalnym i lokalnym. W publikacji zdefiniowane zostało pojęcie innowacji i innowacyjności regionu jako kategorii ekonomicznej. Określone zostały również relacje między rozwojem regionalnym a innowacyjności gospodarki regionalnej. Dokonano również identyfikacji instrumentów stymulowania innowacyjności regionów w ramach polityki regionalnej kreowanej przez Unię Europejską oraz regionalne jednostki samorządu terytorialnego.

Słowa kluczowe: innowacyjność, rozwój regionalny, region.