Contents

2012 2(1) September

Antanas Makštutis, Audronė Balkytė, Vladas Tumalavičius
SECURITY, SUSTAINABILITY AND COMPETITIVENESS: BENCHMARKING ATTEMPTS 5

Jacek Białek, Łukasz Leśniewski
POLAND’S MEMBERSHIP IN THE EUROPEAN UNION AND THE COHESION POLICY: IF CONVERGENCE IS SUSTAINABLE 13

Ilga Lavrinovich, Olga Lavrinenko, Nikolajs Jefimovs
SUSTAINABLE DEVELOPMENT, ECONOMIC GROWTH AND DIFFERENTIATION OF INCOMES OF LATVIAN POPULATION 33

Kamila Borseková, Katarína Petríková, Anna Vaňová
THE METHODOLOGY OF USE AND BUILDING COMPETITIVE ADVANTAGE IN THE REGIONAL LEVEL 41

Mindaugas Laužikas, Gintarė Baipšytė, Viktorija Butaitė
THE DEVELOPMENT OF COMPETITIVE ADVANTAGES OF LITHUANIAN BIOTECHNOLOGY COMPANIES VIA SUSTAINABLE INNOVATION STRATEGIES 51

Giedre Raisiene
SUSTAINABLE DEVELOPMENT OF INTER-ORGANIZATIONAL RELATIONSHIPS AND SOCIAL INNOVATIONS 65

Sánchez-Hernández, M.I.; Gallardo-Vazquez, D.; Dziwinski, P.; Barcik, A.
SUSTAINABLE DEVELOPMENT AT ENTERPRISE LEVEL: CSR IN SPAIN AND POLAND 77
Foreword to the fifth issue of peer reviewed scientific Journal of Security and Sustainability Issues
The General Jonas Žemaitis Military Academy of Lithuania

Dear readers, scientists, practitioners, statutory and civil community,

For your interest and attention I am introducing the new, the fifth, quarterly issue of the scientific peer reviewed “Journal of Security and Sustainability Issues”. The philosophical platform of the journal lies in intention to embrace and integrate two interdependent constituents: security and sustainable development. Security of any independent state is perceived as precondition of sustainable development of its economy and proxy for enhancing the quality of life of its citizens. Therefore, pulling for common discussion committed audience, scientists and practitioners make a route towards the more secure and developed society, smoother and more efficient processes.

The content of the second volume (Volume 2) and its first number (Number 1) of September 2012 is devoted to the problems of security and sustainable development in the context of intensive and inevitable globalization. The convergence of countries and competitive advantages at regional, industrial and organizational levels are being tackled by the presented fifth issue of the “Journal of Security and Sustainability Issues”. The authors raise scientific questions, analize theory and practice through security and sustainability lenses in order to seek for novel insights and to come to the more efficient policies.

Let the international interest in the security and sustainable development research area, elaborations of the related issues and debates lead us to creating new theories, policies and practices, enhanced state security and stable increase in the quality of our lives.

Sincerely,

General VAINIUS BUTINAS
Commander of the State Border Guard Service
at the Ministry of the Interior of
the Republic of Lithuania
The *Journal of Security and Sustainability Issues* is a peer-reviewed journal which publishes original research papers. It is the international journal published cooperating with the institutions indicated on the cover of the journal. It is published quarterly.

Areas of research include, but are not limited to, the following:

- Conceptual Approaches towards Security and Sustainability
- Globalization Processes and Social Security
- Defence and Security Technologies
- Innovations and Technological Development for Security and Sustainability
- Energy Security
- Regulation of the Security Industry
- Transition Issues and Secure Development
- Computer and Information Security
- Human and Environmental Security
- Biodiversity and Ecological Sustainability
- Economic Growth and Sustainable Development
- Economics of Sustainable Organizations and Industries
- Sustainable Entrepreneurship
- Intercultural Communication for Security and Sustainability
- Secure Development of Sector Economics
- Sustainable Finance and Investment
- Strategic Management for Sustainability
- Case Studies in the Process of Secure and Sustainable Development
- Evaluations of Security Measures

All papers published in the *Journal of Security and Sustainability Issues* are peer-reviewed by the members of the Editorial Board or by its appointed experts.

The papers published in *Journal of Security and Sustainability Issues* are indexed/abstracted by:

- Business Source Complete
- Sustainability Reference Center
- International Security & Counter Terrorism Reference Center
- **EBSCO Publishing**
  - www.ebscohost.com
  - http://search.ebscohost.com

EDITORIAL CORRESPONDENCE including manuscripts and subscription
Prof. Manuela Tvaronavičienė
Tel.: +370 687 83 944
E-mail: manuela@vgtu.lt

JOURNAL OF SECURITY AND SUSTAINABILITY ISSUES
2012, 2(1)

http://www.lka.lt/index.php/lt/217057/

© Authors of the articles, 2012
© Military Academy of Lithuania, 2012
SECURITY, SUSTAINABILITY AND COMPETITIVENESS:
BENCHMARKING ATTEMPTS

Antanas Makštutis¹, Audronė Balkytė²∗, Vladas Tumalavičius³

¹³The General Jonas Žemaitis Military Academy of Lithuania,
Šilo Str. 5A, LT-10322, Vilnius, Lithuania
E-mails: ¹antanas.makstutis@mil.lt, ³vladas.tumalavicius@mil.lt

²Vilnius Gediminas Technical University, Saulėtekio al. 11, LT-10223 Vilnius, Lithuania;
E-mail: ²audronebalkyte@gmail.com,

Received 1 October 2011, accepted 20 March 2012

Abstract. The article highlights the importance of the development of the society, as well as the measurement of this development, in the context of security, sustainability and competitiveness and goes much further by guiding to further research focus on the introduced new conception of “Secure and sustainable competitiveness” in the context of globalisation. The definition of “Sustainable competitiveness” was broadened by including new aspect of security. The development of the society was introduced as common output of the globalization which goes hand-in-hand with competitiveness, sustainability and security. The interrelation of certain facets between security, competitiveness and sustainability lead to the proposal to create the new index of “Secure and sustainable competitiveness” with possibility to evaluate the progress by looking back and provide prospects by looking forward. The research findings are in line with policy context and the development of the new index of “Secure and sustainable competitiveness” could be an important research contribution to the European union Strategy Europe 2020 for smart, sustainable and inclusive growth (2010).

Keywords: sustainable development, competitiveness, sustainable competitiveness, security, globalization, development of society.


JEL Classifications: H10, H7, K30, M10, O1, O40.

1. Introduction

The article introduces a new conception of “Secure and sustainable competitiveness” and highlights the importance of the development of the society, as well as the measurement of this development, in the context of security, sustainability and competitiveness. The basis and inspiration for the research and introduction of this innovative approach concerning the development of the society in the context of globalisation is the result of recent policy development at the European Union (EU) and global levels and identified lack of research and the creation of indexes, especially on the measurement of future long-term progress (DG for R&I, EC et al. 2010).

The EU Strategy Europe 2020 for smart, sustainable and inclusive growth (2010) is a framework for all further research development. By the time being, there is no common index for benchmarking competitiveness, sustainability and security (Tvaronavičienė 2012, Lankauskiene, Tvaronavičienė 2012) together with strong focus
on the sustainable development of the society. Furthermore, Eurostat doesn’t provide one single index of competitiveness, as well as one single index of sustainable development or security.

The aim of the research is to identify the key aspects of sustainable development of the society in the context of globalization.

First of all, the article raises the main challenges of globalization, namely, sustainability, competitiveness and security.

Secondly, the development of the state and society is introduced in the context of the areas mentioned above. The research focuses on the correlation between security, competitiveness and sustainability as drivers of the common output and impact for the development of the society.

Finally, the perceptions on further research needs concerning the sustainable development of the society in the context of security, sustainability and competitiveness, including the need for an appropriate common index of “Secure and sustainable competitiveness”, are highlighted in the conclusions as guidance for further research.

2. Globalization challenges: society in the triangle of sustainability, competitiveness and security

The EU Sustainable development strategy, launched by the European Council in Gothenburg in 2001 and renewed in June 2006, aims for the continuous improvement of quality of life for current and future generations, by linking economic development, protection of the environment and social justice (Eurostat 2011).

Concerning the competitiveness, there is an increasing acknowledgement of the researchers (Balkytė, Peleckis 2010; Balkytė, Tvaronavičienė 2010a; etc.) that the relationships between competitiveness and sustainable development are becoming deeper. The key challenges of the new European Union strategy Europe 2020 (2010) for jobs and smart, sustainable and inclusive growth create a need of a new concept of competitiveness and sustainable development theory. On the one hand, the intention to continually improve the quality of life and wellbeing on Earth for present and future generations leads to the growing role of sustainable development. On the other hand, competitiveness race in the global economy tests the economies and calls for the mapping of the new competitiveness resources (Balkytė, Tvaronavičienė 2010b).

World Economic Forum (Schwab 2010) defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy.

According to Balkytė and Peleckis (2010), globalization challenges increase the need to evaluate the basic factors, such as land, capital and labour, with a new approach. The future research should include the sustainable development dimension into the competitiveness theory. Climate change and sustainable development dimensions call for the acknowledgement of the role of natural resources for long-term competitiveness.

This approach strengthens the importance of the research on the sustainable development of the society (including fact that human capital is the main source for labour force) in the context of competitiveness.

Lankauskienė and Tvaronavičienė (2012) has introduced the research focus on security and sustainability.

Security and sustainability are multifaceted notions (Białoskórski 2012; Lankauskienė, Tvaronavičienė 2012), hence context, in which those concepts are being elaborated each time has to be taken into account.

According to Lankauskienė and Tvaronavičienė (2012), security has a wider range of dimensions than sustainability. Security includes the social, economic, financial, environmental, and other dimensions. The dimensions covered by sustainability are following: economic, social, environmental. Each of dimensions even acting alone can have a significant weight for security phenomenon depending on the context of an issue (e.g. national security, governmental security). Conversely, sustainability dimensions have a significant weight only functioning all together (they cannot reach such significance activating alone as security dimension), and the power of sustainability conception emerges only talking about “sustainable development”.

For example, the security of energy supply will increasingly be called into question in Europe. In 2030, the EU will be more dependent on external sources
than now (if policy does not change). In 2030, the EU will import almost 70% of its energy needs (The World in 2025).

The correlation between security, competitiveness and sustainability drive the common output and impact for the development of the society. As the various policy initiatives finally impacts the development of the society, the development of the society should be the highest target in all policies.

There are different programmes and strategies concerning the competitiveness, sustainable development and security among the countries or at the EU level. They should be developed in line with recent policy development and include strong focus on the development of the society as the primary goal.

According to Makštutis (2006, 2008, 2010), another research focus could be on the impact of the integrated policy for organizations and state institutions in the context of globalisation.

3. The benchmarking of competitiveness, sustainability and security

By the time being, there isn’t common index for benchmarking competitiveness, sustainability and security together with strong focus on the sustainable development of the society. The majority of the existing research models and combined indexes (or sets of indicators) are created explicitly only for one area (i.e. competitiveness, sustainability or security) or only part of one area. This leads to the confirmation of the existing lack of the research on multi-varied approach to the development of the society, competitiveness, sustainability and security (Garelli 2009; Stańczyk 2011).

Balkytė and Tvaronavičienė (2010a) published a research overview concerning the different competitiveness models (Porter’s Diamond model, the Double-Diamond model, the Generalized Double-Diamond (GDD) model, the Nine–Factor model, TOWS Matrix, Competitiveness Pyramid, etc.) and the international competitiveness indexes (provided by World Economic Forum, IMD World Competitiveness Centre, Robert Huggins Associates, etc.).

Despite the high number of the research in the area of competitiveness, the general public agreement on one competitiveness indicator or index is still not reached.

Researchers, examining the problems of competitiveness, differently approach the concept of competitiveness, suggesting different definitions, classification, factors, models of competitiveness, and evaluation criteria. New challenges, coming from the political decisions, call for the creation the new competitiveness models (Balkytė, Tvaronavičienė 2010a).

The most cited competitiveness index is the Global Competitiveness Index provided by World Economic Forum (Schwab 2010). The 2010 Survey of the World Economic Forum (Schwab 2010) captures the perceptions from the featured 139 economies. The Global Competitiveness Index provides a weighted average of many different components, each of which reflects one aspect of the complex concept that is called competitiveness. All these components are grouped into 12 pillars of competitiveness: 1) Institutions; 2) Infrastructure; 3) Macroeconomic environment; 4) Health and primary education; 5) Higher education and training; 6) Goods market efficiency; 7) Labor market efficiency; 8) Financial market development; 9) Technological readiness; 10) Market size; 11) Business sophistication; 12) Innovation.

Although the 12 pillars of competitiveness are described separately (such an analysis gets closer to the actual areas in which a particular country needs to improve), this should not obscure the fact that they are not independent: not only they are related to each other, but they tend to reinforce each other. The pillars are organized into three sub-indexes, each critical to a particular stage of development: the basic requirements sub-index groups are those pillars most critical for countries in the factor-driven stage, the efficiency enhancers sub-index includes those pillars critical for counties in the efficiency-driven stage, and the innovation and sophistication factors sub-index includes the pillars critical to countries in the innovation-driven stage. The actual construction of the Index involves the aggregation of the 12 pillars into a single index (Schwab 2010).

It should be pointed out that there is a research gap in the competitiveness theory in the context of current policy development at the European and global levels. The researchers did not provide new competitiveness indexes and limited number of theoretical proposals on new measurement of competitiveness was published after the introduction of the new Europe 2020 strategy for smart, sustainable and inclusive growth in 2010. According to Balkytė and Tvaronavičienė (2010a), there is a need for research initiatives to develop the new concept of “Sustainable competitive-
ness” in the context of globalization with focus on the interaction between sustainable development and competitiveness.

Europe 2020, a strategy for jobs and smart, sustainable and inclusive growth, is based on five EU headline targets which are currently measured by eight headline indicators and the EU and national targets are available in the Eurostat (2011). The five EU headline targets fall under the following policy areas: 1) Employment; 2) Research and development; 3) Climate change/energy; 4) Education; 5) Poverty/social exclusion. The engines to boost growth and jobs are addressed by 7 flagship initiatives: 1) Digital agenda for Europe; 2) Innovation Union; 3) Youth on the move; 4) Resource efficient Europe; 5) An industrial policy for the globalisation era; 6) An agenda for new skills and jobs; 7) European platform against poverty. Eurostat doesn’t provide one single index of competitiveness, as well as no one single index of sustainable development or security.

The Sustainable Development Indicators are used to monitor the EU Sustainable Development Strategy in a report published by Eurostat (2011) every two years. They are presented in ten themes: 1) Socio-economic development; 2) Sustainable consumption and production; 3) Social inclusion; 4) Demographic changes; 5) Public health; 6) Climate change and energy; 7) Sustainable transport; 8) Natural resources; 9) Global partnership; 10) Good governance.

Of more than 100 indicators, eleven have been identified as headline indicators. They are intended to give an overall picture of whether the European Union has achieved progress towards sustainable development in terms of the objectives and targets defined in the strategy. Quantitative rules applied consistently across indicators, and visualised through weather symbols, provide a relative assessment of whether Europe is moving in the right direction, and with sufficient haste, given the objectives and targets defined in the strategy (Eurostat 2011).

Security aspects are covered in the set of the Sustainable Development Indicators available from Eurostat (2011) and a limited number of aspects on security are included in the sub-index of the Global Competitiveness Index provided by the World Economic Forum (Schwab 2010).

This analysis of existing benchmarking of competitiveness, sustainability and security, while static and partial, highlights the lack of the measurement progress and research of each of areas listed above, including strong focus on sustainable development of the society.

In general, the benchmarking and the comparison among the countries show the remaining potential for further development and helps to identify the areas that are lagging behind.

The integrated approach to the development of the society as the result of secure and sustainable competitiveness would help to compare the temporary achievements versus long-term development. As the existing methods provide the methodology for the evaluation of results achieved in the previous years, there is a need for new models for the evaluation of impact for the future outcomes.

4. Sustainable development of the society

The researchers provide segmented analyses which confirm strong correlations between different sets of indicators in the context of the development of the society, competitiveness or sustainable development.

For example, countries which are highly ranked regarding competitiveness are even highly ranked regarding living standards (Schuller, Lidbom 2009).

Figure 1 confirms that there is a strong correlation between competitiveness and the human development. The analysis of available indexes show that the most competitive Member States of the EU-27 provide the best results in human development (Sweden, Germany). There are still countries with similar rank of competitiveness which provide different results of human development. The existing differences among the Member States show unused potential for the increasing of competitiveness or better human development.
Fig. 1. Competitiveness index (2010-2011) versus Human development index (HDI) (2011)

Source: authors; Data Sources: World Economic Forum (2010); Human Development Report (2011).


The Human Development Index (HDI) is a summary measure of human development. The origins of the Human Development Index are found in the annual Human Development Reports of the United Nations Development Programme. It measures the average achievements in a country in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. It is also used to distinguish whether the country is a developed, a developing or an underdeveloped country, and also to measure the impact of economic policies on quality of life (Human Development Report 2011).

Sustainable economic growth is impossible without sustainable development of human capital. The inclusion of every person in the economy is particularly crucial in the context of globalization, knowledge based economy and demographical changes (Balkytė, Tvaronavičienė 2011b).

Sustainable human development is the expansion of the substantive freedoms of people today while making reasonable efforts to avoid seriously compromising those of future generations. Promoting human development entails addressing local, national and global sustainability; this can – and should – be equitable and empowering (Human Development Report 2011).

Generally, there should be strong correlation between high achievements in competitiveness and development of the society in the long-term, as it is highlighted in Figure 1. But the links between security and sustainability and development of the society need to be checked, especially for the long-term prospective. There is no simple way to describe the correlation between competitiveness and sustainable development or security because the single indexes of sustainable development or security are not developed. Very limited research cover the correlation between the development of the society and security or sustainable development.

In principle, there can not be separate policies concerning the competitiveness, sustainable development, security or development of society. The development of the society is the highest target and achievement of all policies. The development of the society should be viewed as common output of the globalization which goes hand-in-hand with competitiveness, sustainability and security.
5. The perceptions of benchmarking the development of society in the context of “Secure and sustainable competitiveness”

The definition of “Sustainable competitiveness” was proposed by Balkytė and Tvaronavičienė (2010a) in the article on “Perceptions of competitiveness in the context of sustainable development: facets of “Sustainable competitiveness”. The need for new models of competitiveness was identified by Balkytė and Tvaronavičienė (2010b) and strengthened by arguing that the inclusion of the sustainable development dimension into the competitiveness theory is crucial in order to reach the targets of the strategy Europe 2020 (2010) for smart, sustainable and inclusive growth.

According to Balkytė and Tvaronavičienė (2010a), there is a need for research initiatives to develop the new concept of “Sustainable competitiveness” in the context of globalization with a focus on the interaction between sustainable development and competitiveness. Such research will lead to the development of new theoretical models describing the relationships between international globalization, economic growth, sustainable development, wellbeing, and competitiveness.

The importance to control the balance between economic development, social development, and environmental development was also highlighted by Lapinskienė, Tvaronavičienė (2009). Lapinskienė and Peleckis (2009) have initiated to establish the relationship between the sustainable development and the economic growth.

Various aspects can be covered by definition “Sustainable competitiveness”, which should go hand-in-hand with policy initiatives at the European Union and global levels, for example, “sustainable migration” (proposed by Balkytė and Tvaronavičienė (2011a)), “active ageing”, etc.

Furthermore, the preliminary research findings, the outcomes of globalization and political context lead to the conclusion that the proposed definition of “Sustainable competitiveness” should be broadened by incorporating rethought set metrics of security, innovations and entrepreneurship (Mitra 2011) and indicators of economic growth, conditioned by level of innovativeness and fixed investments in various the EU countries (Tvaronavičius, Tvaronavičienė 2012) (Figure 2).

Additionally, the need to measure the progress (looking back) and evaluate the long-term prospects (looking forward) of the society development in the context of security, sustainability and competitiveness leads to the further research initiatives and creation of new index of “Secure and sustainable competitiveness”.

6. Conclusions

The definition of “Sustainable competitiveness” was proposed by Balkytė and Tvaronavičienė (2010a). The recent research findings and political context lead to the conclusion that the proposed definition of “Sustainable competitiveness” should be broadened by including another new aspect – security.

The new conception of “Secure and sustainable competitiveness” includes the view on the development of the society as common output of the globalization which goes hand-in-hand with competitiveness, sustainability and security.

Very limited research cover the correlation between the development of the society, competitiveness, security or sustainable development.

There is no simple way to describe the correlation between competitiveness and sustainable development or security because the single indexes of sustainable development or security are not developed.

The analysis of available indexes confirm that there is a strong correlation between competitiveness and the human development. But the links between security, sustainability and development of the society need to be checked, especially for the long-term prospective.

Furthermore, by the time being, there is no common unanimously accepted index for benchmarking com-
petitiveness, sustainability and security together with strong focus on the sustainable development of the society. The majority of the existing research models and combined indexes (or sets of indicators) are created explicitly only for one area (i.e. competitiveness, sustainability or security).

This leads to the confirmation of the existing lack of the research and multi-varied approach to the development of the society, competitiveness, sustainability and security.

Finally, the need to measure the progress (looking back) and evaluate the long-term prospects (looking forward) of the society development in the context of security, sustainability and competitiveness leads to the further research initiatives and creation of the new index of “Secure and sustainable competitiveness”.

The certain dimensions (for example, “sustainable migration” or “active ageing”) were indicated by authors as preliminary inspirations for the structure of new index of “Secure and sustainable competitiveness”.

References


POLAND’S MEMBERSHIP IN THE EUROPEAN UNION AND THE COHESION POLICY: IF CONVERGENCE IS SUSTAINABLE

Jacek Białek¹, Łukasz Leśniewski²

¹Ministry of Regional Development, Wspólna 2/4 Str. 00-926 Warsaw, Poland
²Polish Information and Foreign Investment Agency, Bagatela 12 Str. 00-585, Warsaw, Poland

E-mails: ¹jacek.bialek@mrr.gov.pl, ²lukasz.lesniewski@paiz.gov.pl

Received 27 February 2011; accepted 15 May 2012

Abstract. On May 1st, 2004, Poland and 9 other countries became members of the European Union. The new economic and institutional conditions resulting from this event had a tremendous impact on Poland’s macroeconomic performance. Poland is the biggest beneficiary of the European Cohesion Policy in 2007-2013. This paper aims at evaluating the scope and strength of cohesion policy’s impact on the macroeconomic situation of Poland. Authors attempt to assess the economic benefits of Poland’s membership in the EU (focusing particularly on those related to impact of the cohesion policy’s implementation). Additionally, the article presents the benefits derived by the EU-15 countries from the implementation of the cohesion policy in Poland. Authors focus, inter alia, on assessing the impact of Poland’s membership in the European Union on macroeconomic situation of the country. The assessment of the said impact is based both on the analysis of selected studies of the subject and on authors’ own research based on available statistical data. Within such a context, authors discuss the results of three research projects – commissioned by the Polish Ministry of Regional Development – which attempt to evaluate the impact of the EU cohesion policy on selected macroeconomic indicators.

Keywords: EU membership, cohesion policy, macroeconomic situation, economic growth, convergence of income levels.

Reference to this paper should be made as follows: Białek, J.; Leśniewski, Ł. 2012. Poland’s membership in the European union and the Cohesion Policy: If Convergence is sustainable, Journal of Security and Sustainability Issue 2(1): 13–32.


1. Introduction

This paper covers selected economic developments in Poland, both in the period of seven years after the accession to European Union and in the period of the EU membership to date, by presenting the changes in main macroeconomic indicators in the two respective periods. In addition to the analysis of macroeconomic trends in Poland, authors present comparison of the economic growth in Poland in the post-accession period with the respective figures for the other “new” member states. Subsequently, in an attempt to ascertain the degree of convergence of the Polish economy measured by the average income levels, authors focus on the relative changes in GDP per capita figures in Poland vis-à-vis all the other member states and the EU-27 average GDP per capita between 2003 and 2010. Article starts with the presentation of the main findings of the selected publications on the effects of the EU enlargement, and subsequently presents authors’ original observations based on the results of their calculations performed on the data derived from the national and European (Eurostat 2011) statistical bases.

Authors introduce the hypothesis that the sizeable improvement observed in the analyzed indicators in the post-accession period stemmed to a large extent from the financial and strategic benefits of cohesion policy. Following the presentation of the extent of financial inflows received under the framework of the said policy and description of the main catego-
eries of the said policy's intervention authors support the said hypothesis by presenting the conclusions of three separate econometric research projects aimed at measuring and forecasting the impact of the cohesion policy on the Polish economy. The final part of the article invokes the research related to the attempt at evaluation of the benefits derived by the EU-15 countries (“old member states”) from the application of the cohesion policy in Poland and concludes that the said policy involves much more than monetary transfers in direction but brings sizeable benefits also to the net contributors to the EU budget.

2. Impact of the EU enlargement on the new member states and on Poland – introductory remarks

May 1st, 2011, marked the 7th anniversary of the largest EU enlargement to date, one which included Poland and nine other states (another two new member states – Romania and Bulgaria joined the EU in 2007). This momentous occasion should serve as a background for formulating various assessments of the impact of the EU membership on the socio-economic situation of both, “new” (EU 12) and “old” (EU 15) member states.

In our paper we discuss three major prepositions related to the cohesion policy’s impact on the Polish economy in the first seven years of the country’s membership in the EU.

First, authors test, on the basis of available evaluation research, the hypothesis that Poland proved capable of effectively allocating the cohesion policy funds and benefits from their growing positive impact on the main macroeconomic indicators.

Second, they discuss the preposition that the effects of the cohesion policy proved instrumental – as an important contribution to growth – by allowing Poland to sustain the positive economic growth in the period of the recent economic crisis. Nevertheless, we will also note that cohesion policy wasn’t the only factor behind the resilient performance of the national economy.

Third, authors support the assertion that in the coming years the growing inflow of the cohesion policy funds will have pronounced socio-economic impact in the final years of the 2007-2013 financial perspective.

In 2009 – on the fifth anniversary of the Poland’s EU membership – governmental agencies and research centers in Poland presented the results of their own research projects attempting to measure the impact of Poland’s membership in the EU in general (and of the effects of European Cohesion Policy in particular) on the economic situation and thus on the quality of life in Poland. Such analyses confirmed the expectations expressed in pre-accession period, and attested to a highly positive impact of accession on macroeconomic stability and economic development of the country. These “historical” reports will be discussed in this article. Since such analyses were lacking on the 7th anniversary of Poland’s accession, we would like to present our own assessment of Poland’s EU membership on the 7th anniversary of the accession, taking into account the period of recent global economic crisis and longer time series (Ministry of Foreign Affairs 2010).

The document “Five years of an enlarged EU – Economic Achievements and challenges”, prepared by the European Commission, published in the European Economy. No. 1/2009 constitutes an example of an in-depth evaluation of the benefits derived from the EU enlargement by both, the “old” and the “new” member states. Even more exhaustive analysis – focused solely on the effects of Poland’s EU membership – was presented in the report “5 years of Poland in the European Union” of the Polish Committee for European Integration (published in April of 2009) which summarized the benefits of membership as well as challenges identified, among others, in such areas as:

a) the economic dimension – the report covers both overall macroeconomic situation and developments in individual sectors of the economy,

b) the social dimension – in this area the report focused on such issues as: labor market and migration, internal security, public health and education, consumer protection as well as Polish society’s assessment of the EU membership,

c) the political dimension – particular attention given to: relations with Poland’s Eastern neighbors, regional cooperation, implementation and enforcement of the EU legislation and effectiveness of the process of upgrading quality of the Polish public administration (The Office of the Committee for European Integration 2009).

Before presenting our own findings, we would like to advert to the two above mentioned comprehensive analyses of the effects of the EU enlargement,
starting from the analysis prepared by the European Commission. The Commission’s experts concluded that the accession of 12, new dynamic member states, had contributed to expansion of the Union’s economic potential and to the improvement of the EU competitive position in global markets (among others, thanks to acceleration of structural reforms in the “new” member states). At the same time the accession expanded the Union’s leverage in the sphere of international political and economic relations. Therefore it can be concluded that the enlargement allowed the UE to prepare more effectively to meet the challenges posed by the current phase of globalization (Hubner 2009; Bachtler, Taylor 2006).

The European Commission focused, in its document, on the economic dimension of the EU enlargement, stating that the success of integration process resulted, to a large extent, from a smooth functioning of both legal and institutional system of the EU and from the effectiveness of the Union’s policies. At the same time, macroeconomic stability, institution building, regulatory convergence, improving governance quality, trade integration and liberalization of capital movements – taking place within the framework of the accession process – facilitated the manifestation of numerous positive effects of integration, even prior to the actual enlargement. The EU accession increased predictability of the new member states’ economic policy and stimulated public sector’s investment in human capital and infrastructure. It should be underlined that implementation of such investment projects was profoundly facilitated by the European cohesion policy. Moreover, the above mentioned achievements created more favorable climate for private sector’s investment, while labor migration from the new to the old member states significantly alleviated the bottlenecks in the latter states’ labor markets (European Commission 2009; Hardt 2008).

The European Commission’s report also underlined significant gains in labor productivity in new member states, accompanied by reduction in unemployment and relatively rapid convergence of income levels. According to the Commission’s estimates, 3 million new jobs were created in those states between 2003 and 2007. Nevertheless, significant skills mismatches still exist between supply and demand for labor (situation in this aspect deteriorated in few countries, including Poland, due to the negative demographic balance of migration). On the other hand, the Commission’s experts indicated that the integration process revealed structural problems which obstruct the development of the new member states. The Commission’s evaluation concluded, however, that – regardless of the problems revealed by the crisis – the Stability and Growth Pact constituted a “medium-term anchor” for the credibility of fiscal policy and that the cohesion policy offers an important support for the process of translating the Union’s strategic objectives into member states’ national and regional convergence strategies (European Commission 2009; HU Presidency 2011).

According to estimates provided by the European Commission in the document discussed here, the EU enlargement contributed – by stimulating socioeconomic cohesion inside the Union – to significant improvement in the quality of life in the new member states. This assertion is corroborated by the finding that the per capita income in new member states increased between 1999 and 2008 from the level of 40% of the “old” EU members average to 51.7% (European Commission 2009). According to the same document, the accession, as well as the pre-accession adjustments on the part of new member states allowed them to post in the period 2000-2008, on average annual GDP growth higher by 1.75% than it would have been the case if they hadn’t joined the European Union. At the same time, the structure of these countries’ economies became more congruent with that of the old member states (as attested to, among others, by significant increase in the share of services in GDP) while increased level of educational attainment not only points to the rapid pace of the economic modernization but also creates the foundations for rapid economic convergence in the future (European Commission 2009).

Having described the impact of the EU enlargement on the new member states in general, we would like to focus on the effects of EU membership observed in Poland. Before presenting more detailed analysis of that impact it is important to mention that the support of the Polish society for the EU membership remains high – for example the public opinion polls conducted in April of 2010 confirmed that 86% of respondents were satisfied with the country’s EU membership1 (CBOS – Public Opinion Research Center).

---

1 The survey was conducted by CBOS (Public Opinion Research Center).
3. The Impact of the EU Enlargement on the Macroeconomic Situation in Poland

The ensuing analysis is based on the subject’s literature, authors’ critical analysis of selected evaluation studies presented by Polish leading scientific institutes and on the authors own conclusions based on available statistical data.

As the starting point for the analysis of Poland’s benefits from the EU membership, particularly those stemming from the implementation of the cohesion policy, we would like to underline that the fundamental premise of the discussed policy is the need to support balanced and sustainable economic growth throughout the entire territory of the European Union. Such an approach to development requires, in turn, bridging the gaps between individual countries and their regions in terms of socio-economic development (Pelkmans 2006; Pietras 2008; Wiktowska 2010).

Figure 1 presents comparative data on the economic development of the EU member states, as evidenced by the level of Gross Domestic Product per capita (at purchasing power parity) in 2010 Poland occupied the 23rd position among the 27 countries and even this “snapshot” indicates that, despite noticeable progress achieved in the last several years, the distance between Poland’s level of development and the EU-27 average is still significant.

![Figure 1. GDP per capita in the EU-27 countries in 2010 at Purchasing Power Standards (EU-27 = 100)](chart.png)

**Source:** Eurostat.

However, the excessive preoccupation with the distance to the “average” level of development is misleading, and analyses should focus more on the development distance between Poland and such other “new members” as Czech Republic, Slovenia or Slovakia. In order to “de-couple” our subsequent analysis from the analytical perspective of the “EU-27 average”, we have decided to relate Poland’s GDP per capita (in PPP) to those of all EU-member states and to calculate changes in this sphere in the period 2003 and 2010. The results of the said calculations are presented in the table 1. The comparison of the relations of Poland’s GDP per capita to both the EU-27 average and to the individual member states indicates that during the first five years of the country’s EU membership Poland’s GDP per capita rose from 49% of the EU average in 2003 to 63% in 2010. It should be underlined however, that in spite of the simultaneous improvement – from 43% to 57.3% – in the ratio of Polish GDP per capita to the average figure for the EU-15 countries the income gap between Poland and the most-developed EU countries remains pronounced (Table 1).

---

2. According to Eurostat’s data in 1997 Poland’s GDP per capita level (at purchasing power parity) amounted to 47% of the EU-27 average. Therefore direct comparison of the degree of convergence observed in the period 1997-2003 and that noted in the period 2003-2010 attests to the beneficial impact of the EU membership on the nation’s development.
When we look back at the convergence in average income levels from 1997 (GDP per capita at PPP standing at 47% of the EU-27 average) to 2003 (49%), and compare it with the convergence observed in the period 2003-2010, we arrive at confirmation of the highly beneficial impact of the EU membership on the nation's development.

The main mechanism of the EU cohesion policy’s impact on reducing regional development disparities is through allocation of the European Union’s funds to investments in widely understood capital (physical capital, including manufacturing sector, transport and municipal infrastructure as well as human capital). This allocation serves to accelerate the real convergence of the recipient countries and of their regions (which represent a basic territorial unit of the cohesion policy) with the more developed economies (Barca 2009; Gorzelak 2011; Begg 2011).

**Table 1. Change (in percentage points) of the relation of Poland’s GDP per capita (at PPP) to the GDP per capita in the EU in 2004 - 2010**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2003</th>
<th>2003-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GDP per capita. EU-27 =100 (2)</td>
<td>Poland’s GDP per capita % of a given state’s level (3)</td>
<td>GDP per capita EU-27 =100 (4)</td>
</tr>
<tr>
<td>Poland</td>
<td>63</td>
<td>100.0</td>
<td>49</td>
</tr>
<tr>
<td>EU-27</td>
<td>100</td>
<td>63.0</td>
<td>100</td>
</tr>
<tr>
<td>Hungary</td>
<td>65</td>
<td>96.9</td>
<td>63</td>
</tr>
<tr>
<td>Italy</td>
<td>101</td>
<td>62.4</td>
<td>111</td>
</tr>
<tr>
<td>Greece</td>
<td>90</td>
<td>70.0</td>
<td>93</td>
</tr>
<tr>
<td>Portugal</td>
<td>80</td>
<td>78.8</td>
<td>79</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>112</td>
<td>56.3</td>
<td>122</td>
</tr>
<tr>
<td>Slovenia</td>
<td>85</td>
<td>74.1</td>
<td>84</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>80</td>
<td>78.8</td>
<td>77</td>
</tr>
<tr>
<td>Ireland</td>
<td>128</td>
<td>49.2</td>
<td>142</td>
</tr>
<tr>
<td>Malta</td>
<td>83</td>
<td>75.9</td>
<td>80</td>
</tr>
<tr>
<td>Spain</td>
<td>100</td>
<td>63.0</td>
<td>101</td>
</tr>
<tr>
<td>France</td>
<td>108</td>
<td>58.3</td>
<td>111</td>
</tr>
<tr>
<td>Belgium</td>
<td>119</td>
<td>52.9</td>
<td>124</td>
</tr>
<tr>
<td>Austria</td>
<td>126</td>
<td>50.0</td>
<td>128</td>
</tr>
<tr>
<td>Sweden</td>
<td>123</td>
<td>51.2</td>
<td>124</td>
</tr>
<tr>
<td>Finland</td>
<td>115</td>
<td>54.8</td>
<td>113</td>
</tr>
<tr>
<td>Germany</td>
<td>118</td>
<td>53.4</td>
<td>116</td>
</tr>
<tr>
<td>Lithuania</td>
<td>57</td>
<td>110.5</td>
<td>49</td>
</tr>
<tr>
<td>Denmark</td>
<td>127</td>
<td>49.6</td>
<td>124</td>
</tr>
<tr>
<td>Latvia</td>
<td>51</td>
<td>123.5</td>
<td>43</td>
</tr>
<tr>
<td>Netherlands</td>
<td>133</td>
<td>47.4</td>
<td>129</td>
</tr>
<tr>
<td>Estonia</td>
<td>64</td>
<td>98.4</td>
<td>55</td>
</tr>
<tr>
<td>Cyprus</td>
<td>99</td>
<td>63.6</td>
<td>88</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>271</td>
<td>23.2</td>
<td>248</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>44</td>
<td>143.2</td>
<td>54</td>
</tr>
<tr>
<td>Slovakia</td>
<td>74</td>
<td>85.1</td>
<td>55</td>
</tr>
<tr>
<td>Romania</td>
<td>46</td>
<td>137.0</td>
<td>31</td>
</tr>
</tbody>
</table>

Source: authors’ calculations, Eurostat.

Referring to the issue of economic growth in the context of Poland’s EU membership, we would like to stress that the dynamics of GDP growth in Poland attests to stimulating impact of accession and post-accession period on the Polish economy. In order to illustrate impact of the EU membership on the economic growth, we have subdivided the period of 1997-2010, into two, seven-year long sub-periods. The first one encompasses the pre-accession period and the latter the first seven years of the EU membership. When we compare the range (minimum to maximum) of rates of economic growth in these two periods, it’s difficult to prove the stimulating impact of the EU membership on the Polish economy, as the annual rate of economic growth in Poland in the period 1997-2003 oscillated between 1.2% and 7.1%, while in the period 2004-2010 it ranged from
1.6% (in the “crisis” year of 2009) to 6.8%.

However, the comparison of cumulative economic growth appears to prove the hypothesis of the positive impact of accession on the economic growth in the country. Between 1997 and 2009 the GDP in Poland increased, in real terms, by slightly over 79.4%. The cumulative GDP growth in the period of 1997-2003 amounted to almost 30.7% while in the period of 2004-2010 it reached almost 37.3%. Simultaneously, the average real GDP of the EU-27 countries increased in the period of 1997-2010 by 28.8% (with the total cumulative growth in the period 1997-2003 amounting, respectively, to 18.8% in the period 1997-2003, and to 8.4% in the years 2004-2010. The average annual GDP growth in the EU-27 countries in the years 1997-2010 amounted to 1.8% (2.5% in the years 1997-2003 and slightly below 1.2% in the period of 2004-2010). Between 1997 and 2010 the Polish economy grew annually on average by 4.3% (3.9% in the period of 1997-2003 and 4.6% in the period of 2004-2010).

Consequently, the difference in the level of economic development between Poland and the average EU level has narrowed slightly. According to the Eurostat, in 1996 Poland’s GDP per capita (at purchasing power parity), stood at 45% of the EU-27 average. In 2003 it reached 49% and in 2010 – 63% of the mentioned average. In other words Poland’s GDP per capita “converged” in the period of 14 years by 18 p.p. towards the EU-27 average. Therefore, the average annual convergence was slightly higher than 1 percentage point (approximately 1.29 p.p.). These calculations can be interpreted in two ways. On one hand they can attest to the success of the hitherto convergence of the Polish economy, while on the other can serve as the inducement to accelerate the process of convergence. An oversimplified – though on the other hand sobering – interpretation of the above mentioned figures – assuming that the average pace of convergence will be the same as the one observed in the last 14 years – indicates that Poland will reach the EU-27 average GDP per capita around the year 2038. Such a scenario should alert the authorities to the possibility of almost next two generations reaching adulthood in a country with GDP per capita below EU-average.

On the other hand, much more optimistic conclusions can be drawn from the fact that during the first 7 years (2004-2010) of the EU membership the average annual pace of country’s convergence towards the EU-27 average amounted to 2 percentage points of GDP per capita. Assuming that this latter rate of convergence is maintained, we can conclude that Poland will achieve the desired level of the EU-27 average around the year of 2030.

As it has been already mentioned, in order not to get excessively preoccupied with the “average” values, we are going to present our own calculations which relate the GDP per capita level in Poland to the respective values for other EU countries (results of these calculations are presented in table 1). For example, it is visible that in 2010 the level of per capita GDP in Poland equaled 23.2% of the respective value for Luxembourg, 49.2% of the figure for Ireland, or 78.8% of that for the Czech Republic (compared to respectively 19.8%, 34.5% and 63.6% in 2003). It has to be underlined that Polish GDP per capita is still very modest in comparison with major Western countries, although over the period analyzed, gap between Poland and these countries has slightly narrowed (see Table 1).

The interpretation of data presented in the above mentioned table requires methodological explanation. The ratio of each member state’s GDP per capita (at PPP) to the EU-27 average is presented in the columns 2 (for 2009) and 4 (for 2003). The columns 3 and 5 represent the results of authors’ calculations of the ratio of Poland’s GDP per capita to that of individual member states (respectively, in the year 2010 and 2003), while column number 6 denotes the “convergence rate” (expressed in percentage points), calculated by comparing the values presented in columns 3 and 5. Positive values in the column 6 indicate Poland’s convergence to the GDP per capita level of a given country (or Poland “gaining” on the countries with initially lower GDP per capita). On the other hand it should be emphasized that values with the minus sign (-) are more difficult to interpret⁵, because the can signify either that Poland falls further behind a given country (as is the case in relation to, for example, Slovakia) or that other countries - with the initially lower GDP per capita – are converging – though to a varying degree towards Poland’s level (Romania, Bulgaria).

⁵ a) Poland pulled away from Lithuania, as the Polish GDP per capita amounted to 110.5% of the Lithuanian one in 2010, compared to 100.0% in 2003 b) Poland’s position vis-à-vis Slovakia deteriorated as the ratio of Polish GDP per capita to that of Slovakia’s decreased from 89.1% in 2003 to 85.1% in 2010. c) Poland’s GDP per capita was still significantly higher than that of Romania’s and Bulgaria but between 2003 and 2010 the “advantage” of Poland was reduced (e.g. Poland’s GDP per capita stood at 158.1% of the Romanian level in 2003 and “only” at 137.0% in 2010).
The results in question indicate that in the period 2004-2010, Poland bridged the GDP per capita gap vis-à-vis wide majority (22) of the EU-27 countries, gained distance on 2 countries (Latvia and Lithuania) and lost part of the “advantage” over 2 other countries (Romania, Bulgaria) and lost distance to Slovakia (by 4.0 p.p.). It should be also underlined that the most visible progress was observed in reducing the GDP per capita gap vis-à-vis Hungary (19.1 p.p.), Italy (18.2 p.p.), and Greece (17.3 p.p.).

4. Poland’s economic growth in the period 2004-2010 at the background of other EU “new” member states

The data presented in Table 2 and Table 3 indicate that in the period 2004-2008 Polish economy was growing at a slower pace than the economies of the seven “new” EU member states (Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Romania and Slovakia). However, the calculations for the period of 2004-2010 reveal that the global economic crisis had much stronger impact on the other new member states than on the Polish economy. Consequently, in 2009 Poland was the only one of the “new” member states to record a positive economic growth. Therefore, in the period 2004-2009 (as well as in the period 2004-2010) the cumulative GDP growth (and annual average rate of growth) in Poland was the second highest (following Slovakia) in the analyzed countries, attesting to the more balanced nature of growth in Poland than in majority of the new member countries.

Table 2. GDP growth in Poland and other „new” member states of the EU in 2004-2010 (%)

<table>
<thead>
<tr>
<th>Country (1)</th>
<th>2004 (2)</th>
<th>2005 (3)</th>
<th>2006 (4)</th>
<th>2007 (5)</th>
<th>2008 (6)</th>
<th>2009 (7)</th>
<th>2010 (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>5.3</td>
<td>3.6</td>
<td>6.2</td>
<td>6.8</td>
<td>5.1</td>
<td>1.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>6.7</td>
<td>6.4</td>
<td>6.5</td>
<td>6.4</td>
<td>6.2</td>
<td>-5.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>4.7</td>
<td>6.8</td>
<td>7.0</td>
<td>5.7</td>
<td>3.1</td>
<td>-4.7</td>
<td>2.7</td>
</tr>
<tr>
<td>Estonia</td>
<td>6.3</td>
<td>8.9</td>
<td>10.1</td>
<td>7.5</td>
<td>-3.7</td>
<td>-14.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Cyprus</td>
<td>4.2</td>
<td>3.9</td>
<td>4.1</td>
<td>5.1</td>
<td>3.6</td>
<td>-1.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Latvia</td>
<td>8.9</td>
<td>10.1</td>
<td>11.2</td>
<td>9.6</td>
<td>-3.3</td>
<td>-17.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Lithuania</td>
<td>7.4</td>
<td>7.8</td>
<td>7.8</td>
<td>9.8</td>
<td>2.9</td>
<td>-14.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Hungary</td>
<td>4.3</td>
<td>4.0</td>
<td>3.9</td>
<td>5.1</td>
<td>3.7</td>
<td>-2.6</td>
<td>2.9</td>
</tr>
<tr>
<td>Malta</td>
<td>-0.5</td>
<td>3.7</td>
<td>2.8</td>
<td>4.3</td>
<td>4.3</td>
<td>-6.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Romania</td>
<td>8.5</td>
<td>4.2</td>
<td>7.9</td>
<td>6.3</td>
<td>7.3</td>
<td>-6.6</td>
<td>-1.9</td>
</tr>
<tr>
<td>Slovenia</td>
<td>4.4</td>
<td>4.0</td>
<td>5.8</td>
<td>6.9</td>
<td>3.6</td>
<td>-8.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Slovakia</td>
<td>5.1</td>
<td>6.7</td>
<td>8.3</td>
<td>10.5</td>
<td>5.9</td>
<td>-4.9</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Source: Eurostat.

Table 3. Estimates of GDP growth (cumulative and annual averages) in Poland and other “new” EU member states in 2004-2010 (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>30.0</td>
<td>5.4</td>
<td>32.1</td>
<td>4.8</td>
<td>37.3</td>
<td>4.6</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>36.6</td>
<td>6.4</td>
<td>29.1</td>
<td>4.3</td>
<td>29.4</td>
<td>3.7</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>30.4</td>
<td>5.5</td>
<td>24.3</td>
<td>3.7</td>
<td>27.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Estonia</td>
<td>31.9</td>
<td>5.7</td>
<td>13.1</td>
<td>2.1</td>
<td>15.7</td>
<td>2.1</td>
</tr>
<tr>
<td>Cyprus</td>
<td>22.7</td>
<td>4.2</td>
<td>20.4</td>
<td>3.1</td>
<td>21.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Latvia</td>
<td>41.3</td>
<td>7.2</td>
<td>16.3</td>
<td>2.5</td>
<td>15.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Lithuania</td>
<td>41.0</td>
<td>7.1</td>
<td>20.1</td>
<td>3.1</td>
<td>21.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Hungary</td>
<td>13.8</td>
<td>2.6</td>
<td>6.1</td>
<td>1.0</td>
<td>7.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Malta</td>
<td>15.4</td>
<td>2.9</td>
<td>12.4</td>
<td>2.1</td>
<td>15.6</td>
<td>2.1</td>
</tr>
<tr>
<td>Romania</td>
<td>39.1</td>
<td>6.8</td>
<td>30.0</td>
<td>4.5</td>
<td>27.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Slovenia</td>
<td>27.2</td>
<td>4.9</td>
<td>17.0</td>
<td>2.7</td>
<td>18.7</td>
<td>2.5</td>
</tr>
<tr>
<td>Slovakia</td>
<td>42.1</td>
<td>7.2</td>
<td>35.2</td>
<td>5.1</td>
<td>40.8</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Source: authors’ calculations, Eurostat.
When we “decompose” the economic growth in Poland, it turns out that in the period of 2004-2008 – that is before the full impact of the crisis was revealed, with the slowdown (which started in Q4 2008) in the national economy – the growth was underpinned (particularly in the period 2005-2006) mostly by the investment demand and by consumer demand. The high dynamics of outlays on gross fixed capital formation can be attributed to significant inflows of foreign direct investments, which in turn resulted from improved confidence on the part of foreign investors due to the country’s EU membership. Moreover, exports had – despite their declining rate of growth in the period of 2004-2007 resulting from the strengthening exchange rate of the zloty vis-à-vis major currencies – an important contribution to economic growth.

According to the authors’ calculations, in the period 1997-2010 the expenditures on fixed capital formation grew cumulatively by 110.9% (with average annual growth of about 5.5%)\(^4\). It should be underlined that in the pre-accession period of 1997-2003 their cumulative growth amounted to mere 29.6% (annual average of nearly 3.8%), while in the period 2004-2010 the cumulative growth in these expenditures reached 64.1% (average annual growth of 7.3%). These attests to the enormous surge in investments observed after the EU accession. To a certain extent the latter investment growth was stimulated by the inflow of the EU funds. However, as it will be shown later, the really pronounced impact of the EU funds has only become visible as late as the period 2009-2010, when the funds available within the framework of the cohesion policy allowed to counteract the economic slowdown caused by the exogenous factors.

Simultaneously, the cumulative growth in consumption in the period 1997-2010 amounted to 70.8% (annual average of 3.9%). The cumulative growth in the years 1997-2003 reached 29.6% (annual average of nearly 3.8%), while in the period of 2004-2010 individual consumption expanded overall by 31.8% (at the annual average rate of approximately 4.0%). Therefore, it can be concluded that the impact of the EU accession on the consumption growth was much lower than on the gross fixed capital formation, which may attest to the fact, that Poland uses the opportunities gained from the EU membership chiefly to strengthen the foundations of development.

Analysis of the foreign trade data reveals that the values of exports and imports were increasing in almost every year between 1997 and 2010 (excluding the year 1999 and the “crisis” year of 2009). Visible growth occurred after the Polish accession to the European Union in 2004 (Table 4, Table 5) – while table 5 illustrates the dynamics of the analyzed indicators. Although the value of both exports and imports increased significantly over the years 1997-2010 (respectively by over 456% and 360%), the significant increase in the difference between the nominal value of imports and that of exports (Table 4) merits particular attention. Moreover, it should be underlined that while in 1997 value of exports accounted for approximately 75.8% of the value of imports, in 2010, the respective ratio exceeded 95.3%.

### Table 4. Current account statistics. Trade in 1998-2010 (in millions EUR)

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports f.o.b.</th>
<th>Imports f.o.b.</th>
<th>Balance of trade in goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>22,005</td>
<td>27,823</td>
<td>-5,818</td>
</tr>
<tr>
<td>1997</td>
<td>27,194</td>
<td>35,885</td>
<td>-8,691</td>
</tr>
<tr>
<td>1998</td>
<td>28,951</td>
<td>40,397</td>
<td>-11,446</td>
</tr>
<tr>
<td>1999</td>
<td>28,215</td>
<td>42,361</td>
<td>-14,146</td>
</tr>
<tr>
<td>2000</td>
<td>39,022</td>
<td>52,349</td>
<td>-13,327</td>
</tr>
<tr>
<td>2001</td>
<td>46,537</td>
<td>55,094</td>
<td>-8,557</td>
</tr>
<tr>
<td>2002</td>
<td>49,338</td>
<td>57,039</td>
<td>-7,701</td>
</tr>
<tr>
<td>2003</td>
<td>53,836</td>
<td>58,913</td>
<td>-5,077</td>
</tr>
<tr>
<td>2004</td>
<td>65,847</td>
<td>70,399</td>
<td>-4,552</td>
</tr>
<tr>
<td>2005</td>
<td>77,562</td>
<td>79,804</td>
<td>-2,242</td>
</tr>
<tr>
<td>2006</td>
<td>93,406</td>
<td>98,945</td>
<td>-5,539</td>
</tr>
<tr>
<td>2007</td>
<td>105,893</td>
<td>118,262</td>
<td>-12,369</td>
</tr>
<tr>
<td>2008</td>
<td>120,890</td>
<td>138,614</td>
<td>-17,724</td>
</tr>
<tr>
<td>2009</td>
<td>101,760</td>
<td>104,862</td>
<td>-3,102</td>
</tr>
<tr>
<td>2010</td>
<td>122,411</td>
<td>128,413</td>
<td>-6,002</td>
</tr>
</tbody>
</table>


It should also merit attention that in the period 2000-2005 there was a continual decrease in the trade deficit, while in the years 2006-2008 there were significant increases observed in this category, followed by a substantial reduction in 2009 and by almost doubling of the deficit in 2010.

\(^4\) It should be stressed out than in the year 2009 the said expenditures declined by 1.1% and in 2010 by another 2%.
Two other factors contributed also to the significant growth of GDP per capita in Poland in the period 2004-2010. The first one was the growth of labour productivity - measured as the output per worker. In the analyzed period it grew from about 61% of the EU average in 2004 to slightly over 65.6% in 2010. The second factor was the noticeable growth in employment following Poland’s accession to the EU. In 2010 employment rate for persons aged 15-64 reached 59.2%, as against 51.2% in 2004. Nevertheless, Poland’s employment rate for the working age population is one of the lowest in the EU.

In the last few years the sectoral structure of the Polish economy has been undergoing systematic transformation. The structure of employment and – to a lesser extent – that of the gross value added indicates that agriculture is losing economic weight, while the role of services is becoming more pronounced. However, the shift of economic activity towards modern sectors is progressing relatively slowly, with the low productivity sector of agriculture still employing over 13% of the workforce (almost thrice the EU average) (Karpiński 2008).

In 2004-2010 the public finance sector in Poland remained unbalanced. Although the dynamic economic growth of the years 2004-2007 allowed to reduce the debt-to-GDP ratio, budgets of national and local government institutions were in the red even with the GDP growth rate approaching 7% (as it was the case in 2007) as the public finances deficit in Poland is mainly structural. Consequently, the economic slowdown caused by the financial crisis has in recent years contributed to significant growth of the debt levels of all segments of the public finance sectors.

5. The Cohesion Policy - Transfers and the Direction of Intervention

With the country’s accession to the European Union the process of achieving the objectives of the cohesion policy was initiated. Poland’s accession to the EU brought about the implementation of the cohesion policy’s instruments. This development translated in turn into both the strong influx of EU funds and the simultaneous spending of national funds dedicated to co-financing of the cohesion policy’s projects (Kawecka-Wyrzykowska 2010). In recent years, EU transfers have been systematically growing both in absolute terms (to over 9 billion euro in 2010) and in relation to Polish GDP (2.60% in 2010 and over 1.77% on average in the period 2004-2010). On av-

### Table 5. Changes in the balance of trade in goods in 1997-2010 (in EUR)

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports – cumulative percentage change 1996=100</th>
<th>Imports Cumulative percentage change 1996=100</th>
<th>Balance of trade Cumulative percentage change 1996 =100</th>
<th>Exports – percentage change, previous year =100</th>
<th>Imports percentage change, previous year =100</th>
<th>Balance of trade percentage change, previous year =100</th>
<th>Ratio of the value of exports to the value of imports (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>123.6</td>
<td>129.0</td>
<td>149.4</td>
<td>123.6</td>
<td>129.0</td>
<td>149.4</td>
<td>75.8</td>
</tr>
<tr>
<td>1998</td>
<td>131.6</td>
<td>145.2</td>
<td>196.7</td>
<td>106.5</td>
<td>112.6</td>
<td>131.7</td>
<td>71.7</td>
</tr>
<tr>
<td>1999</td>
<td>128.2</td>
<td>152.3</td>
<td>243.1</td>
<td>97.5</td>
<td>104.9</td>
<td>123.6</td>
<td>66.6</td>
</tr>
<tr>
<td>2000</td>
<td>177.3</td>
<td>188.2</td>
<td>229.1</td>
<td>138.3</td>
<td>123.6</td>
<td>94.2</td>
<td>74.5</td>
</tr>
<tr>
<td>2001</td>
<td>211.5</td>
<td>198.0</td>
<td>147.1</td>
<td>119.3</td>
<td>105.2</td>
<td>64.2</td>
<td>84.5</td>
</tr>
<tr>
<td>2002</td>
<td>224.2</td>
<td>205.0</td>
<td>132.4</td>
<td>106.0</td>
<td>103.5</td>
<td>90.0</td>
<td>86.5</td>
</tr>
<tr>
<td>2003</td>
<td>244.7</td>
<td>211.7</td>
<td>87.3</td>
<td>109.1</td>
<td>103.3</td>
<td>65.9</td>
<td>91.4</td>
</tr>
<tr>
<td>2004</td>
<td>299.2</td>
<td>253.0</td>
<td>78.2</td>
<td>122.3</td>
<td>119.5</td>
<td>89.7</td>
<td>93.5</td>
</tr>
<tr>
<td>2005</td>
<td>352.5</td>
<td>286.8</td>
<td>38.5</td>
<td>117.8</td>
<td>113.4</td>
<td>49.3</td>
<td>97.2</td>
</tr>
<tr>
<td>2006</td>
<td>424.5</td>
<td>355.6</td>
<td>95.2</td>
<td>120.4</td>
<td>124.0</td>
<td>247.1</td>
<td>94.4</td>
</tr>
<tr>
<td>2007</td>
<td>481.2</td>
<td>425.1</td>
<td>212.6</td>
<td>113.4</td>
<td>119.5</td>
<td>223.3</td>
<td>89.5</td>
</tr>
<tr>
<td>2008</td>
<td>549.4</td>
<td>498.2</td>
<td>304.6</td>
<td>114.2</td>
<td>117.2</td>
<td>143.3</td>
<td>87.2</td>
</tr>
<tr>
<td>2009</td>
<td>462.4</td>
<td>376.9</td>
<td>53.3</td>
<td>84.2</td>
<td>75.7</td>
<td>17.5</td>
<td>97.0</td>
</tr>
<tr>
<td>2010</td>
<td>556.3</td>
<td>461.5</td>
<td>103.2</td>
<td>120.3</td>
<td>122.5</td>
<td>193.5</td>
<td>95.3</td>
</tr>
</tbody>
</table>

Source: authors’ calculations, National Bank of Poland 2011.
Jacek Białek, Łukasz Leśniewski

Poland’s Membership in the European Union and the Cohesion Policy: if Convergence is Sustainable

average, in the period of 2004-2010, the EU transfers for the implementation of the European cohesion policy amounted to 4.45% of general government’s revenues and to 11.55% of total investment expenditures in the national economy (Table 6, 7) (Ministry of Regional Development 2010)

Table 6. Transfers from the EU budget for the implementation of the Cohesion Policy in Poland, in the period of 2004-2010 (millions of Euro)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total EU transfers (million EUR)</td>
<td>1 820</td>
<td>2 339</td>
<td>3 518</td>
<td>6 292</td>
<td>6 051</td>
<td>7 193</td>
<td>9 222</td>
</tr>
<tr>
<td>Total EU transfers (million PLN)</td>
<td>8 251.9</td>
<td>9 415.4</td>
<td>13 703.0</td>
<td>23 802.0</td>
<td>21 278.9</td>
<td>31 124.1</td>
<td>36 841.9</td>
</tr>
<tr>
<td>GDP (million PLN, current prices)</td>
<td>924 538</td>
<td>983 302</td>
<td>1 060 031</td>
<td>1 176 737</td>
<td>1 275 432</td>
<td>1 343 366</td>
<td>1 415 385</td>
</tr>
<tr>
<td>GDP (million EUR, current prices)</td>
<td>203 912</td>
<td>244 274</td>
<td>272 145</td>
<td>311 067</td>
<td>362 689</td>
<td>310 461</td>
<td>354 289</td>
</tr>
<tr>
<td>% of GDP</td>
<td>0.89</td>
<td>0.96</td>
<td>1.29</td>
<td>2.02</td>
<td>1.67</td>
<td>2.32</td>
<td>2.60</td>
</tr>
<tr>
<td>Total revenues of the public finance sector (million PLN)</td>
<td>345 933.7</td>
<td>382 496.8</td>
<td>420 411.1</td>
<td>484 853.3</td>
<td>515 204.6</td>
<td>539 890.2</td>
<td>551 098.5</td>
</tr>
<tr>
<td>Total revenues of the public finance sector (million EUR)</td>
<td>76 297.7</td>
<td>95 020.8</td>
<td>107 933.3</td>
<td>128 169.7</td>
<td>146 506.5</td>
<td>124 772.4</td>
<td>137 947.1</td>
</tr>
<tr>
<td>% of the public finance sector’s revenues</td>
<td>2.39</td>
<td>2.46</td>
<td>3.26</td>
<td>4.91</td>
<td>4.13</td>
<td>5.76</td>
<td>6.69</td>
</tr>
<tr>
<td>Total Investment Expenditures (million PLN, current prices)</td>
<td>120 467</td>
<td>131 055</td>
<td>154 880</td>
<td>191 714</td>
<td>217 260</td>
<td>218 581</td>
<td>215 997</td>
</tr>
<tr>
<td>Total Investment Expenditures (million EUR, current prices)</td>
<td>26 569.7</td>
<td>32 557.0</td>
<td>39 762.8</td>
<td>50 679.1</td>
<td>61 781.3</td>
<td>50 515.6</td>
<td>54 066.8</td>
</tr>
<tr>
<td>EU funds as a percentage of total investment expenditures</td>
<td>6.85</td>
<td>7.18</td>
<td>8.85</td>
<td>12.42</td>
<td>9.79</td>
<td>14.24</td>
<td>17.06</td>
</tr>
</tbody>
</table>

Source: authors’ calculations, Ministry of Regional Development, Ministry of Finance and of Central Statistical Office.

It should be underlined that a significant acceleration of implementation of development projects in Poland was observed in the period 2007-2010. During that period, the public finance sector institutions more than doubled their structural expenditures (from both national and EU sources) over the expenditures incurred in the period 2003-2006. In 2009 the total structural expenditures amounted to 5.6% of the GDP, and – according to estimates – to approximately 6.5% in 2010 – this increase stemmed chiefly from increased expenditures from the EU sources.

In the case of 2004-2006 financial perspective the direction of spending of the available European funds was determined in the National Development Plan for 2004-2006 (NDP 2004-2006). This document sanctioned the implementation of seven operational programmes financed with EU structural funds (with the total amount of 8.2 billion euro) and co-financing of two Community Initiatives (0.4 billion euro), as well as the implementation of the Cohesion Fund (4.2 billion euro). Operational programmes and community initiatives were continued in the period 2007-2009, while the implementation of a remaining part of projects co-financed by the Cohesion Fund will continue until 2012.

Eighty eight thousand projects have been carried out under the NDP 2004-2006. The vast majority of funds were allocated for investments in basic infrastructure (transportation, energy and environmental protection). The reminder of the funds was earmarked for projects supporting the development of both the production sector (R&D, innovations, private enterprise) and human resources (labour market policy, training, social integration).
Table 7. Value and structure of the NDP 2004-2006 projects by main categories of structural expenditures (in zloty)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value of projects (PLN million)</th>
<th>Value of the EU co-financing</th>
<th>% of the EU co-financing/ total value of projects</th>
<th>Structure of projects - by value</th>
<th>Structure of the EU support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productive sector</td>
<td>30,530.7</td>
<td>10,700.9</td>
<td>35.05</td>
<td>29.90%</td>
<td>18.38%</td>
</tr>
<tr>
<td>Human resources</td>
<td>11,342.0</td>
<td>8,098.4</td>
<td>71.40</td>
<td>11.11%</td>
<td>13.91%</td>
</tr>
<tr>
<td>Technical infrastructure</td>
<td>58,947.9</td>
<td>38,519.5</td>
<td>65.34</td>
<td>57.74%</td>
<td>66.16%</td>
</tr>
<tr>
<td>Others – technical assistance</td>
<td>1,274.9</td>
<td>899.1</td>
<td>70.53</td>
<td>1.25%</td>
<td>1.54%</td>
</tr>
<tr>
<td>Total</td>
<td>102,095.5</td>
<td>58,217.9</td>
<td>57.02</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: authors’ calculations, Ministry’s of Regional Development database.

Principles of the cohesion policy implementation in Poland for the 2007-2013 financial perspective are determined in the document called the National Strategic Reference Framework 2007-2013 (NSRF 2007-2013). This program (known also as The National Cohesion Strategy) will be carried out through 5 national and 16 regional operational programmes. In the 2007-2013 programming period Poland is the biggest beneficiary of the European cohesion policy, since more than 67 billion euro from the EU budget (or about 20% of the entire cohesion policy’s budget for that period) were allocated to the implementation of the NSF R2007-2013.

The initial requirement for the implementation of the NSFR 2007-2013 involved the establishment of the appropriate institutional framework. It was necessary to elaborate operational programmes as well as to prepare attendant documents instrumental in the implementation of the said programmes. Because of this strenuous requirement Polish beneficiaries of the cohesion policy for the period of 2007-2013 received their first payments as late as in the second half of 2008. As of December 26, 2010, contracts have been signed for 48,946 projects, with the total value of 217.7 billion zloty of eligible expenditures (including the EU co-financing of the 150.5 billion zloty)6.

The structure of projects (as far as total funding is concerned) differs significantly from categories of intervention indicated in the NDP 2004-2006. It needs to be emphasized that this was a result of a quicker release of subsidy payments for certain types of measures, e.g. those supporting human resources. Such a swift implementation was not possible; however, in case of infrastructural investments for which the preparation stage is much longer. Ultimately, relatively more resources will be allocated for development of human resources under the NSRF 2007-2013 than it was the case under the NDP 2004-2006, and less support will be granted for development of basic infrastructure, which nevertheless will remain the main category of intervention.

Looking at the accession process through the prism of financial flows, we can distinguish three categories of flows that may occur, or intensify in the process of the EU integration. The first group pertains to the flow of assistance from the EU's income redistribution schemes from richer countries to poorer ones. The second group encompasses flows of resources stemming from a stronger integration of product markets (increased flows of trade in goods and transfers from migrant workers resulting from the job market's opening). Finally, the third group of resources relates to investments, which can be further divided into separate categories of capital flows (namely those of foreign direct investments and portfolio investments). The first of the above mentioned categories of financial flows affects the economy directly by stimulating investment demand on the part of firms which implement investment projects co-financed from public sources, and by stimulating consumer demand of the direct and indirect beneficiaries of the EU assistance. Moreover, the legal requirements related to use of the EU funds play a stabilizing role as far as the presence of a predictable legal and economic environment is concerned, and therefore help to improve business conditions for other economic units.

---

6 In the period 2007-2010 the average exchange rate of the Polish zloty was about 3.9 zloty per 1 euro.
Actions envisioned in the National Development Plan 2004-2006 and in the National Strategic Reference Framework 2007-2013, can be assigned – according to the character of their impact on the economy – into three main categories:
- actions relevant to the expansion of the economy’s productive potential,
- actions which generate additional demand,
- actions which affect the prices of certain products.

Impact of the EU funds on the supply-side of the economy is highly important, as among the objectives of economic policy there is one which pertains to bringing about lasting and beneficial changes in the economy, which is possible only by influencing the economy’s productive potential. Effects on the demand side, albeit relatively immediate, are largely transitory in nature and play a much smaller role in the attainment of strategic objectives. Therefore, the authors of available evaluation research on the EU co-financed intervention reduced the said flows to three dimensions, which cover, respectively: support for companies, development of human capital and development of infrastructure.

The measures intended to support companies should not be perceived solely as a direct financial injection which allows to expand – to the extent equal to the size of transferred funds – the financial resources. It should be underlined that the said financial flows constitute an incentive for business investment. Such resources increase the profitability of investment projects, and consequently have positive impact on the companies’ propensity to invest. Growth in the stock of physical capital stems also from higher rate of return on the entrepreneur’s own investment. On the other hand it should be also stressed that the injection of public funds (similarly as that of the private funds) doesn’t fully translate into increase in the capital stock as certain part of resources has to be earmarked for the installation of new equipment or for training the employees in the use of the said equipment.

However, while the first of the two above mentioned streams of resources (those earmarked for direct support of enterprises and those designed to assist the development of the human capital) directly increase the availability of production factors, the funds earmarked for the development of basic infrastructure do not directly involve the creation of a production factor (such flows are designed to increase the productivity of other factors). In other words, the funds earmarked for infrastructure do increase the productive capacity of the economy by raising the efficiency of production factors. It should be also added, that all three of the above defined financial flows from the EU coffers create additional demand in the economy.

Though the main objectives and priorities for the expenditure of Structural Funds and of the Cohesion Fund resources in Poland in the 2007-2013 financial perspective were already defined in the National Strategic Reference Framework and in individual operational programs, it continues to be important to allocate these resources in a manner consistent with achieving the objectives set out in the NSRF 2007-2013 and in National Development Strategy 2007-2015. The experience related to the EU co-financed intervention within the framework the National Development Plan 2004-2006 points out to an excessive fragmentation of projects in terms of their value. From the perspective of the national economy as a whole, there is an evident need to intensify efforts to modernize its potential, by expanding actions aimed at building the knowledge-based economy and the information society. In order to achieve these objectives, it is necessary to improve conditions for more effective support of cooperation between enterprises and the world of science, as well as to enhance conditions for stimulating growth opportunities on the regional level (with simultaneous support offered to the main fields of development). Particular attention should also be paid to improving conditions of the absorption of the EU funds in the sphere of infrastructure, since the said infrastructure is indispensable – together with the required improvement in the regulatory sphere – to attract private investors to given regions.

6. Impact of the EU Cohesion Policy on the Main Macroeconomic Indicators

Having presented the above mentioned explanatory notes, we would like to underline that the econometric estimates commissioned by the Ministry of Regional Development indicate that in the initial period of Polish membership in the EU (2004-2006) impact of the EU funds on the economy wasn’t significant. However, starting from 2007 there has been a visible growth in terms of the EU co-financed projects’ (financed by the Structural Funds and Cohesion Fund) impact on the main macroeconomic indicators. Based on the results of the estimates provided by the Institute for Structural Research it can be concluded that the profound impact of the EU funds on the economic growth was
already observed in the years 2009-2011 and that the said impact will be also sizeable the period 2011-2012 and subsequently in the year 2015. On the other hand, the estimates presented by the Gdansk Institute for Market Economy/Prevision indicate that the biggest impact on GDP growth will be evident in the years 2011-2013, while the Wroclaw Agency for Regional Development estimates that the said impact was the strongest in 2009 and will become quite significant in the years 2012-2013. These figures corroborate the assertion that the implementation of the cohesion policy allowed Poland to avoid the economic crisis in 2009 and to return on the path of higher growth in 2010.

Accumulated European funds for the implementation of the cohesion policy in Poland in the period 2004-2015 will have amounted to over 80 billion euro. Such a significant influx of funding will have profound impact on the main macroeconomic aggregates. Two factors determine the direction of this impact: division into main categories of intervention (e.g. dominant role of the basic infrastructure expenditure) and allocation of funding over time (e.g. significant increase in the expenditures of NSRF 2007-2013 resources in 2009). Although the value of funding allocated in 2004-2009 was considerable, the largest share of resources will flow into the Polish economy in the forthcoming years, with the highest actual payments expected in 2013, when the strongest macroeconomic impact of the cohesion policy will become evident (Table 8).

Table 8. Impact of the cohesion Policy on the GDP rate of growth in Poland

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gdansk Institute for Market Economics/Prevision</td>
<td>0.1</td>
<td>0.2</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Institute for Structural Research</td>
<td>0.1</td>
<td>0.4</td>
<td>0.8</td>
<td>0.4</td>
<td>-0.3</td>
<td>1.8</td>
<td>1.5</td>
<td>0.8</td>
<td>0.6</td>
<td>0.5</td>
<td>0.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Wroclaw Agency of Regional Development</td>
<td>0.1</td>
<td>0.3</td>
<td>0.8</td>
<td>0.5</td>
<td>-0.1</td>
<td>1.1</td>
<td>0.7</td>
<td>0.7</td>
<td>0.8</td>
<td>0.9</td>
<td>0.1</td>
<td>-0.2</td>
</tr>
</tbody>
</table>

Source: Gdansk Institute for Market Economics/Prevision, Institute for Structural Research, Wroclaw Agency of Regional Development.

We have asserted at the beginning of this paper that cohesion policy played an important role in Poland’s relatively successful economic performance in the period of the global economic crisis. We have also discussed the differences in economic growth observed in the group of new member states in the period 2004-2010. The results of econometric research quoted in the table 8 attest to the significant positive impact of cohesion policy on this indicator becoming evident from the year 2009. In 2009 Poland was the only economy, not only in the group of the new member states but also in the entire European Union, to record positive economic growth. The economy expanded by 1.6%, and the estimated impact of the cohesion policy on the rate of GDP growth reached from the “conservative” 0.3 p.p. (according to Gdansk Institute for Market Economics) to 1.1 p.p. (Wroclaw Agency of Regional Development 2010) and to 1.8 p.p. (Institute for Structural Research 2010) respectively. When we compare the actual economic growth observed in 2009 with estimates of the Institute for Structural Research the conclusion is that without the cohesion policy’s intervention Polish economy would have shrunk (by 0.2%) instead of growing by 1.6%. The sizeable impact of cohesion policy on economic growth recorded in 2009 becomes also evident when we refer to the research conducted by the Wroclaw Agency of Regional Development, while the estimates presented by the Gdansk Institute for Market Economics indicate that the economy would have grown by over 1% even in the absence of the cohesion policy funds.

In our opinion, the cohesion policy had an important contribution to economic growth in the crisis year of 2009, however there were also other factors which stabilized the economy and allowed it to avoid recession in that year:
relatively low openness of the national economy (as evidenced by the share of foreign trade in the Gross Domestic Product) and relatively stable domestic market which proved capable of “amortizing” the weakened external demand, national currency, whose

\footnote{According to authors calculations based on the Eurostat data, exports amounted in the period 2004-2010, on average, to 39.6% and imports to 41.5% of the Polish GDP, while in the Czech Republic these figures reached 64.9% and 62.3% and in Slovenia to 63.9% and 64.6%, respectively (Eurostat data base, access on October 10, 2011).}
depreciation resulted in increased price competitiveness of exports, relatively low indebtedness of households and enterprises stemming from the reasonable monetary policy on the part of the National Bank of Poland, and the limited exposure of enterprises to derivatives (stemming from their low expertise in using such financial instruments) (International Monetary Fund 2011, European Commission 2011).

The period of 2008-2009 witnessed also the emergence of the far-reaching impact of the EU financial support on the convergence of the level of GDP per capita between Poland and the EU-27 average. In the opinion of the research institutes, involved in respective econometric research, as of 2009 Poland was able — because of the direct impact of the projects co-financed by the European Union — to bridge the gap in this category by 0.9-1.9 p.p. (Table 9). The impact on the analyzed category is predicted to grow in subsequent years along with increased inflow of the EU funds. Consequently the dynamic development of the Polish economy will allow to improve the ratio of per capita GDP to the EU average by the year 2015 to about 68.6% (Institute for Market Economics) or even close to 70.1% (Institute for Structural Research 2010).

Table 9. Impact of the Cohesion Policy on the relation of GDP per capita at purchasing Power parity (EU-27 =100)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gdansk Institute for Market Economy/ Prevision</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.4</td>
<td>0.6</td>
<td>0.9</td>
<td>1.2</td>
<td>1.6</td>
<td>2.0</td>
<td>2.4</td>
<td>2.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Institute for Structural Research</td>
<td>0.1</td>
<td>0.3</td>
<td>0.6</td>
<td>0.9</td>
<td>0.8</td>
<td>1.9</td>
<td>2.8</td>
<td>3.4</td>
<td>3.8</td>
<td>4.2</td>
<td>4.3</td>
<td>4.8</td>
</tr>
<tr>
<td>Wroclaw Agency of Regional Development</td>
<td>0.1</td>
<td>0.2</td>
<td>0.6</td>
<td>0.8</td>
<td>0.8</td>
<td>1.5</td>
<td>1.9</td>
<td>2.4</td>
<td>2.9</td>
<td>3.5</td>
<td>3.6</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Source: Gdansk Institute for Market Economics/Prevision, Institute for Structural Research, Wroclaw Agency of Regional Development.

The EU funds are also contributing to increased employment rates and to reduction in unemployment rate. In 2010 the employment rate was higher than the one implied by baseline scenario (which assumes lack of the cohesion policy’s intervention) from 0.6 percentage points (Gdansk Institute for Market Economy/Prevision) to 1.2 p.p. (according to Wroclaw Agency of Regional Development), while the unemployment rate was lower, by between 0.8 p.p. and 1.8 p.p., respectively (Fig. 2).

![Fig. 2. Impact of the Cohesion Policy on the employment rate in the 15-64 age bracket in Poland (p.p.)](source)

*Source: Gdansk Institute for Market Economics/Prevision, Institute for Structural Research, Wroclaw Agency of Regional Development.*
The most pronounced impact of the Cohesion Policy on the labour market is forecasted for the period 2013-2015 when the employment rate will be higher by 1.3-1.6 p.p. thanks to the EU funds, and the number of employed will be higher by 395 thousand people – 523 thousand people.

![Fig. 3. Impact of the Cohesion Policy on the unemployment rate in the 15-64 age bracket in Poland (p.p.).](image)

**Source:** Gdansk Institute for Market Economics/Prevision, Institute for Structural Research, Wroclaw Agency of Regional Development.

Since the EU funds finance large investment projects in the field of infrastructure and offer direct support to enterprises, the seriously contribute to the revival of investment activity in Poland, leading to an acceleration of growth in gross fixed capital formation and to an increase in the investment rate. Econometric estimates commissioned by the Ministry of Regional Development indicate that in 2010 the implementation of Cohesion Policy have caused the investment rate (ratio of expenditures on gross fixed capital formation to the GDP) to be between 2.4 – 3.6 p.p. higher than it would have been in the absence of the EU financing. The maximum impact of the EU resources on the investment rate is forecasted to occur in the period 2013-2014 where the incremental growth resulting from the Cohesion Policy interventions will contribute 3.0-5.9 p.p. to its value (Table 10, Table 11).

**Table 10.** Impact of the Cohesion Policy on the growth in gross fixed capital formation (p.p.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gdansk Institute for Market Economy/Prevision</td>
<td>5.1</td>
<td>1.1</td>
<td>2.8</td>
<td>1.4</td>
<td>-0.4</td>
<td>3.4</td>
<td>1.4</td>
<td>0.7</td>
<td>0.5</td>
<td>0.3</td>
<td>-0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Institute for Structural Research</td>
<td>0.7</td>
<td>3.1</td>
<td>4.2</td>
<td>2.5</td>
<td>-2.3</td>
<td>9.6</td>
<td>6.8</td>
<td>3.6</td>
<td>1.5</td>
<td>0.9</td>
<td>-1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Wroclaw Agency of Regional Development</td>
<td>0.4</td>
<td>0.8</td>
<td>1.9</td>
<td>2.4</td>
<td>1.5</td>
<td>3.0</td>
<td>3.9</td>
<td>4.0</td>
<td>4.6</td>
<td>5.2</td>
<td>4.5</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**Source:** Gdansk Institute for Market Economics/Prevision, Institute for Structural Research, Wroclaw Agency of Regional Development.

During the first few years of Poland’s membership in the EU the cohesion policy’s interventions did not profoundly affect the growth of labor productivity – chiefly due to the fact that EU resources were allocated towards creation of new jobs. However, in subsequent years, increased investment in human and physical capital will lead to more pronounced improvement in the analyzed category. For example the Gdansk Institute for
Market Economy projects that in 2015, the ratio of labor productivity in Poland to the average labor productivity in the EU will be improved by 1.4 p.p., thanks to impact of the cohesion policy, and will reach 71.6% of the average level for the EU-27 (in 2010 the respective figures stood at 66.5% of the EU-27 average, with the impact of EU funds quantified as 0.7 p.p.).

**Table 11.** Impact of the Cohesion Policy on the ratio of public finance sector’s deficit to GDP (p.p.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gdansk Institute for Market Economy/Prevision</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Institute for Structural Research</td>
<td>0.0</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.3</td>
<td>0.4</td>
<td>0.7</td>
<td>0.9</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>Wroclaw Agency of Regional Development</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.3</td>
<td>0.6</td>
<td>0.8</td>
<td>1.1</td>
<td>1.4</td>
<td>1.7</td>
<td>1.7</td>
<td>1.6</td>
</tr>
</tbody>
</table>

*Source: Gdansk Institute for Market Economics/Prevision, Institute for Structural Research, Wroclaw Agency of Regional Development.*

In the long run the European Funds bring about lasting and significant improvement in the stability and sustainability of public finances, as measured by the ratio of general government deficit to the GDP. However, in the shorter period the projects co-financed from those funds may cause the worsening of the indicator’s values.

This character of the said impact stems from the mechanisms via which EU funds act upon the ratio of the general government deficit to GDP, which involves three channels: 1) positive impact on the volume of the GDP makes given level of deficit lower in relation to the size of the economy, 2) growth in the GDP and other economic flows (e.g. revenues of companies and households, consumption) causes the tax base to rise and – consequently higher revenues of the general government and lower deficit, 3) the need of assuring co-financing from the domestic sources causes the deficit to increase. (Kaczor *et al.* 2011).

Authors of the MaMoR 3 (Gdańsk Institute for Market Economy/Prevision) model forecast that the mutual interactions of the three above mentioned “channels” cause the impact of the EU funds on the public finance sector to be moderate and – with the exception of the year 2010 – positive. After the year 2010 the positive impact of the funds on the general government’s deficit will become slightly more pronounced – and in the period 2013-2015 their presence causes the deficit to GDP ratio to be 0.4 p.p. lower (with the simultaneous reduction in the public debt to GDP ratio by 3.6 p.p. in 2015) (Table 12).

**Table 12.** Impact of the Cohesion Policy on the ratio of public debt to GDP (p.p.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gdansk Institute for Market Economy/Prevision</td>
<td>-0.5</td>
<td>-0.8</td>
<td>-1.0</td>
<td>-1.2</td>
<td>-1.4</td>
<td>-1.6</td>
<td>-1.7</td>
<td>-2.0</td>
<td>-2.4</td>
<td>-2.9</td>
<td>-3.2</td>
<td>-3.6</td>
</tr>
<tr>
<td>Institute for Structural Research</td>
<td>0.0</td>
<td>-0.2</td>
<td>-0.6</td>
<td>-0.7</td>
<td>-0.7</td>
<td>-1.7</td>
<td>-2.7</td>
<td>-3.2</td>
<td>-3.6</td>
<td>-3.8</td>
<td>-3.7</td>
<td>-4.0</td>
</tr>
<tr>
<td>Wroclaw Agency of Regional Development</td>
<td>-0.1</td>
<td>-0.3</td>
<td>-0.8</td>
<td>-1.4</td>
<td>-1.6</td>
<td>-2.1</td>
<td>-2.6</td>
<td>-3.1</td>
<td>-3.6</td>
<td>-4.2</td>
<td>-4.3</td>
<td>-4.1</td>
</tr>
</tbody>
</table>

*Source: Gdansk Institute for Market Economics/Prevision, Institute for Structural Research, Wroclaw Agency of Regional Development.*

According to the forecast presented on the basis of the EU Impact model (Institute for Structural Research) the impact of the EU funds on the situation of the public finance sector remains limited in the entire period of analysis, as the authors of this model assume lack of the structural shifts in the budgetary expenditures due to the Cohesion Policy. However the instrument of the said policy contribute somehow to the improvement
in the fiscal parameters, reducing the ratio of general government’s deficit to GDP by between 0.7 p.p. and 1.0 p.p. per year in the period 2010-2015. According to the presented model the highest positive impact of the EU funds on the public finance sector will occur in the period 2012-2013 when the general government to GDP ratio will be reduced by 1.0 p.p. and the ratio of public debt to GDP will be 3.6-3.8 p.p. lower compared to the scenario without the access to the EU financing.

As it has been already mentioned, the EU funds contribute to reduction in interregional differences in the level of economic development. On average, the most pronounced inflow of funds and their impact on the regional convergence is observed in the case of poorer regions of Eastern Poland. The funds’ impact on the analyzed indicators, particularly in the longer time horizon, is confirmed by the said evaluation studies. The scale of available cohesion policy financing constitutes the main factor which determines the influence of the policy’s intervention – though there are numerous exceptions to this “rule of thumb” (for example resulting from the different structure of funds’ division among the main economic categories of intervention). To sum up, it has to be reiterated that available evaluation studies unequivocally confirm the positive impact of these funds on the attainment of the cohesion policy’s objectives in Poland.

7. Benefits of the EU-15 Countries from the Implementation of the Cohesion Policy in Poland

The issue of the cohesion policy’s benefits for the EU-15 countries (the richest, “old” member states), also merits attention in this study. Impact of the cohesion policy on the economic situation of the EU old member states was extensively analyzed by the Institute for Structural Research in the research paper commissioned by the Ministry of Regional Development. Though authors of the said paper acknowledge that their research didn’t cover the full impact of Poland’s EU accession on the economic situation in these countries (which is probably much larger than the effects of the implementation of cohesion policy alone), their assessment constitutes an interesting attempt at evaluating the first five years of Poland’s EU membership from the perspective of “old” member states’ benefits. Authors divide the said benefits into two separate categories – direct and indirect. The first group encompasses situations in which firms from the “Old Union” profit from the EU co-financed projects pursued by them in Poland – consequently certain part of the contributions of the net-paying countries returns to them in the form of payments for goods and services sold in Poland. According to the Institute of Structural Research, in the period 2000-2008 the said payments amounted to approximately 5% of the value of the EU cohesion funds sent to Poland, which signifies that the direct benefits derived by the EU-15 countries from the implementation of cohesion policy in Poland within the framework of the National Development Plan 2004-2006 amounted to PLN 4.6 billion (or approximately EUR 1.18 billion). As far as the direct benefits of the EU-15 countries are concerned it should be underlined that approximately half of those accrued to Germany, 12% to Denmark and 11% to Austria (Bukowski, Wierus 2010).

However, the Institute estimates also, the indirect benefits associated with an increased – on the account of the implementation of EU cohesion policy in Poland - demand of the Polish economy for imported goods and services (imports of: supply goods, consumer goods and investment goods). That increased demand derives from both the fact that the interventions co-financed from the EU funds require not only the execution of the subcontracting work or the delivery of supplies of goods and services necessary to complete the projects - both these flows are reflected in the direct benefits of the EU-15 countries), but also bring about long-term modernization of the Polish economy. The said modernization increases the economy’s productive potential, and thus produces higher demand for various goods and services.

According to the evaluation of the Institute for Structural Research total benefits (direct and indirect) of the cohesion policy’s implementation in Poland which accrued in the period 2004-2009 to the EU-15 countries amounted to 17.8 billion zloty (4.5 billion Euros - at current prices from to 2008) or to 27.0% of the total value of financial inflows received by Poland in that period (IBS - Institute for Structural Research 2010).

The experts from the Institute for Structural Research point out to the non-uniform distribution of the above mentioned benefits – resources allocated for Poland for the period 2004-2006 were in fact much lower than the allocation for the period 2007 -
2013. The experts quoted here, also indicate that the indirect effects of this policy (especially those that are associated with increased demand on the part of the country's economy) are slightly delayed in time. IBS has estimated that in the period 2004-2015 the benefits derived by the EU-15 countries will have amounted to a total of about PLN 151 billion (EUR 37.8 billion) - at constant prices of the year 2008. These calculations strongly attest to noticeable benefits of the EU cohesion policy accruing not only to the net beneficiaries of the said policy, but also to the net contributors to the European Union's budget (Institute for Structural Research 2010).

Conclusions

The first seven years of Poland's membership in the European Union brought about favorable changes in the country's socio-economic situation, as evidenced by the acceleration of economic growth compared to the situation observed in the period 1998-2003 (prior to the EU accession). This “post-accession transformation” resulted in acceleration of the convergence process – attested to by a catching up with the EU-27 GDP per capita level. However, in case of Poland, the said process did not proceed faster than in the case of the majority of countries which joined the European Union on May 1, 2004 or afterwards. The above observation indicates the enormous need to undertake actions aimed at improving the effectiveness and upgrading the competitiveness of the Polish economy. The EU cohesion policy can constitute an important inducement and support for the actions required on both the national and regional levels. It should be also reiterated that the said policy brings various direct and indirect benefits to these countries which are a net contributors to the EU budget.

The hitherto implementation of the cohesion policy allowed Poland to record additional improvement in the number of key macroeconomic parameters, attesting to the policy's significant impact on the national economy and confirming our first assumption. The results of the available evaluation studies corroborate our second assumption, namely the importance of the said funds for the ability of the Polish economy to avoid the recession in the year 2009. Moreover, the available evaluation studies support our assertion that the largest positive impact of the policy will grow over time to become the most pronounced in the period 2012-2014. Due to the low level of innovativeness of the Polish economy, it is important to allocate significant part of the cohesion policy resources to innovative projects, as such an allocation will, in turn, lead to the economic modernization and – via multipliers effects – to an increased demand for goods and services produced in the country. At the same time, economic policy should aim at the necessary structural reforms and create favorable climate for the business sector. (OECD 2009 OECD 2009, 2010).

It should also be noted that, to date, implementation of cohesion policy contributed decidedly to the modernization of transport infrastructure in Poland. The available econometric research indicates that, in the period 2004-2006 the presence of the EU funds (and the requirement to apply stringent procedures in the implementation of projects in particular), allowed to identify a number of barriers to the development of infrastructure in Poland (such as: inadequacies of the spatial planning system, the inefficiencies of a legal system or the low effectiveness of management of state-owned transport companies). The removal of these barriers should facilitate significant improvement in the implementation of large transport projects within the framework of the 2007-2013 financial perspective.

The success (or lack thereof) of Poland in using, in the forthcoming years, the opportunities stemming from the free access to the markets of other EU countries, as well as of substantial financial resources allotted for Poland within the framework of the cohesion policy will, to a large extent, define the scale of benefits of the EU membership.

Deeper economic integration of the new member states and the convergence of income levels require them to finish the implementation of the Single Market rules and will depend of further integration of markets for goods and services. Integration of the EU financial sector should be also deepened (particularly taking into account the regulatory shortcomings revealed by the economic crisis). The specter of the adverse impact of the crisis on the internal convergence within the European Union should be overcome. At the same time the actions taken by the EU (such as the elaboration of the EU 2020 Strategy) indicate that the crisis may become an important “stimulus” for reforms, that will, after counteracting the recessionary trends, bring about profound structural transformation necessary to improve the foundations

The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Ministry of Regional Development and/or of the Polish Information and Foreign Investment Agency.

References


Institute for Structural Research. 2010. Impact of the benefits derived by EU-15 countries from the implementation of cohesion policy in Poland. Update 2010. Warsaw


SUSTAINABLE DEVELOPMENT, ECONOMIC GROWTH AND DIFFERENTIATION OF INCOMES OF LATVIAN POPULATION

Ilga Lavrinovich¹, Olga Lavrinenko², Nikolajs Jefimovs³

¹, ², ³ Daugavpils University, LV-10225 Daugavpils, Latvia
E-mails: ¹ilga.lavrinovica@du.lv, ²olga.lavrinenko@du.lv, ³geliogabal@inbox.lv

Received 28 January 2012; accepted 15 June 2012

Abstract. Economic growth and income differentiation problems are the most actual problems of modern research. The research is attributed to sustainable development research area. In a case of Latvian economy these problems have a huge actuality because of lack of researching works, where these parts of science are completely opened. Special interest causes question about the trajectory of economic growth and and uneven income. If GDP growth is connected with increasing income differentiation of population, then increasing income differentiation absorbs part of the effect on the growth of aggregate income. If GDP growth is on the background of lower income differentiation, the increase in total income is supplemented by regularity of revenue growth. Thus the social effect of economic growth increases significantly. What trends are taking place in income differentiation by regions and economic development of the regions in Latvia after the EU accession? What trends are taking place in interregional differentiation in income per household member, and in GDP? Is there a relationship between trajectories of economic growth and income differentiation in the regions of Latvia?

Keywords: economic growth, sustainable development, differentiation of incomes, economic development, inter-regional inequality, amplitude coefficient, coefficient of variation.


JEL Classifications: A1, A10.

1. Introduction

At present the problem of uneven economic development of Latvia and other countries is becoming increasingly popular. However, most studies devoted to the uneven economic development, not tied to the main macroeconomic problem - the problem of economic growth. Recently this issue has been included into economic development or sustainable development research area (e.g. Torado, Smith 2009; Dudzevičiūtė 2012; Lankauskiene, Tvaronavičienė 2012). Unanimously, reducing of tremendous income inequality differences is seen as sustainable development target.

In Central and Eastern Europe, large-scale reforms in the 1990s led to a deep recession, accompanied by increased inequality. Meanwhile, China’s constant annual growth of the Gini coefficient by 2 percentage points was observed during 1990-2001 in the background of a booming economy (Wei et.al. 2011). Thus, the income differentiation can occur on the background of economic recession, and on the background of economic growth. Localization of GDP growth in the small area means, that high rates of economic growth can come into conflict with the growing prosperity of the vast majority of the population. Accordingly, high rates of economic growth may be accompanied by an enrichment of the rich contingent of the population against the depletion of other social groups. In this case, the usefulness of the economic growth can be questioned. Along with this, the opposite phenomenon could happen, when economic growth is accompanied by an equalization of
Incomes (Fournier, Koske 2012). If GDP growth is accompanied by increasing income differentiation, the increase in income inequality absorbs part of the effect on the growth of common income. If GDP growth is on the background of lower income differentiation, the growth of common revenue is complemented by the increase of income uniformity. Thus, the social effect of economic growth is increasing.

The purpose of the article: to set trends in income differentiation of regions and regional economic development, that taking place in the period from 2004 to 2009, as well as to answer on question about their relationship.

Research object and methods: The problem of relationship of economic growth and changes in income inequality in Latvia has several aspects.

One of them is connected with the establishment of an econometric dependence between these two phenomena. However, this approach should be recognized as the unpromising, due primarily to the fact that the above trends have to be watched for a long period of time. But a long period of time is a period of economic recession and periods of economic growth, which makes impossible meaningful use of the correlation analysis of the two phenomena. Construction of multifactor econometric models is also impossible, since there is a lack of statistical data due to insufficient length of time series. In connection with the above-described problems, the authors will study the defined problem using methods of logical analysis.

Inter-regional inequality is estimated by the coefficient of scatter and coefficient of variation. In calculation formulas their form has a view:

\[ K_R = \frac{X_{\max} - X_{\min}}{\bar{x}}; \]  
\[ V_\delta = \frac{\sigma}{\bar{x}}. \]

where, \( K_R \) - coefficient of sweeps, \( V_\delta \) - coefficient of variation, \( X_{\max} \) and \( X_{\min} \) - the largest and smallest value of feature; \( \bar{x} \) - medium value of feature.

Increase of the amplitude coefficient and the coefficient of variation directly indicates the increase of feature variation in the examined aggregation. Thus, analyzing the dynamics of these factors in connection with key parameters it is possible to give a qualitative and quantitative characterization of the growth process of the existing differences. Inequality of income per household member is assessed by the Gini coefficient. Empirical base of research are the data of Central Statistical Bureau of Latvia.

2. The discussion and results

The representatives of the liberal economy emphasize the dominant role of economic growth on income raising. Steady growth in the economy linked, in terms of liberal economy, with a free economy, increase worker productivity and reducing unemployment.

A wide range of studies illustrate the large beneficial effects of product market liberalisation on productivity, but the impact on labour income inequality is uncertain. Product market liberalisation generally raises employment, but this inequality-reducing effect could potentially be offset by a wider dispersion of earnings, though the evidence on the latter link is far from conclusive (Bourlès, 2010; Griffith et.al. 2007; Guadalupe 2007; Koske et.al. 2012).

Proponents of the liberal economy are considering free market as the most efficient economic system, which is as effective in solving social problems. Therefore, they do not approve state intervention as a method of reducing poverty and require the restriction of the welfare state. Generous social protection, in their opinion, is a disincentive to work and promotes the formation of single-parent families. The welfare state, in their view, can only for a short period of time to raise incomes, but in the future, because of its negative effects on the growth of the economy; finally it could lead only to a deepening of poverty. High social transfers stable the labor market and can’t reduce taxation. Often, however, the growth of income inequality is often shaped by the increasing concentration of income at the top of the income distribution (Hoeller 2012). In many countries this fact is worsen by the decrease of taxes on capital incomes and inheritance. Indeed, capital income tends to be increasingly concentrated in the upper income brackets, as do wealth and inheritance, that’s why, in the authors’ opinion, the liberal approach deserves criticism (Piketty 2010; Fredriksen 2012).

Structural theory points to changes in the demographic structure, as a factor that increases the possibility of low-income (Lisauskaite 2010). The researchers, based on this theory, usually take into account women’s participation in the labor market, population
of elderly people, children in single mother families, immigration (Polityka Unii Europejskiej 2008; Stávková et.al. 2011). Although the relationship between women’s participation in the labor market and low income, in the opinion of the authors, is not always clear. Skills of workers are also an important factor in income inequality in technological progress (Goos et.al. 2009).

Structural policies in the areas of education, labour and product markets influence labour income inequality by affecting i) the employment rate and ii) the dispersion of earnings among those that have a for a detailed discussion job (Koske et.al. 2012).

Institutional Economics points to institutional factors that generate differences in the amount of wealth (OECD 2011, 2012). Observed between states, as well as between social groups in the country the difference in income derived from the degree of income redistribution, which can be solved by the state, as well as the level of social transfers aimed at helping the poor. Supporters of the welfare state argue that the extension of social protection is the most important factor that reduces poverty (Rethinking Poverty… 2009). Low-income workers, working on temporary labour agreements, earn less than workers with similar professional skills on permanent labour agreements (Fournier, Koske 2012). Adequate protection for employees with temporary or permanent agreements can also reduce the income gap between immigrants and citizens (Causa, Jean 2007).

According to the American economist Paul Krugman institutions, norms, and political environment mean for the distribution of income much more, than objective market forces: “a key role in increasing inequality (in the U.S. (note the authors of the article)) played the erosion of social norms and institutions that once supported the equality” (Krugman 2007).

Thus, economic growth in the regions and the distribution of its results, which involves the state, are deeply connected. Their optimal ratio (a condition of healthy development) including growth itself, without which, of course, would be nothing to distribute. The degree of income equality is influenced by many circumstances of the multiple factors. Here are property income, and the level, quality education, which, in contrast, reduces the differentiation, and finally, the level of employment, and much more. Equally important is the state - its social policy, if it is aimed at redistribution of incomes and increase of social spending.

Based on the objectives of the research, the authors identify emerging trends in the period from 2004 to 2008 in the inter-regional differentiation of the average income per household member and per capita GDP, as well as in the differentiation of income within each region.

3. Trends in average income per household member in Latvia and by region

The study found that there is a tendency of increase in average income per household member in Latvia during the period from 2004 to 2008: medium income increased from 100 lats to 253 lats (153% increase), but the inflation index in the same period (January) increased only to 42.2%. In the period from 2008 to 2009 due to the crisis, the average income per household member in Latvia decreased from 253 to 213 lats (16% decrease), the inflation index in the same period increased by 9.8%. Similar trends were observed across regions.

The medium income per household member in Latvia in 2000 was 78% of the minimum consumer basket; medium income in 2005 equaled the value of the minimum consumer basket. In the period from 2006 to 2009 average income per household member grew much faster than the value of the minimum consumer basket and signs of the crisis were not noticeable. Talking about families in which each member of the household accounts less than a set of minimum consumer basket, their number decreased from 81% of all Latvian households in 2000, to 65% - in 2005, to 56% - in 2007, to 47% in 2008, and up to 40% in 2009 (Voronov, Lavrinenko 2011).

\[1\] The central theme of Krugman’s statements as a theorist and publicist - study the reasons why, since the mid-`70s, the U.S. has intensified the uneven distribution of income between the participants of production before and after its redistribution through the state. The author traces the impact of this trend on the political system and social situation in the country. He also asks that the state can do in order to return to the position of a relatively more even distribution of income created by “New Course” of Roosevelt, and lasted for more than thirty years.
The lowest average incomes per household member, during the entire research period, were in Latgale: in 2004 - 73 lats in 2009 - 159 lats (Fig.1). The highest average income per household member, during the entire research period, were observed in the Riga region 135 lats in 2004, and 260 lats in 2009 (see Fig.1). Trends in income inequality in the average per household member in Latvia, between and within regions.

The value of the Gini coefficient in Latvia during the period from 2004 to 2007 increased by 1.6 percentage points (from 36.4% to 37.7%), and the beginning of the crisis period is characterized by a decrease of the Gini coefficient to the level of 2004. How the inter-regional disparities in income per household member has changed? Calculated by formulas (1) and (2) coefficient of scatter and coefficient of variation, we have in the Table 1.

![Fig. 1. Average incomes per household member by region in 2004-2009](image)

Source: CSB.

**Table 1.** The coefficients of scatter and the variation in income average per household member between the regions of Latvia in 2004-2009

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>$K_R$</td>
<td>0.66</td>
<td>0.86</td>
<td>0.71</td>
<td>0.63</td>
<td>0.57</td>
<td>0.50</td>
</tr>
<tr>
<td>$K_{R%}$ (2004 r.=100%)</td>
<td>100</td>
<td>130</td>
<td>107</td>
<td>95</td>
<td>85</td>
<td>75</td>
</tr>
<tr>
<td>$V_{d}$</td>
<td>0.25</td>
<td>0.30</td>
<td>0.25</td>
<td>0.26</td>
<td>0.23</td>
<td>0.18</td>
</tr>
<tr>
<td>$V_{d%}$ (2004 r.=100%)</td>
<td>100</td>
<td>122</td>
<td>99</td>
<td>104</td>
<td>94</td>
<td>72</td>
</tr>
</tbody>
</table>

Source: authors', CSB.

Thus, it was found that the inter-regional differentiation of income average per household member in the period from 2004 to 2009 decreases: the coefficient of scatter is reducing by 25%, coefficient of variation - 28%.

Having examined the trends in the Gini coefficient within the regions we can say, that they have different directions (see Fig.2).
In general, it is observed the increase of GDP in Latvia from LVL 7,434,454 in 2004 to LVL 16,188,232 in 2008. Analyzing the economic development of regions, it is noted, that in all observed regions the value trend of the gross domestic product is increasing. In the Riga region, according to the financial data of 2008, the GDP makes more than a half of common state GDP - 54.1%, in Pierigas region - 12.7%, in Kurzeme - 10.4% in Latgale - 8.4%, in Zemgale - 7.6 %, in Vidzeme - 6.6%. However, the situation differs, considering the per capita GDP by regions. The region with the lowest GDP per capita is the Latgale region (3926 lats in 2008), slightly higher GDP in the region of Zemgale (4378 lats in 2008), then in Vidzeme region (4503 lats in 2008), then - Pierigas region (5370 lats in 2008), then – region of Kurzeme (5579 lats in 2008), and the leader, of course, is the Riga region - 12 234 lats per capita in 2008.

Thus, it is concluded, that the per capita GDP trend in the period from 2004 to 2008 has an increasing rate (Fig. 3).

4. Economic growth in Latvia and regions

In general, it is observed the increase of GDP in Latvia from LVL 7,434,454 in 2004 to LVL 16,188,232 in 2008. Analyzing the economic development of regions, it is noted, that in all observed regions the value trend of the gross domestic product is increasing. In the Riga region, according to the financial data of 2008, the GDP makes more than a half of common state GDP - 54.1%, in Pierigas region - 12.7%, in Kurzeme - 10.4% in Latgale - 8.4%, in Zemgale - 7.6 %, in Vidzeme - 6.6%. However, the situation differs, considering the per capita GDP by regions. The region with the lowest GDP per capita is the Latgale region (3926 lats in 2008), slightly higher GDP in the region of Zemgale (4378 lats in 2008), then in Vidzeme region (4503 lats in 2008), then - Pierigas region (5370 lats in 2008), then – region of Kurzeme (5579 lats in 2008), and the leader, of course, is the Riga region - 12 234 lats per capita in 2008.

Thus, it is concluded, that the per capita GDP trend in the period from 2004 to 2008 has an increasing rate (Fig. 3).
In Riga region there was an increase of per capita GDP in the analyzed period by 108%, in Pierigas region – by 171%, in Vidzeme - by 135%, in Kurzeme - by 96%, in Zemgale - by 163%, in Latgale - by 163% (2004=100%)

The authors found that there are decreasing trends in the differentiation of the regions in per capita GDP in the researched period. It is evidenced by decreased values of the coefficient of variation and the coefficient of scatter - 18% and 17% respectively (see Table 2).

**Table 2.** The coefficients of scatter and the variation of GDP per capita between the regions of Latvia in 2004-2009

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>$K_r$</td>
<td>1.67</td>
<td>1.61</td>
<td>1.52</td>
<td>1.41</td>
<td>1.39</td>
</tr>
<tr>
<td>$K_r$ %</td>
<td>100</td>
<td>96</td>
<td>91</td>
<td>84</td>
<td>83</td>
</tr>
<tr>
<td>$(2004;g.=100%)$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_s$</td>
<td>0.63</td>
<td>0.60</td>
<td>0.56</td>
<td>0.52</td>
<td>0.52</td>
</tr>
<tr>
<td>$V_s$ %</td>
<td>100</td>
<td>95</td>
<td>88</td>
<td>83</td>
<td>82</td>
</tr>
<tr>
<td>$(2004;g.=100%)$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: authors’, CSB.*

Thus, the investigation of the trajectories of economic growth (GDP per capita) and the dynamics of differentiation of the medium income for a household member between the regions indicates, that inter-regional differentiation of medium income per household member and per capita GDP in Latvia decreased in the period from 2004 to 2008. Regarding to income inequality per household member in each region, it could be stated that there are opposite tendencies In some regions (Riga, Vidzeme, Kurzeme) on the background of increasing GDP per capita, level of income differentiation by one household member is reducing, that is increase of total income is complemented by the equality of income growth, which in turn increases the social impact of economic growth. In other regions (Pieriga, Zemgale, Latgale) the increase of total income is supplemented by the uneven growth of income, which reduces the social impact of economic growth.
Conclusions

The research found that there is a tendency of increase in average income per household member in Latvia during the period from 2004 to 2008, during the period from 2008 to 2009 due to the crisis the average income per household member in Latvia decreased. Similar trends were observed by regions.

The lowest average income per household member during the entire research period was in Latgale, the highest average income per household member during the entire research period was observed in the Riga region.

The value of the Gini coefficient in Latvia during the period from 2004 to 2007 increased by 1.6 percentage points (from 36.4% to 37.7%), and the beginning of the crisis period is characterized by a decrease of the Gini coefficient to the level of 2004.

Having examined the trends of the Gini coefficient by regions we can say that they have different directions. In the period from 2004 to 2009 trend of increasing Gini coefficient is common for Pierigas, Zemgale and Latgale regions. In contrast, in Riga, Vidzeme and Kurzeme region, there was a trend of slight decrease of the Gini coefficient.

The per capita GDP has a tendency to increase in the period from 2004 to 2008.

The region differentiation of per capita GDP has a tendency to reduce in the required period.

Interregional differentiation in Latvia of average income per household member and per capita GDP decreased in the period from 2004 to 2008.

Regarding income inequality per household member in each region it could be stated, that there are opposite tendencies. In some regions (Riga, Vidzeme, Kurzeme) on the background of increasing GDP per capita, level of income inequality by one household member is reducing, that is increase of total income is complemented by the equality of income growth, which, in turn, increases the social impact of economic growth. In other regions (Pieriga, Zemgale, Latgale) the increase of total income is supplemented by the uneven growth of income, thereby reducing the social impact of economic growth.

Thus, we can not conclude that the increase in total income mediates the increase in income inequality within regions during the period from 2004 to 2008.

References


OECD Publishing.


Stávková, J.; Stejskal, L.; Nagyová, Ľ. 2011. Income differentia-

Todaro, M. P.; Smith, C. S. 2009. Economic Development. Addi-
son-Westley. 861p.

Voronov, V.V.; Lavrinenko, O. 2011. The income differentia-

Wei, Y.D.; Yu, D.; Chen, X. 2011. Scale, agglomeration, and regional inequality in provincial China, Tijdschrift voor Econo-
1. Introduction

The issue of competitive advantage is closely tied to the competitiveness, is influenced by different theories and is interdisciplinary. Facts about competitive advantage can be found in economic theory, history, architecture, sociology, culture, etc. We will pay attention to the particular knowledge, based on economic theory. The competitive advantage is a relative term (Benes 2006: 27). According to Martin (2002, 2005), there is no single, all containing economic or economic-geographic theory, providing a generally acceptable definition and explanation of regional competitiveness and regional competitive advantage. The situation is the same in definition of the methodology for the identification and exploitation of competitive advantage in terms of regions. The paper was published by the support of research project VEGA n. 1/1010/11 Theoretical and methodological basis of planning in the public administration and possibilities of its application in the Slovak Republic.

2. Literature review

The theory provides three forms of certain benefit which an entity acquires over its competitors. This is a comparative advantage, competitive advantage and compiled, created advantage (constructed advantage). The theory of comparative advantage is mainly associated with the work of Ricardo and has the macroeconomic fundamentals. Porter (1994,1998) Competitive advantage is based on the work of Porter and diamante key factors for the development of competitive advantage. Porter also developed the idea of industry
clusters as a basis of economic development. This idea was further developed by several authors (Maskell, Malmberg 1997; Etzkowitz, Leydesdorff 2000) and led to the theory of innovation systems, which include a broad list of networked partners including universities, research centers, government agencies and businesses. This idea was adapted to the concept of compiled or constructed advantage (Cooke, Leydesdorff 2006). Skokan and Rumpel (2007) indicate that some of the key ideas of the concept of innovation systems, based on the interaction between business, universities and government formed the concept of knowledge economy and society. Two previous approaches, comparative advantage and competitive advantage, do not include the new dynamics of innovations and capacity their using in the form of human resources necessary for growth. This “new competitive advantage” emphasizes the development of regional economy and its dynamics. It is built on knowledge and requires the development linking the economy, government, knowledge infrastructure, society and culture (Cooke et al. 2006; Etzkowitz, Leydesdorff 2000).

The findings and opinions of the authors who have dealt with or deal with competitive advantage can be divided into several groups according to common features, or theoretical disciplines that analyses the competitive advantage. Cellini and Soci (2002) argue that the theory of regional competitiveness and regional competitive advantage does not belong to the macro level (national) or the microeconomic level (business). When we speak about region, we can not say that it is a simple grouping of businesses or a subgroup of nation. Camagni (2002) adds that the regions actually compete by attracting businesses (capital) and labor, as well as by markets, but the competition is based on the absolute advantage rather than comparative advantage. We incline to the Cellini and Soci (2002) approach, that regional competitiveness and regional competitive advantage is developed at the meso-level that involves elements of macro level and micro level.

In theory, it is also possible to find three approaches to create competitive advantage - a market-based approach to competitive advantage, which focuses on cost and differentiation, approach to the competitive advantage based on resources and marketing approach to competitive advantage, which represents a compromise between these two approaches. A specific approach can be considered creating a new advantage based on the knowledge; cooperation of public, private and non-profit sector; building networks and partnerships. The process of identification and exploitation of the region's competitive advantage will depend on the type of competitive advantage in the region (Borsekova, Vaňová 2011).

The approach of competitive advantage based on resources focuses on the region's resources and the competitive advantage is created through internal resources of the region. The unique resources help to create a unique market position. In some cases, the competitive advantage of the region can be formed by the external sources; e.g. in the form of strong foreign investment's flows into the region, which can be beneficial only in a certain time period. The procedure of identification and exploitation of competitive advantage based on resources is developed by authors Barney (1991) and Grant (1991), who designed this approach to the enterprise level. However, it can be applied to conditions in the region. According to these authors, the successful application of the theory of competitive advantage based on the resources consists of certain necessary steps. The following table shows the procedures of identification and exploitation of competitive advantage based on resources, according to Barney and Grant analogously accustomed to the terms of regions.

**Table 1. Process of identification and utilization of competitive advantage based on resources**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Identification of the potential key sources in the region, that create the assumption of the competitive advantage creating;</td>
<td>1. Identification and classification of regional sources. Evaluation of strengths and weaknesses in comparison with the competitors. Identification of opportunities for better use of resources in the region.</td>
</tr>
<tr>
<td>2.</td>
<td>Assessment the resources by four criteria: criterion of regional resource using, rarity criterion, inimitability criterion, indispensability criterion.</td>
<td>2. Identification of regional capacities and abilities. Answer to the question – what can the territory does more effective as competitors. Identification of inputs and capabilities, complexity of these capabilities.</td>
</tr>
<tr>
<td>3.</td>
<td>Maintaining and protecting the values that contribute to the regional growth.</td>
<td>3. Evaluation of the profit generating resource's potential and capabilities in connection with the potential to achieve the sustainable competitive advantage and relevant return on invested capital or resources.</td>
</tr>
</tbody>
</table>
We prefer the synthesis of these two approaches at the ideal methodology for the identification and exploitation of competitive advantage based on resources. The comprehensive methodology for the identification and exploitation of competitive advantage based on resources in terms of regions should include all steps illustrated in table 1.

The second approach to the competitive advantage is a market-oriented approach. It focuses on cost and differentiation. This approach to the competitive advantage, mainly represented by Porter (1998), Vaňová (2006), claims that the market and the environment identifies the entities, in our case, regions that are ineffective or which produce products for which the consumers are not willing to pay the asking price. The theory of competitive advantage is driven mainly by external factors (opportunities, threats and sectoral competition) and as the Porter (1998) writes that the sustainability of such competitive advantage means constantly to overtake the competition by “shifting target” of region and its constant improvement, innovation.

A compromise between these two approaches is an approach based on the network of values, which is a third approach to the competitive advantage (McPhee, Wheeler 2006). According to this approach, building a sustainable competitive advantage is based on positioning in the value network. If we apply this approach to the region, we understand positioning of the region as a market position that the region received in the market compared to its competitors. The region can achieve a desired market position by the competitive advantage. The base term of this approach is the expectation of customers, that compares what the customer gets (benefits that brings product and services) and what must be made to obtain the desired product or service (the direct and indirect costs that must be sacrificed in favor of obtaining the desired product) (Hollensen 2010: 28–35).

This approach to the competitive advantage is most closed to the marketing concept, especially marketing places¹. The marketing places is the basis of relatively new and innovative concept of territorial development - strategic marketing planning of territorial development. It should be noted that “the management of strategic marketing planning in terms of territories is much more difficult than in terms of private companies” (Kotler et al. 1992).

The competitive advantage of the region is an important starting point for taking a position on the market, because it makes region more attractive. It is often the basis for the setting of marketing objectives. The superiority over the competition became the basis of marketing strategies that are not aimed only at the customer satisfaction.

Marketing concept argues if the regions want to be successful, they must provide the greater value to the customer as competitors offer (Saloner et al. 2001). The role of marketing professionals is therefore to do something more than just adapt to the needs of target customers. They must strive to achieve strategic advantage by placing own offer firmly in the minds of customers in comparison with the competitor’s offers (Vaňová 2006: 83). The link between strategic marketing planning and a regional competitive advantage is so strong that the marketing strategy of development can often be defined as looking for a competitive advantage. By Vaňová (2006) “the role of strategic marketing planning in the region is to secure the efficient satisfaction of commercial and non commercial needs from the perspective view, requirements and ex-

to a certain city, state or country” (1982, p. 482). Hanuláková with a team of authors defined marketing places as a set of methods and tools to ensure the development of the territory and to achieve the prosperity that defines the product and prospects for location development and ensure the compliance of territorial supply and market needs. Marketing places evaluates territorial resources and contributes to the optimum utilization of the territory potential. It aims to satisfy the commercial and non-commercial needs taking into account the public interest (2004, p.10). The most comprehensive definition of marketing places is created by Vaňová. She defines marketing places as “a continuous social process that provides the possibility to influence the sustainable development of the territory more effective by building a sustainable competitive advantage, creating conformity between demand and supply of the territory at the market by using the specific marketing methods and tools. The process aims to minimize the risks of the territory associated with its entering to the market and maximize its social benefit in accepting its social role” (2006, p 36).


<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Choosing strategy, that best utilizes the regional resources and capabilities with respect to the external environment.</td>
</tr>
<tr>
<td>5.</td>
<td>Identifying gaps in the resources that need to be filled. Investments into the expanding and improving the basic resources.</td>
</tr>
</tbody>
</table>

---

¹ Kotler defines marketing places as “all activities to create, maintain or change attitudes and behavior to a particular location. The aim of marketing is to attract new residents, tourists and investors.
pectations of current and potential customers of the region, and the valuing up and optimal utilising its potential. At the same time, it must take into account the possible changes in the market, and in the external and competitive environment, to promote the region on the market through sustainable competitive advantage, with respecting the public interest”.

3. Methodology and research results

The basis of our research is the assumption that competent persons and authorities at the regional level, do not enough deal with the issue of competitive advantage in region, its identification and use, respectively they do not pay attention to it at all. In our opinion, this is due to the fact that the issue of competitive advantage at the regional level is not processed in the literature in detail and there is not a comprehensive methodological approach focused on identification and exploitation of competitive advantage in the region. We assume that the summary and enrichment of knowledge in this area and developing a methodological procedure for the identification and exploitation of competitive advantage can be a sign of possible change in this unfavourable situation.

3.1. Methodology

The first part of the primary research has focused on theoretical knowledge of competitive advantage and its determinants. We chose the method of interview in the survey form conducted by the Delphi method in one round. The questionnaire included eight closed, mixed and open questions. Two questions were scaling with the assessment scale. The end of the questionnaire consists of an identification of respondents (professional field). The questionnaire was distributed electronically or personally, because we engaged in the research the experts from abroad too. The aim of the questionnaire was to gain the expert opinions on the chosen definitions of competitive advantage, competitive advantage factors in the region and their importance, methodology for identification and exploitation of competitive advantage in terms of regions.

Through the questionnaires, we contacted the local and foreign experts to obtain expert opinions on selected theoretical knowledge of competitive advantage and its determinants. This part of primary research involved 33 experts, in the ratio of 17 domestic (52%) and 16 foreign (48%) professionals. The foreign experts include the specialists from six countries (Belgium, Czech Republic, Finland, Netherlands, Germany and USA). The sample of respondents was composed of a deliberate choice. We focused on domestic and foreign experts from academia and research institutions, which represent an expert group dealing with the issue of competitive advantage in their work. This part of the primary research involved the experts from fourteen professional fields. The fields and proportion of respondents in % illustrates the following figure.

![Proportional composition of respondents according to area of their work](image)

**Fig.1.** Proportional composition of respondents according to area of their work

*Source: Own workmanship of the primary research results.*
The second part of the primary research focused on the identification and actual use of competitive advantages in terms of the Slovak regions, the factors and features of competitive advantage and the methodology for the identification and exploitation of competitive advantages at the regional level. This part of the primary research was conducted through structured interviews in all NUTS 3 regions of Slovakia in the period from October to January 2011/2012. Respondents were the expert groups including the executives and employees of departments of regional development, tourism and culture. The expert groups were set up by the heads of departments and varied in number of participating persons depending on the number of employees of each department. In all regions, we have met the professionals with the same specialisation.

3.2. Research results

In the first phase of the empirical research we target on the theoretical and practical knowledge about the methodological approach of identification and utilization of competitive advantage on the regional level. The questionnaire survey was designed to determine whether experts met in theory or in practice with the methodological approach of identification or utilization of competitive advantages in conditions of regions. Next figure shows their answers:

![Fig. 2. Methodology for identification and exploitation of CA in theory or praxis](image)

Source: Own workmanship according to results of empirical research.

As we can see in the figure 2, the most of the experts did not meet with any methodological approach of identification and exploitation of competitive advantage in theory nor in the praxis (from 70 to 80 %). Experts from Delphi questionnaire, who said that they met with the methodological approach for the identification and utilization of competitive advantages in terms of region, mentioned the following works:
- Constructing regional advantage - final report (Cooke et al. 2006);
- Team of authors Martin (2002, 2005); Boschma (2004); Kitson et. al. (2004) who deal with issue of regional competitive advantage;
- Regional competitiveness index (Annoni, Kozovska 2010),
- Monitoring the competitiveness in tourism and tourism competitiveness index TTCI;
- Analysis of competition within the strategic marketing planning (Vaňová 2006).

We study all these approaches and we use them in proposing methodological approach of identification and exploitation of competitive advantage on the regional level.

The second phase of the research was focused on the use of competitive advantage and methodical way of identification and exploitation of competitive advantage in terms of Slovak regions. The competitive advantage is viewed as important for regional development by 100 % of respondents in the expert groups. The expert groups in all regions agreed that competitive advantage is important for the development of tourism in the region, as does the region attractive to tourists. The expert group also agreed that the existence and proper use of competitive advantages can contribute to the overall development of the region. The benefits of competitive advantage are perceived
in terms of development and use of cultural and historical potential of the regions, but also in the field of cultural and historical heritage. Several expert groups think that on the real competitive advantage can be built overall development of the region. In the empirical research we investigated the use of competitive advantage in the Slovak Republic. The results showed the following figure.

Fig. 3. Exploitation of the competitive advantage on the regional level

Source: Own workmanship according to results of empirical research.

Overall, only 50% of respondents in the expert group said they used competitive advantage in their region. 33% of respondents said that in their region, their competitive advantage is not used and 17% of respondents think that their region uses a competitive advantage only partially. The causes of insufficient exploitation of competitive advantage are nearly identical in expert groups in regions. They see as reason of insufficient exploitation of competitive advantage an absence of a methodological approach for the identification and exploitation of competitive advantage, lack of financial resources and their inefficient redistribution, disinterest of regional governments to pay attention to this issue comprehensively and also the problem with correct identifying competitive advantages within the region. Based on the results of empirical research and knowledge available to domestic and foreign authors we have proposed a methodology for the identification and exploitation of competitive advantage in conditions of regional government.

Conclusions

By proposing the methodology for identification and exploitation of competitive advantage in terms of the region we appear from the available theoretical knowledge and available approaches to identification and exploitation of competitive advantage in various levels (enterprises, nations etc.). We applied that knowledge by analogy to conditions of regions and link them with aim to develop a comprehensive methodology for identification and utilization of competitive advantages in terms of regions. We also tried to incorporate comments and suggestions of experts and respondents which we have gained during the implementation of empirical research.

The first step in the process of identification and exploitation of competitive advantage is to identify a unique competitive advantage, or potential competitive advantage, if it is not possible to identify it clearly in region. In its identifying the stakeholders should understand the competitive advantage as a special, unique and exceptional quality, ability, or characteristic, which represents a value for the customers of the region (residents, tourists, businessmen, investors, etc.). This specific, unique and exceptional quality, ability or characteristic can be identified in the form of significant benefits to the region and contribute to the better position of the region in the market compared to competing regions. To identify a competitive advantage is possible through analyzing internal and external environment of the region, market analysis and competition analysis. In this process, the SWOT analysis can be helpful, mainly the strengths of the region. SWOT analysis is based on the evaluation of the internal environment in the form of strengths and weaknesses and the external environ-
ment, which identify the opportunities and threats. The purpose of SWOT analysis by Vaňová (2006) is “to gain information necessary for the strategic decisions aimed at satisfying needs of all selected market segments and pre-determine the potential competitive advantage or more competitive advantages of the region”. We recommend that the items of SWOT analysis should be arranged in order of importance to identify which strengths are the strongest and thus represent a competitive advantage, or benefit, with the potential to become real competitive advantage. We recommend also evaluating the results of SWOT analysis. According to Vaňová, by this process is possible “to identify the factors of external environment that can positively or negatively affect the strengths and weaknesses of the region in case that problem areas are not predicted.” In the process of identifying competitive advantages it is important to respect the features of competitive advantage. It is a uniqueness, sustainability and profitability. Competitive advantage should be in compliance with market needs and external environment. Competitive advantage is created in terms of imperfect competition. Strengths within the SWOT analysis of the region can be identified as a competitive advantage through the TOWS matrix (TOWS matrix means the synthesis of SWOT analysis) if they meet the above mentioned attributes and definition of competitive advantage. The basis of this synthesis is the evaluation of individual items in the form of points in the predetermined range in the SWOT analysis. Points are assigned according to the importance of individual characteristics, which should be obtained objectively e.g. through market surveys market, comparison with the competitors (Vaňová 2006).

The second step is to identify a type of competitive advantage, which is located in the region. The next use of the competitive advantage will depend on the type of competitive advantage and strategy that the region chose for its exploitation. The third step is to select an appropriate strategy through which will the region utilize the competitive advantage. The region can achieve market-based competitive advantage; competitive advantage based on resources or creates new competitive advantage.

A market-based competitive advantage in the region is focuses on cost or differentiation. In identifying market-based competitive advantage should be taken into account that this kind of competitive advantage is greatly influenced by the external environment (opportunities and threats). By this approach, for sustainability of the competitive advantage it is necessary to innovate constantly, improve and move the target of the region.

The first kind of market-based competitive advantage is low cost competitive advantage. Region reaches this competitive advantage if it is able to provide its customers with greater or equal value of the total product, or partial products at a lower price than competing regions. If the region has this type of competitive advantage, then needs to choose an appropriate strategy. In the case of competitive advantage of low costs, region can choose strategy of price leadership. It aims to attract to the region as many customers (residents, investors, tourists, and companies) as is possible and get the largest share of target markets. The conditions for the strategy implementation are sensitivity of target market segments to changes of prices and inability to imitate low prices by competition.

The second kind of market-based competitive advantage is the competitive advantage of differentiation. The competitive advantage of differentiation means that the region will provide a product or partial product/products, which are unique for customers, target segment. Due to the uniqueness of this type of product the customer accepts a higher price, which is given by unique supply. The competitive advantage of differentiation in terms of region, we understand as the specific or unique feature, which has a territory of the region at the level of product or sub-products and the unique feature (the ability, character) gives consumers a higher value compared to competing regions. In the case that the region has an advantage of differentiation, it should choose for its further utilization one of differentiation strategies. The choice of this strategy and its successful implementation in the region is possible in the terms: the region offers a unique product or partial product (s); the region meets the different needs of customers; the region must be able to adapt to market needs; competition of the region focuses on all segments of the market. The region may choose in the strategy of differentiation whether to focus on all target segments (undifferentiated strategy of differentiation), or choose just one or only a few target segments (differentiation strategy). Usually the costs are higher in undifferentiated strategy, but the higher is also efficiency of segment’s response (Vaňová 2006).
The advantage of differentiation strategy applied to regional conditions is that the name of the region is also the brand. If the region has a good image, the region’s customers are less sensitive to price changes. As a positive fact can be taken that in the case of customer’s satisfaction, they like to come back to the area which creates customer loyalty to the region, which significantly limits the entry of new competitors to the territory. The disadvantage is in the case of the competitive advantages of low cost the risk that competitive region will be able to imitate this competitive advantage (Vaňová 2006).

The competitive advantage of the region based on the resources we will understand as a specific characteristic of the region, unique preferential or extraordinary ability in the quality or quantity or how to use potential of the region and its resources, which has the region over their competitors and allowing to realize greater value than achieved the competition in the same market. The higher value is based on the efficient use of resources which has the region and ensures a certain advantage over competitors by owning unique resources which can not be imitate, or that resources in the region are used in a unique way.

The competitive advantages of the region based on marketing approach, especially marketing of territories, we understand as the significant advantage of a specific preference, exceptional ability in quality or quantity, or how to use potential of the region, which has the region over its competitors and which enables region to realize greater value than achieved competition in the same market (West et. al. 2010).

Knowledge and proper use of competitive advantage is an assumption for success of the region in the market. Competitive advantage is the result of strategic management. Competitive advantage results from a specific and unique characteristic of the region, from choosing of markets and from the way of using regional potential. Specific, exceptional feature of the region is understood as a unique priority to the region, enabling it to achieve better results than its competitors. These may include attributes such as curiosity (something that differ the region in the opinion of customers from other areas), uniqueness (something difficult to imitate or to achieve) and utility (something that means for customers benefit).

If the region does not reach any of the above competitive advantages then can construct new advantage. This is a specific type of regional advantage, which is based on a knowledge economy and requires the interconnection of economy, government, infrastructure, knowledge, and culture (Etzkowitz, Leydesdorff 2000). In the theory of constructed advantage, instead of solving market failures, policy interventions aimed at reducing the interaction and interconnection among deficits. An approach of regional innovation systems as a key approach for the created benefit, just sees deficits as the main problem of innovation in the European Union. Regional advantage should be consciously and actively driven (constructed). This requires a new, more dynamic role for the public sector and the wider system of economic management, particularly in terms of cooperation with the private sector (Skokan, Rumpel 2007). It is necessary to consider whether the region has the necessary capacity and facilities for such treatment. If the region decides that it is going to build new competitive advantage, it should consider the following actions and recommendations developed by scientists and economists, led by Cooke (2006). For applying this approach, in the region has to operate a number of agencies that should act as carriers of the policies needed to create new regional benefits. This approach emphasizes the importance of competence on the local level (including people, business environment and the regional knowledge infrastructure), small and medium enterprises (mainly technology oriented businesses), government and its activities in building regional innovation systems as a creative and knowledge-based environment. This stresses the need for proactive and systematic approach to innovation based regional policy. To construct a regional advantage requires systematic approach to developing the internal capacity of enterprises and regions which are able to innovate. These highlights the role of knowledge creation, dissemination and its exploitation, well structured and well designed system of science and research as well as the interplay of global and local flows of knowledge. Regional innovation systems are playing and will continue to play a strategic role in promoting innovation and competitiveness of regions. This approach also emphasizes the role and importance of cooperation between industry, universities and government with aim to develop and support creative environment.

After identifying a particular type of competitive advantage it is necessary to choose an appropriate strategy for utilization and building of competitive advantage. This strategy should be consistent with
other planning and strategic documents, with the vision and objectives of regional development. Finally, the chosen strategy should be implemented together with associated arrangements and activities. It is necessary to provide control and evaluation of the whole process. The following figure shows our proposed methodology for the identification and exploitation of competitive advantage in terms of regions.

![Methodology Diagram](image-url)

**Fig. 4.** Methodological approach of identification and utilization of competitive advantage in conditions of regions

*Source: Own workmanship.*

Our suggested methodology (Fig. 4) for the identification and exploitation of competitive advantage in terms of the region is based on the available theoretical and practical knowledge of competitive advantage.
In the development process, we also took into account the results of primary research and we tried to incorporate all relevant recommendations gained from primary research in the Slovak regions. We consider this methodological approach useful not only in theory but especially in the practice. We have provided it to regional authorities and we are planning to deal with this issue in the future and to continue exploring the application of this approach into practice.

We consider this topic as extremely actual and through the correct identification and exploitation of regional competitive advantage we see the possible way for solving regional development issues, for example regional disparities. This approach should be also helpful by solving impacts of financial and economic crisis.

References


Vaňová, A. 2006. Strategic marketing planning of territorial development. Banská Bystrica: Faculty of Economics UMB.

THE DEVELOPMENT OF COMPETITIVE ADVANTAGES OF LITHUANIAN BIOTECHNOLOGY COMPANIES VIA SUSTAINABLE INNOVATION STRATEGIES

Mindaugas Laužikas¹, Gintarė Baipšytė², Viktorija Butaitė³

Vilnius University International Business School
Saulėtekio av. 22, LT-10225 Vilnius, Lithuania
E-mails: ¹mindaugas.lauzikas@gmail.com, ²gintaref@gmail.com, ³vik.but@gmail.com

Received 18 January 2012 accepted 20 May 2012

Abstract. The aim of the present article is to investigate the role of sustainable innovation strategies on competitive advantages of Lithuanian biotechnology companies. The entire Lithuanian biotechnology market is targeted via the conduction of semi-structured qualitative interviews, consecutively carried out in 2011 and 2012. The methodological solution to introduce the time perspective in the research elucidates the importance of the sustainability in innovation processes as there could be the progress and the continuity in the implementation of innovation strategies observed among sample companies. There is the increasing number of discussions about innovations and the performance of organizations. The success of an innovative activity depends on the complex of human and financial resources, organizational, managerial, technical and other factors. Though competitive advantages cover a vast spectrum of aspects, they all are inter-related and dependent on a great number of factors and measures. The innovation strategy could help to reach target results and to provide a synergy effect. Main reasons for the creation and deployment of innovations should also be the increasing competition, rapidly evolving technology and changing consumers’ expectations. Such factors as the human capital emerges as the key driver of high-tech industries because people involved in innovative activities are characterized by their competencies, motivation and willingness to act in different circumstances. It should not be forgotten the importance of the continuity of innovation processes and long-term strategic directions. The research question: are sustainable innovation strategies necessary for competitive advantages of Lithuanian biotechnology companies? Firstly, there is the concept and classification of innovations presented; it is continued by the revelation of main features of innovation management and success factors of the commercialization of innovations. These chapters are followed by the identification of companies’ competitive advantages and the analysis of sustainable strategic human resource management. Finally, there are main characteristics of the biotechnology sector underlined and the research (2011 and 2012) results on a sustainable development of competitive advantages via the innovation strategy presented.

Keywords: sustainability, innovation strategies, biotechnology companies, competitive advantages.

Reference to this paper should be made as follows: Laužikas, M.; Baipšytė, G.; Butaitė, V. 2012. The development of competitive advantages of Lithuanian biotechnology companies via sustainable innovation strategies, Journal of Security and Sustainability Issues 2(1): 51–64.

JEL Classifications: D21, D04, D83, L1, L2, L65, M1, O3, Q55.

1. Introduction

In the broader sense the success of innovative activities depends on macro factors such as the country’s cultural environment, market factors such as the consumers’ satisfaction and micro factors such as the employees’ tolerance of innovative activities that are carried out in companies, the diversity of innovations or the cooperation potential. Moreover, modern innovations are associated with businesses, government institutions, the innovation support mechanism as well as professional, social and managerial competencies of education organizations that consolidate and transform the individual knowledge into competitive
products.

To scrutinize the role of the innovative strategy on high-tech firms' competitive advantages there were Lithuanian biotechnology companies having a great potential in both global and Lithuanian markets selected. The research was consecutively conducted in 2011 and 2012 in order to find out how consistent and value-adding innovation strategies are.

The aim of the research (2011) was to examine the role of the innovation strategy on strengthening competitive advantages of Lithuanian biotechnology companies via the use of human resources. 9 Lithuanian biotechnology companies were contacted and innovation experts from 8 companies were successfully interviewed. Taking into consideration the limited size of the biotechnology market, the sample of 8 companies is more than representative and sufficient: there were nearly all the companies of the Lithuanian biotechnology market interviewed.

A semi-structured qualitative interview method was chosen due to the limited number of respondents and the focus on qualitative aspects of the issue. There was a personal interview type selected with the interview plan and the opportunity to ask additional questions not included in the plan. There were open questions phrased and both life and telephone interviews used. The research was conducted in the period from April to May 2011 by the team of researchers of the International Business School at Vilnius University (Laužikas, Treskauskienė and Keturakienė). Thanks to a good interaction between the interrogator and respondents an excellent communication during interviews was ensured. The choice of a semi-structured qualitative interviews method made it possible to control the situation, to smoothly manage the conversation and to explain respondents more precisely the question, if necessary. Similarly to the research of 2011, the study of 2012 aimed to examine the effects of innovations on biotechnology companies’ sustainable competitive advantages. In order to determine whether innovations are responsible for strengthening competitive advantages, there were those Lithuanian biotechnology companies selected that successfully competed in both Lithuanian and global markets. To obtain the most accurate information it was intended to contact experts from eight biotechnology companies that were considered leaders in the market and were also interrogated in 2011. The sample of the research (2012) reads 5 companies, as one company refused to cooperate while other two were not reachable during the research period. On the other hand, such sample is sufficient, because the 2012 research was to support the previous year analysis while checking the progress and consistency in terms of the innovation performance. In addition, among respondents there were innovations-related experts from two largest companies (in terms of the headcount) interviewed. The study applied a semi-structured qualitative interview method with a logical sequence of questions; however, there was a possibility to ask questions spontaneously provided. The use of direct interviews and the collection of responses by e-mail were combined. The study was conducted in the period from April to May, 2012.

2. The concept and classifications of innovations

The word ‘innovation’ appeared in the fifteenth century deriving from the French word ‘inovacyon’ which means ‘renewal’ or ‘providing a new form to an object’. Lithuanian language possesses the term ‘novelty’, but this word does not incorporate the innovation process, it is more the result of a process (Strazdas et al. 2008). To continue, efforts to find a single definition of innovations are vain as many authors and scholars it describes in different ways. It could be described as the creation process, the development and efficient use in various fields. Innovations can be understood as: changes in the position and characteristics of the object in order to improve the process of the research and development or management; activities to use inventions, improve technologies and the production process. The consideration of innovations more economic than technological is arguable, because technological inventions are not regarded as innovations without promoting the economic growth, increasing the productivity and competition.

The beginning and an integral part of innovations is a new knowledge, which can be generated only by using a human mind power and the creativity. The impetus to innovations is the dissatisfaction with the current situation and the perception that there is room for the improvement, the intellectual and creative potential and the desire to achieve better results (Jakubavičius et al. 2008). Schumpeter (1961) points out that the innovation leads to regional cyclical fluctuations. When the business starts to use new farming, manufacturing, business management ideas and
tools, there is an economic upturn. Thus, economic actors that apply innovations are the basis for the progress in the society because they do not only ensure the economic growth, but also encourage a scientific, technical, and, thereby, a social progress (Schumpeter 1961). The innovation is not only to increase the competitiveness, but also to be an effective part of the marketing. To continue, innovations are implemented at all stages of the production: the design, new technologies, the exploitation of resources, new products’ characteristics. The society welcomes both the innovativeness of the product and the companies’ openness to innovations as well as the desire to excel (Jakubavičius et al. 2003). According to Jakubavičius et al. (2003) innovations are developed and implemented by innovative companies. These principle innovation actors have some common features: making important changes, having regular information channels, driven by the decentralization and the teamwork, tolerating the risk, ignoring formalities as well as encouraging innovations. In general such companies seek for the increase in their competitiveness, growth, consumers’ satisfaction, the quality of the product or service, the increase in the operational efficiency as well as the attraction and maintenance of the best human resources (Ramanauskienė 2010).

Ramanauskienė (2010) focuses on definitions of the innovation as a process in which the invention or the idea acquires an economic content; the innovation is a technical, manufacturing and commercial means to deliver new or improved manufacturing processes and equipments; the innovation is a social, technical, economic process which in the practical utilization of inventions and ideas brings best products in terms of their characteristics, a new technology and economic benefits.

Though many scholars define the innovation as the process by which the information, knowledge are realized in the development of new products or services, Milius (2011) relies on the Drucker’s (2004) tradition, where the innovation can be described as a creative management tool helping to develop new products and services in order to maximize profits. The innovation classification consists of eight features, such as the content, the implementation level, the extent of implementation, degree of novelty, organizational features, the nature, the meaning and impact of the final outcome. Ramanauskienė’s (2010) classification is based on the extent of innovations, the novelty and the intensity of innovative changes that express quantitative and qualitative characteristics and are important in assessing both the economic impact of innovations and the relevance of management solutions. Strazdas et al. (2008) also focus on Bright’s (1968) researches where new ideas come from the old truth and it is not necessarily a new product or service; it may be the development of one or another aspect. Fields that are not considered as the adequate environment for innovations are usually full of new ideas and possibilities

To sum up, the innovation could be defined as the risk-oriented process in which the knowledge is converted into competitive products or services within the cultural environment. Some assess the technological side of innovations, others the economic side, but the majority conclude that the innovation promotes the growth of income, employment and, of course, encourages the competition in the market. A successful management of innovations requires not only the understanding of the concept, but also the investigation of the development process and features of innovations.

3. The commercialization of innovations and competitive advantages

Markets worldwide adopted a great number of different models of managing innovative activities. They reflect the creativity and innovativeness in practice. Jakubavičius et al. (2003) underline three well known management models of innovative activities. The foundation of the ‘Risky Business’ model (considered American) is composed of small and risky companies with activities related to the development and use of scientific ideas and their conversion to new technologies and products that later are transferred to large enterprises. Another innovative business model ‘Scientific-research association’ is the essence of the cooperation among corporations on the scientific basis. Corporations try to merge the knowledge and people and to develop both fundamental scientific ideas and the underlying technology. The developed technologies are transferred to participating organizations in order to adapt the technology and to get the final product. The efficiency is limited by the degree of a vertical integration among participants. This model is more suitable to the Japanese market. The third model is the ‘International Inter-organizational Cooperation’ model (considered European) being the intermediary
between the first and the second. Strategic alliances could be designed among large enterprises with common objectives, combined assets and opportunities.

Innovation management models differ from country to country, based on their time of occurrence, life-time, the advancement level, their influence on the country's economy as well as the focus on the further innovation development. In addition, it is difficult to say whether they are carried out effectively or not: Europe is lagging, but both the U.S. and Japan (similarly to other innovation-driven economies) are advanced in innovations (GEM 2011).

The experimental development and various researches encourage the appearance of innovations and new technologies, creates a high added value which affects the country's economic growth. The commercialization of the research turns ideas into products that find new ways of solving problems as well as transform old or create new markets. The commercialization of the research is defined as the process of developing new ideas, converting the research into services or commercial products and introducing them into the market. It requires a large amount of resources, although there is a chance that a product or service will fail (Zemlickienė 2011).

Vijeikienė, Vijeikis (2000) emphasizes the importance of the preparation for the introduction of new products or services to the market. There are four crucial questions underlined as the guideline. When? The company preparing to introduce a new product or service to the market should choose a suitable moment. Where? The company should decide where a new product or service will be sold: in the local, regional, national or international market. Only few companies have courage and opportunities to introduce new products or services simultaneously in both national and international markets. Small businesses can only gradually absorb opportunities in attractive regions and cities, while large companies can penetrate cities, regions or national markets quicker. What? The company producing new products or services needs to identify its target customers and constantly focus on them. How? While launching new products or services the action plan is very important. The budget should be allocated to the marketing plan and other marketing procedures.

Success factors of commercializing innovations in general include financial capabilities, career plans and needs, the commercialization phase itself and a geographical location. Both internal and external factors determine the success of the commercialization of innovations. Jakubavičius et al. (2000) identify such internal and external factors affecting the success of the commercialization: political, legal, economic, technological, market, human resources, informational, organizational culture, resources. The application of innovations is valued on the basis of financial indicators and calculations, while the assessment criteria include numbers of patents and creations, products, trademarks, service options. The financial criteria include sales, profits or the increase in sales and profits due to a new service or product (Čiburiienė and Povilaitis 2008).

In order to establish the criteria of executing and monitoring innovations companies must be clear about their goals. There should be targets and expected results, in terms of both the economic and social impact, set; the innovation performance should be monitored and necessary corrections done. Such methods as Six Sigma (a data-driven approach and methodology to eliminate defects in any process) or the Business Performance Index (covering the assessment criteria of the company’s performance at different levels) should be applied. Notwithstanding the diversity of evaluation methodologies, managers should not rely on a single assessment system, as selected indicators should measure returns and the use of a great number of resources and should be in line with the management system overall.

Companies’ competitive advantages and opportunities of strengthening them are closely related not only to the competition, but also to the innovation performance. Many Lithuanian companies face the increasing competitive pressure from both domestic and international competitors. In order to successfully compete it is important to identify factors that influence competitive advantages. Lithuanian companies’ success can be ensured only by a continuous development and introduction of new products, the implementation of quality systems, managing segment-related factors, efficiently using resources, increasing the productivity, being responsible for the operational modernization as well as speeding up joint activities with foreign companies (Makštutis 2002).

Firms’ innovations are related to the life cycle of a product, the company’s position in the market and the development of the R&D strategy in the company. Within the development of technologies, the
aging of products is accelerating. Companies must constantly develop and commercialize innovative ideas, because consumers and clients are waiting for new products and services. Furthermore, the product development is beneficial due to the added value from the R&D and creative activities within the value chain. Although the development of new products might be profitable, Lithuanian enterprises are modestly investing in this field, as this process is complicated, expensive and risky.

Given a rapidly evolving globalization, the expansion of innovative businesses becomes more complicated, as flows of information are more intensive, innovative products and technologies have shorter life cycles, while consumers’ needs are rapidly changing. The development of new products and services should be a well organized and continuous process, where the speed and flexibility are important prerequisites to a successful innovation.

4. Strategic human resource management

In spite of a large diversity of strategies (whether they are offensive, defensive or imitation) all strategies have two main objectives: the efficient use of resources (financial, technological, human and etc.) trying to specify the key activities and the adaptation to the external environment. During the innovation process a new knowledge is introduced in operations of enterprises seeking for economic gains. This process links the science, creativity and business. The innovation improves the competitiveness of both companies and the economy. Main participants in the innovation process are innovative companies due to their openness to innovations, the teamwork, the risk management and the reduction of formalities. To conclude, a strategic management is crucial for innovative businesses, as it consists of the use of resources and response to changes in the market.

In today’s dynamic global markets to be successful and productive organizations need to re-evaluate priorities of using human resources; there is the need to integrate new strategies and ways to effectively use the most important assets of organizations. Employees are involved in creating, implementing, managing and controlling the organization’s strategy. An effective management of human resources is via attracting and retaining highly skilled and well motivated human resources who help to develop products of a high quality, to reduce production costs as well as to strengthen organizations’ competitive advantages. The knowledge becomes the key weapon in the competition, while the technological development and globalization encourage the use of human resource strategies. Many authors consider the human resource management as the use of human resources which allows the organization to achieve its strategic objectives focusing on the external and global environment, covering long-term perspectives and driven by the focus on generating new ideas and achieving results. M. A. Armstrong (2006) argues that the management of resources is a strategic, consistent and comprehensive approach towards the company’s human resource management. Jewell (2002) identifies four principles of the human resource management: the need of investments in human resources, the importance of human resources in organizations’ strategic plans, encouraging employees to voluntarily join the realization of company’s objectives, a sustainable approach to strategic human resource management.

Huselid et al. (1997) define strategic human resource management as the most important in promoting the efficiency of the operational and business performance where employees (strategic resources) should be managed, according to the organization’s strategy. Such authors as Martín-Alcázar, Romero Fernández and Sanchez-Gardey (2005) believe that strategic human resource management is influenced by the organizational, social and economic environment; thus, human resource management requires the integration among the practice, policy and strategy. Bamberger and MeSHoulam (2000) argue that strategic human resource management is the link of strategic objectives with a human, social and intellectual capital.

Problems of strategic human resource management are tackled in different ways by applying such models as the Michigan Business School model, developed by Fombrun et al. (1984) (the human resource management strategy is associated with the enterprise’s strategy; the model is rational and quantitative), the Harvard/ ‘Employees’ involvement’ model, considered as irrational, humanistic and qualitative (Beer et al. 1985) emphasize the importance of expected employees’ results, the involvement of the human factor in the implementation of the business strategy and the focus on shareholders and environment-related impacts on the employees’ behaviour, the attention to the communication, leadership, motivation and directing staff to achieve organizational goals in terms
of competitive advantages), Guest’s (1987) model (while seeking strategic objectives the organization treats employees as it is economically more beneficial for the organization, and only top-level managers are strategic decisions makers), the Warwick model, initiated by Sparrow and Hiltrop (1994) (they emphasize the human resource management orientation to the process and situations, and the human resource management strategy depends on external factors or the relationship between human resource and the organization’s strategy).

Although there is no consensus in the scientific literature on human resource strategies’ components, it is possible to identify four key human resource management elements: human resource planning, remuneration and motivation, the assessment of the employees’ performance, work environment, employees’ education and qualifications (Išoraitė 2011). The human resource strategy is highly dependent on the organization type and its activities. Batt (2002) identifies three human resource management functions that contribute to the competitiveness of organizations: recruiting employees with certain skills and their training; particularities of work, promoting the employees’ freedom of actions; the promotion related to results. The formation of human resource strategies should be without separating phases of the design and implementation. It is important to establish guidelines that can be used in the development of human resource management strategies. Human resource management should rely on long-term strategies including such aspects as the investment in the development of employees’ skills and motivation. Moreover, the human resource strategy should be clearly linked to the overall corporate strategy and such strategies as the innovation and marketing, assessing company’s human resources as crucial for competitive advantages. The human resource strategy includes the communication, motivation, leadership, forecasting of the human resources demand, the work environment evaluation, training of employees and other equally important aspects.

A rapid spread of information and communication technologies encourages many organizations to actively look for new ways, ideas, experimental and creative solutions and to improve existing products, processes, systems and technologies. It is hard to imagine a successful organization based on the intellectual potential if it does not treat its people as the most important resource. As it stated by Wang (2005), human resource management is particularly important in promoting technological innovations, organizational changes and entrepreneurship. It can contribute to high-quality technological innovations, in parallel to adding value to the technological and organizational strategies as well as combining such important aspects as the complexity of the human resources strategy, organizational effectiveness and competitive advantages.

It is important to combine the personnel, systemic and organizational approaches in order to encourage technological innovations and integrate human resources in the organization. These approaches connect human resource management functions in the improvement process of the organizations’ performance: a sustainable strategic planning and the implementation of strategies at all structural levels help to achieve better results in innovation processes (Wang 2005). However, the investment in the scientific and technological education is a necessary condition to commercialize innovations via the use of human resources. To combine the innovation and human resource strategies it is important to involve human resources in innovation processes via the creation of the adequate climate and culture in favour of the creativity and innovations. In this way employees are encouraged to use modern technologies and tackle company’s issues. To achieve such symbiosis, the organization often faces the necessity to employ high qualification specialists and managers.

Science-intensive branches that create a modern and sophisticated technology possess strategies, based on high-skilled professionals, managers, often recruiting from external markets. The issue of short-term objectives in the promotion system is often insufficiently tackled, as the effectiveness of different strategies is highly dependent on the system of priorities and employees’ motivation. In addition, it is stated that the effectiveness of the knowledge management allows employees to generate knowledge in their particular fields as well as in organizational innovation processes. Thus, the relation between human resource management practices and organizational innovations is closely related to the effectiveness of the knowledge management (Tan and Nasurdin 2011).
5. Characteristics of the Lithuanian biotechnology sector

The biotechnology can be considered as one of the oldest human activities, but only in the second half of the twentieth century the modern era of the biotechnology began; scientists had discovered how to create micro-technologies by using molecules. Today biotechnology activities are widely applied and can be grouped into four categories: the application of the red-biotechnology for health; the white biotechnology for the industry and environmental protection; the green biotechnology applied in the agriculture; the blue biotechnology applied in the marine and aquatic processes (UAB ‘Fermentas’ 2012).

Innovation is a crucial element of the biotechnology sector. The European Federation of Biotechnology (2012) defines the biotechnology as an integrated application of natural and engineering sciences, when using organisms, cells, their parts or molecular analogs useful products and services are created. The biotechnology offers the potential to use technologies in many industrial sectors such as healthcare, pharmaceuticals, animal health, textile, chemicals, plastics, paper, fuel, food or feed production. The term ‘Biotechnology’ was developed from three Greek words ‘bios’ (life), ‘techne’ (art, craft) and ‘logos’ (science). The biotechnology industry is one of the Lithuania’s key high-tech branches that could help Lithuanian companies to penetrate foreign markets. Thus, the need for innovations is obvious in the biotechnology sector.

Lithuanian biotechnology market is one of the largest in Central and Eastern Europe, because products do not have subsidiary products, so there are all conditions for effectively using the R&D in increasing the competitiveness of the Lithuanian economy. Although the Lithuanian biotechnology sector possesses a relatively modest number of companies, they employ highly qualified specialists and modern equipment that ensure the competitiveness of their products. Most of Lithuanian biotechnology companies represent the red biotechnology. This group also incorporates the company ‘Thermo Fisher Scientific’ (Fermentas), Vilnius branch, (which focuses on the molecular diagnostics) as well as the company ‘Sicot Biotech’ (which develops and manufactures recombinant biopharmaceuticals solutions using the advanced science and technology). The two companies are considered to be the largest in Europe by the number of employees. The Lithuanian biotechnology industry has been developing since 1990 and is considered as one of the most developed in Central and Eastern Europe. The sector employs 700 employees, including 160 employed in the R&D. The Lithuanian biotech sector is responsible for the world-class researches or inventions such as drugs against cancer. According to the Lithuanian Biotechnology Association (2012), sales of Lithuanian biotechnology products regularly increase on the annual basis, and more than 70 countries are the current export markets for Lithuanian biotechnology companies.

6. Innovations and competitive advantages of biotechnology companies

The first research in the series (2011) intended to examine how Lithuanian biotechnology companies positioned themselves in the market and how they defined their corporate strategies. All the interrogated companies stated that their corporate strategy is directly related to innovations. Some of them were developing new products; some were improving processes or introducing new management techniques. One of the interviewed experts stated that his/ her company was innovative, because they had acquired a modern equipment to produce one particular product, but the further innovation development was not expected. Thus, some companies perceived the concept of the innovation process in a very narrow perspective: the creation of only one or several products via using a new technology is not a continuous process, while the continuity and sustainability are necessary for the innovation strategy. Therefore, not all the companies working in innovative industries are innovative.

Within the ulterior semi-structured interviews (2012) it was tried to determine whether the innovation strengthened competitive advantages of Lithuanian biotechnology companies. All the interviewed experts agreed with the statement that innovations had improved their companies’ position in the market. According to experts, innovations are mainly oriented to the development of a new product, the customer and the efficiency of companies’ activities. In addition, innovations ensure the companies’ uniqueness in the market, create their competitive advantages and raise the value of the company.

To ensure the company’s success and effectiveness it is important to continuously develop and commer-
cialize innovations. Though the development of new products and services can be profitable, it is complicated, expensive and risky. According to experts of biotechnology companies, the result of the innovation performance often depends on the type of innovations itself.

Business experts agree with the statement that the growing market demand, profits, the increasing number of partners could all be the results of successful innovations, but there are occasions when the profit and the market stagnate, because innovations are too expensive and not always bring profits. Innovations require new resources and partners, and they lead to a more complex management of the organization. According to the interviewed experts, there is always a risk probability in implementing the innovation that innovations can not work and can not bring the desired expectation. Trying to identify the role of the market research in the innovation process three companies admitted conducting the market analysis, while one expert of those companies that carry out scientific and technological researches in the field of biopharmaceutical for other companies stated that his/her company did not directly focus on the market research, and concentrated on searching new customers with their particular innovation demands (as a result, their sales performance to other participants of the market is not relevant). According to other experts, the market research is conducted randomly, since an accurate market analysis is very expensive and time-consuming. The main tool is the observation of secondary sources, and the market research is in use only in the strategic decision making.

Innovation and marketing are the most important functions of businesses with the key objective to receive profits from their goods and services. To get the confidence and the acceptance of its products or services each company is forced to create and preserve its distinctive character, image and reputation. Only then companies’ products and services can be noticeable. It is not surprising that the analyzed biotechnology companies have the marketing department established, the aim of which is to strengthen the companies’ brand. However, experts have not mentioned another important aspect of the interaction between innovations and marketing, although it is closely related to the product creation stage, which is the assistance to the R&D department and a continuous cooperation with the Human Resource department. It should not be forgotten that to save time and resources a company does not always fulfil all stages of the development process of a new product or service. Even if the company fulfil all the steps perfectly, it still faces the risk probability (Vijeikienė and Vijeikis 2000). There are several types of risks, related to developing a new product or service that are listed by the interviewed experts.

![Fig. 1. Types of risks in developing new products or services](source: prepared by authors, based on respondents’ answers.)

The interrogated biotechnology experts admitted that there was always a part of risk of innovations present. One expert measured the risk through the scale of investments required and expected financial benefits. Others believed that a reasonable risk should be an acceptable risk in order to have innovations as the development engine. Companies’ competitive advantages depend on the expected value. Each division should contribute to the value creation. The competitive advantage is usually an advantage over competitors by any exceptional aspect of the company. To evaluate the entire biotechnology sector is difficult, because it is necessary to compare very different businesses and business models. It is also argued that the biotechnology investment market is risky and of a high return; it is a competitive and a high value-generating industry. According to some experts, the competition exists, but companies do not fight against competitors.

As the counterargument to the statement that there is no high competition, one expert argued that the pharmaceutical industry was under the influence of high barriers for new entrants, such as patents. New ideas were also endangered by the dumping or the disposal of a mass advertising. Another expert ad-
mitted that the competition is both high and low. A relatively large number of companies involved in the biotechnology industry point at a high competition, while a low competition is due to a small number of new emerging companies because of a substantial financial investment and knowledge. Only one expert argued that there was no competition in the Lithuanian biotechnology sector at all, because there is no a great number of companies or all of them operate in different segments.

7. Strategic human resource management in biotechnology companies

Innovations derive from innovative ideas that lie behind human resources and interactions among their knowledge and skills; thus, the lack of human resources could be destroying. All the respondents of the first year-interviews (2011) admitted that Lithuania had enough of biotechnology professionals, due to the national education and training policy and many years of experience in the development of the biotechnology sector. For larger companies (from 46 to 360 employees) a small percentage of the employees’ turnover did not have a significant impact on the organizational performance. Meanwhile, small firms were more sensitive to the ‘brain drain’ of the qualified personnel. According to the expert of one of the largest Lithuanian biotechnology companies, the sustainability of biotechnology companies was endangered, as he/she expected a high vulnerability in terms of the ‘brain drain’ of young people interested in the field of the biotechnology, as they were planning their studies abroad. The expert regrets that the Lithuanian education system loses in the global competition and the biotechnology companies start losing in terms of the future employees, compared to foreign companies.

Another issue is related to management: it appears that the existence of human resource manager depends more on the size of a company, rather than on its innovation performance. Almost all the interviewed companies have managers and specialists, based on their field, involved in the innovation strategies making. It can be concluded that conservative traditions of a centralized management dominate among Lithuanian biotechnology companies. It should be marked that management of international business processes was enriched by a foreign experience and modern approaches.

Trying to identify whether employees are encouraged to generate innovative ideas, how these ideas are assessed and selected as well as how innovative employees are rewarded some interesting findings emerged. In general ideas were assessed and selected by managers and experts. Apart from two larger interrogated companies all firms encourage their employees to make innovative suggestions, but do not reward them financially because it is considered to be the employees’ direct responsibility. It is difficult to measure the material value of the idea, to wit, it is difficult to determine a reward for it; however, the majority consider financial rewards as the most effective. The most of innovative firms encourage new ideas, but avoid of allocating funds for these activities. Non-financial reward techniques, public praises, trainings are more popular. The interviewed companies employ highly skilled employees, thus, seminars and trainings should be a part of the corporate strategy. The idea is to figure out how often employees have the possibility to attend trainings and seminars, as it is an important means of improving professional skills and promoting new ideas. One of the interrogated companies considers itself being innovative, but does not encourage employees to generate new ideas, does not encourage innovations and the creativity. Trying to find out how many innovative ideas have been successfully implemented in sample companies it was discovered that respondents do not have such information, which indicates that companies either do not measure such progress or have a very low percentage of commercialized innovative ideas. Analysis of the role of the teamwork in innovative activities and the way these teams are formed shows that many biotechnology companies invoke the teamwork. It appears that the top managers are often involved in innovation activities with other employees. Most teams are formed on a voluntary basis. The responses received in 2012 point at the importance of strategic management and, in particular, human resource management, where involving all the stakeholders should be clearly identified as an innovation objective. Therefore, the present article should be continued with the identification of companies’ innovation efforts and activities over the last three years.
The Development of Competitive Advantages of Lithuanian Biotechnology Companies Via Sustainable Innovation Strategies

<table>
<thead>
<tr>
<th>Companies</th>
<th>Innovations</th>
<th>Innovation objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>The company 'A2'</td>
<td>Continuously executing product, service and process innovations</td>
<td>Business growth</td>
</tr>
<tr>
<td>The company 'B2'</td>
<td>Modernization of the equipment</td>
<td>To stay at the edge in the field</td>
</tr>
<tr>
<td>The company 'C2'</td>
<td>Building a modern centre of the scientific and technological research</td>
<td>To have a number of laboratories to conduct the R&amp;D in the field of biotechnologies</td>
</tr>
<tr>
<td>The company 'D2'</td>
<td>New manufacturing lines, products, management models</td>
<td>To lead in the quality and professionalism</td>
</tr>
<tr>
<td>The company 'E2'</td>
<td>Changes of the technological base</td>
<td>To be reliable and exceptional in the quality</td>
</tr>
</tbody>
</table>

**Fig. 2.** Implementation of innovations and their objectives in Lithuanian biotechnology companies

According to experts’ answers, all the companies have been continuously carrying out innovations, having their own objectives that serve as the guideline for the further performance and strategic management. The development and implementation of innovation strategies are one of the main conditions to be competitive in local and international markets. To develop the innovation strategy there should be an efficient strategic planning implemented, when there are long-term goals identified and expected ways to achieve those goals underlined. All the interviewed companies have their own innovation strategies. One of the companies uses STRAP (Strategic Planning Process) innovative business strategy, the aim of which is to constantly examine activities of the organization from both the present and future perspectives and to implement necessary changes in order to succeed in the future. Other companies have the innovation strategy to quickly introduce a new capacity into the operation and then to outsource the R&D. Given the expanding biopharmaceutical industry there is a growing need for the biotechnology research.

As it was previously tackled in the article, the financial support is crucial for innovative companies. Based on the interviews, carried out in 2011, larger sample companies appreciate Lithuanian Governmental actions in encouraging innovative activities. This can be explained by the fact that larger companies have the ease to absorb the financial support of the European Union, compared to smaller ones. All the companies-respondents (except one small company) have already used the European Union’s support over the last 3 years. These funds were normally allocated to the research and development. Respondents identify strengthening their competitive advantages as the main driver of innovative activities. They believe that Lithuania possesses many educated people in the field of the biotechnology, and the importance of innovations is obvious for their companies; however, there should be a multifactor model designed, where all the interrelated factors would be presented in order to better understand the innovation process in high-tech industries and the way how innovation strategies could strengthen biotechnology companies’ competitive advantages (see Fig. 2).

**8. The role of financial resources**

In 2012, experts assured the importance of the financial support one more time. Currently, Lithuania, like other Central and Eastern European countries, do not have properly equipped laboratories for biopharmaceutical drug developments that fully meet all international standards, to wit, they are not capable of preparing and producing medical products of the required quality for clinical trials. For this reason Lithuanian scientists do not have the access to the know-how acquired by the country’s academic community, cannot use it for specific R&D projects and develop high value-added products. Building a biopharmaceuticals development laboratory is a very expensive, long-term investment process, thus, without the support of EU funds or other financial support means it would be difficult for the company to survive. Today, it is essential to develop the biotechnology sector where particularly high value-added products are developed, while the labour productivity is one of the largest.

All the interrogated experts declare using the financial support. For instance, one company gets 70 per cent funds from the EU, which is used for building a new modern centre (for the scientific and technological research) as well as for the investment in the infrastructure development for the research and development. Another sample company benefits
from the EU support in building an integrated molecular biology research centre. Another interrogated firm conducts three projects within the Lithuania’s Strategy to efficiently use the EU Structural Funds (2007-2013) and the Economic Growth Actions Programme ‘New Opportunities’, driven by the purpose to increase sales in such foreign markets as Kazakhstan or CIS countries. To continue their peer has successfully implemented the project ‘Development of the Industrial Biopharmaceutical Base’ with the goal to expand the company’s biopharmaceuticals manufacturing, suitable to the production of new products. All the companies mention the importance of the commercialization which they define as the application of a new product series production and the introduction of it to the market. It reminds that a successful introduction of a new product to the market needs answers to four questions.

9. The commercialization and measurement of innovations

It appeared that all the interrogated companies try to get answers to four questions while innovating. STRAP (Strategic Planning Process) provides the answer to the question ‘When’ to innovate for two respondents, others are influenced by the availability of the EU support and the possession of professionals who can perform well within the R&D. Interviewees sell their products and services mainly in international markets such as the EU and the U.S. They focus on both individual biopharmaceutical companies and large retail chains, and admit that the introduction of the marketing action plan is very important. In addition, all the investigated companies are engaged in the red biotechnology, thus, introduction of biopharmaceutical drugs to the market is a very long and complicated process which could take up to 10 years and need to adopt a sustainable strategy. Companies’ competitive advantages depend on their created value. Each division contributes to the value creation, and activities of a company should be carried out in a system rather than individual parts. The biotechnology industry is growing rapidly, thus, a particular interest should be paid on products of a high added value such as pharmaceutical products. Hence, it is necessary to find out how companies measure the added value of innovations.

Most experts measure the added value of innovations in profits, while one expert proposes the measurement method of the value added of innovations by the emergence of new technological opportunities and the creation of new qualifications (see Fig. 3). To sum up results of 2012 interviews it appears that Lithuanian biotechnology companies share a strong position in the international biotechnology research market segment, and their innovation strategies are driven by the need to encourage the innovation process by effectively managing human resources and applying adequate marketing actions. In order to strengthen their competitive advantages and maintain a strong position in international markets they use financial incentives of the EU and foreign investments. A strong and robust cooperation among the innovation and other business departments creates a higher added value to the biotechnology industry and the Lithuanian economy.

Experts of the year 2012, similarly to 2011 respondents, elucidate a holistic understanding of principles, factors and measures in strengthening competitive advantages of Lithuanian biotechnology companies. This helps to answer the research question whether sustainable innovation strategies are necessary for competitive advantages of Lithuanian biotechnology companies or not. To implement innovative ideas, to increase profit margins, to grow revenues and the market share, to expand to foreign markets and ensure both the employees’ and consumers’ satisfaction Lithuanian biotechnology companies need to focus not only on the EU financial support, but also on allocating their internal funds to innovations and the R&D. The innovation and human capital-intensive business strategy should help to strengthen all above
mentioned competitive advantages. As the counter-weight to the ‘brain drain’ and legal constraints, companies should invest more in the creation of an adequate innovation environment, organizational structures and the development of a closer co-operation with educational, innovation, R&D and other strategically important organizations (see Fig. 4). All these important factors and implemented measures should be ingeniously tackled paying a sufficient attention to the monitoring system and measurements of the role of innovations on strengthening competitive advantages of Lithuanian biotechnology companies in the perspective of the continuity and consistency.

<table>
<thead>
<tr>
<th>Investments in the innovation and R&amp;D</th>
<th>Strategic orientation to innovations</th>
<th>HR: numbers of experts and their qualification</th>
<th>Financial resources, The EU support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation climate</td>
<td>Management tools</td>
<td>Co-operation</td>
<td>Team building</td>
</tr>
<tr>
<td>Economic and politic stability</td>
<td>Legal base</td>
<td>IT and innovation policies</td>
<td>Organizational structures</td>
</tr>
<tr>
<td>Commercialization of innovative ideas</td>
<td>Increasing profit margins</td>
<td>Employees’ satisfaction</td>
<td></td>
</tr>
<tr>
<td>The market share</td>
<td>The income growth</td>
<td>Expansion to foreign markets</td>
<td></td>
</tr>
</tbody>
</table>

**Fig. 4.** Combination of the innovation and human resource strategies in Lithuanian biotechnology companies: factors and measures

*Source:* prepared by authors.

**Conclusions**

The development and realisation of innovation strategies should involve all the employees, shareholders and freelancers. They contribute not only with their professional knowledge and skills, but also with the moral support of innovations (or visa versa). Thus, the innovative company must not only be open to innovations, but also should motivate employees to support innovations and seek a sustainable improvement given the risk tolerance and the ability to manage it. Prior to the implementation of innovations, the firm chooses its strategy with its risk, potential risk management tools and the efficient use of resources. It should not be forgotten that the enterprise is a group of people developing products or services, driven by the purpose of selling them and receiving economic benefits.

To improve the productivity it is crucial to develop and implement an effective human resource strategy which shall consist of: the demand planning, motivation, evaluation systems and trainings. The creation of one particular or multiple products or services using a new technology and stopping improving them is not a continuous process and does not support sustainable innovations strategies. It can be argued that many innovative biotechnology companies that encourage new ideas are not innovative because not all of them have their innovation strategies. In addition, companies encouraging employees to generate new ideas do not reward their employees financially (often pay only for trainings); however, they believe that the financial reward system is efficient.
Innovation is a risky process in which the knowledge is converted into competitive products or services and promotes the income and employment growth. Firms’ competitive advantages are related to both technical developments and process innovations that are based on the market knowledge and various initiatives. The innovation strategy is necessary for the company to develop and modernize products or services and to increase the competitiveness in international markets. The commercialization of innovations is the development and execution process of innovative ideas and researches, the conversion of these ideas and researches to commercial products or services and their introduction to the market. The speed and flexibility are important preconditions for the success of innovations in the rapidly evolving and competitive environment.

Though the development of new products and services can be profitable, the process is very complex and carries a significant risk. A successful innovation can increase profits and the market demand; however, the number of potential partners might also increase due to the lack of resources necessary for innovations. The interrogated biotechnology companies take a strong position in the international biotechnology research segment, and they tightly work with international companies. The demand in the Lithuanian biotechnology sector is limited, thus, it is important to promote the international development, attracting foreign investors.

Answering to the research question whether sustainable innovation strategies are necessary in creating competitive advantages of biotechnology companies the experts’ answers indicate that a successful position in global markets calls for stronger efforts in marketing, strategic human resource management as well as the cooperation with a great variety of partners. There should be a set of actions further than using the financial support set while paying attention to the innovation climate, organizational structures and the commercialization process of innovative ideas as well as a clear monitoring system. Innovation processes should not be one-off investments in product, process or service innovations. To strengthen competitive advantages biotechnology companies should focus on the continuity and consistency.

References


Ramanauskiene, J. 2010. Innovacijų ir projektų vadyba. Akadem,


2012, 2(1): 65–76

SUSTAINABLE DEVELOPMENT OF INTER-ORGANIZATIONAL RELATIONSHIPS AND SOCIAL INNOVATIONS

Agota Giedrė Raišienė

Mykolas Romeris University, Ateities st. 20, LT-08303 Vilnius, Lithuania
E-mail: agotar@mruni.eu

Received 20 January 2012; accepted 8 May 2012

Abstract. The paper discusses the key factors that contribute to the successful „nurturing” of inter-organizational relationships and evolving partnership activities in a pursuance of social innovations. In the first section of the paper, the factors influencing inter-organizational collaboration are reviewed. The second section discusses the content of inter-organizational interaction forms and link between maturity of collaboration, sustainability of relationships and partnership’s potential for social innovations. In the third part, the modern shifts in leadership are talked about. The fourth part presents the empirical research made, and a discussion based on the research findings is submitted.

Research was based on the qualitative methods: in-depth interview, case study, participant observation and personal reflection, and analysis of documentary materials. Three cases in two organizations were studied.

The analyzed inter-organizational partnerships have shown that in less mature forms of inter-organizational interaction, innovations are unlikely, as compared with the inter-organizational partnership and integrative collaboration. Also found that collaborative leadership is a dominant factor when thinking about innovative joint work results.

Keywords: inter-organizational collaboration, sustainability of inter-organizational relationships, maturity of partnership, collaborative leadership, social innovations.

Reference to this paper should be made as follows: Raišienė, A.G. 2012. Sustainable development of inter-organizational relationships and social innovations, Journal of Security and Sustainability Issues 2(1): 65–76.

JEL Classifications: M1, L2.

1. Introduction

Technological, demographical, economical and other systematic changes require adequate changes from societies and from separate organizations, and even more important – require adequate attitude to the innovations. The organizations with a long perspective of the existence have the necessity of constantly taking care of progress and innovations, including social ones. In order to do this, evaluating and acknowledging the social reality is necessary. In the context of changes, both societies and organizations have to recognize and comprehend which patterns are/may be consistent and which – temporary. As a result, the knowledge on how organizations and groups may work more effectively is permanently relevant.

The changes of social world and effective strategies of organizational behavior may be demonstrated with a short example. In the year 1967, Warren stated that ‘unitary organizations would produce more innovations than would federative organizations’. After a few years, hypothesis failed (see Warren et al. 1975). Nowadays, there are no doubts that inter-organizational collaboration is inevitable not only for innovation development, but for the development of a successful business in general.

The leader’s role is also changing accordingly to the time. But does the influence of typical leader’s behaviour for the effectiveness of organization and group activity also change? What leadership do organizations request in case of inter-organizational collaboration? Answering these questions is very important for
organizations seeking continuity and development. According to raised questions, the aim of the article is to find out what factors enable a successful nurturing of inter-organizational relations and evolving inter-organizational activity, when partners are seeking for social innovations. In addition, the article studies the role of a formal leader in this case.

The discussion is based on an empirical research done. The article presents the results of tree cases analysis on the inter-organizational partnership. The methodological basis of the research is formed by the insights received after completing the theoretical analysis of inter-organizational interaction. In-depth interview, document analysis and participant observation were used to accomplish the case analysis.

In the first part of the article, the factors influencing inter-organizational collaboration are reviewed. The second section discusses the content of inter-organizational interaction forms. In the third part, the modern shifts in leadership are talked about. The fourth part presents the empirical research made and a discussion based on the research findings is submitted.

2. Factors influencing inter-organizational collaboration

Horizontal determinants of inter-organizational interaction may be defined as essential elements that develop and strengthen organizational collaboration. Determinant groups of influence for collaboration consist of macro-factors deriving from the outside, mezo-factors formed by the interacting organizations and micro-factors that depend on connections and interrelations between the members of the executive team (Figure 1).

The macro-factors derive from organization’s external environment. The most important components of them are cultural, social, economical systems, with an addition of political system in public sector. In the context of social innovations, development of collaboration is mostly influenced by the cultural structure of society. In the cultures with deep-rooted individualist traditions, autonomy and individual achievements are promoted instead of collaboration (Thompson 2003). Collaborative processes cannot be taken in isolation, but need to be located in their continual interactions with wider processes (Healey et al. 2003).

Due to this reason, if socio-cultural environment possesses deep-rooted individualist traditions and a lack of flexibility, effective collaboration may be especially difficult or even impossible.

Organizational interaction requires favorable organizational conditions: structure and philosophy of collaborating organizations, administrative support for collaboration, sufficient resources and efficient coordination and communication mechanisms.
Organizations’ philosophy and their inherent values determine the degree and intensity of collaboration. Organizations that value participation, fairness and support and where a climate of openness and trust prevails, develop employees that are capable of collaboration (Henneman et al. 1995). Such organizations express their positive attitudes towards sharing of resources and risk (Stichler 1995).

Traditional hierarchical structures do not facilitate emergence of key conditions for collaboration (Henneman et al. 1995; Linden 2002). Management of organization plays a particularly significant role fostering collaborative efforts and later – maintaining the collaboration efforts. Researchers of inter-organizational collaboration emphasize the significance of facilitative leadership (Chrislip, Larson 1994; Linden 2002; Ansel, Gash 2008; Agranoff, McGuire 2003). Collaboration cannot be implemented applying principles of command and control. Facilitative leaders are serving rather than steering (Denhardt, R. and Denhardt, J. 2000). Leadership in collaboration requires maintenance of inter-organizational relations and skills of ensuring an effective interaction process (Chrislip, Larson 1994).

Collaboration development requires corresponding coordination and communication mechanisms. Collaboration can greatly benefit from united work strategy, standardized documentation, meetings of stakeholders and open communication channels (Henneman et. al. 1995; Linden 2002). Factors enabling inter-organizational collaboration overlap in areas of group and organization activity. The factors of group interaction have received most attention in the literature on collaboration. The following factors influencing collaboration practice at micro level are identified: positive attitude and willingness to collaborate; trust; mutual respect and assistance; responsibility; open communication and consensus in making decisions (Gray 2008; Chrislip, Larson 1994; Keast et al. 2006; Himmelman 1992; Hogue 1993).

Factors of inter-organizational collaboration depend to each other in close and dynamical manner. It is important to consider the factors influencing collaboration and their interrelations. Otherwise it may become a significant problem when seeking an effective inter-organizational collaboration in the aspects of both process and achievements.

3. Links between forms of inter-organizational interaction, sustainability of inter-organizational relations, maturity of collaboration and potential for social innovations

An abundance of terms indicating interrelations of organizations and reciprocal integration can be observed in scientific literature on organizational interaction. For example, inter-organizational collaboration (Bardach 2001; Huxham, Vangen 2003), mutual inter-organizational/interinstitutional interaction (Milbourne et. al. 2003; McRae, McGuire 2003), inter-organizational/interinstitutional/intersectorial partnership (Gray 2008), social partnership (Siegel 2010), interorganizational/interinstitutional networks (Keast et al. 2006), association, alliance, coalition (Axelsson, R. and Axelsson, S. 2006; Linden 2002), inter-organizational cooperation (Schermershorn 1975) inter-organizational relationships (Koschmann 2008).

Such diversity shows that terms indicating organizational connections have no unambiguous content. The variety of organizational interaction forms and their content remains an object of scientific discussions. Nevertheless, according to some of the authors analyzing inter-organizational interaction, free interpretation of inter-organizational interaction terms may even cause disappointment in the results of inter-organizational interaction (Borden 1999; Mandell 2001). Adequate comprehension of organizational interaction content is necessary to ensure an effective collaboration between organizations or stakeholders. After reasonably evaluating the specific goals, intensity of interrelations and shared resources of interacting organizations a prognosis on the future results of joint work may be expected. Due to a reason that the empiric research the results of which are presented further in the article was methodologically based on knowledge on inter-organizational collaboration, the main horizontal forms of inter-organizational interaction will be briefly reviewed. These forms are: competition, networks, cooperation, partnership, coalition or alliance and integrative collaboration (Rašienė 2009).

Coopetition implies cooperation of organizations providing the same products or services in one sphere of their activity and competition in other activities (Walley 2007; Padula, Dagnino 2007). Bengtsson et al. (2010) states that the nature of co-opetition could be defined as a process rather than a context. Coopetition provides a possibility to create relations in that
way making assumptions to access the beneficial resources managed by other organizations and to have a advantage against third-party organizations (Yami et al. 2010). Accordingly to expected benefits for organizations, the interest in joint work changes along with the solidarity of relations. Competitive interaction requires various combinations of network, cooperation and partnership features. Networks are dynamic connection structures involving participants in different volume and intensity. The main goal of inter-organizational network is to share mutually beneficial and relevant information (Rašienė 2009). Cellular connections between organizations help to meet the needs of organization flexibility and implementing innovations, as due to a rapid environmental change, organizations are unable to acquire and control the intellectual capital necessary for the assurance of their work (Clegg 1990). Organizations involved in networks create a system of dependent variables, but do not have a permanent organizational structure. These systems constantly change along with the directions of shared information (Agranof, McGuire 2001).

Cooperation is a collective association grounded on agreed political, economic, cultural, scientific or any other obligations. The notion of cooperation presupposes that particular goals that are relevant to all the parties involved may be implemented through a collective action (Vigoda-Gadot 2004). Contrary to networks, cooperation calls for involvement of stakeholders, higher level of trust, conformity of meeting times and places, since some decisions are made jointly. The range of resources subject to sharing may vary from informational and technological to financial and human resources (Sanderson 1999).

Partnership is perceived as a form of intensive interaction among organizations’ targeted at implementation of political, economic, social programs and at solution of problems. Partners commit to share resources, expertise and risk. Partnership is established on the basis of involvement and is characterized by open communication among all the parties involved. Speaking about social partnership it is notable that the highest value is created by the joint work of organizations that represent different sectors (Seitanidi et al. 2010). If partnership between commercial organizations is created by choosing partners according to market value (competitive advantage), equalization is implemented after involving non-profit organizations. This means that no partner may be changed or eliminated for his unique position (Samii et al. 2002).

Association/alliance/coalition is an inter-organizational interaction based on mutual interests, when a service, product and relation system is created by sharing ideas, social and economical resources (Rašienė 2009). Having joined an alliance, organizations grant access to physical and financial resources or the corresponding institutions support the aimed status (Linley et al. 2009). The bases of coalitions are different. This form of interaction is characterized by attention to innovative results in a long-term perspective. The relations between stakeholders are intense, mutual and based on interest.

Integrative collaboration. The main difference between integrative collaboration and other forms of inter-organizational interaction is the effect of synergy and attention to the sustainability of inter-organizational relationships. In this case, the interacting subjects are not only characterized by the aim to share risk, responsibility and expenses, but also specific knowledge and experience to help each and every collaborating organization reach the best possible results. Integrative collaboration is characterized by the time given for join work, especially high level of trust and joint resources, from material to intellectual. Table 1 presents the generalized features of different forms of inter-organizational interaction from the perspectives of goals, structures and processes of the social subjects. The data is based on the works by Hogue (1993), Himelman (1994), Vigoda-Gadot (2004), Alnoor (2004), Torres, Margolin (2003), Alter and Hage (1993), Mandel (2001) and other researchers. Term “integrated collaboration” is introduced by Rašienė (2009).
Table 1. Forms of inter-organizational interaction in terms of goal, structure and process (Raišienė 2009)

<table>
<thead>
<tr>
<th>Form of interaction</th>
<th>Goals and objectives</th>
<th>Key features of structure</th>
<th>Key features of processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networks</td>
<td>1. To constantly exchange mutually useful or specific information.</td>
<td>1. Flexible, informal relations; 2. Roles of participants are not clearly defined or are defined loosely; 3. Formal leader is absent; 4. Boundaries of interacting groups constantly shift.</td>
<td>1. No purposive leadership; 2. Initiation of search for common decisions is practically absent; 3. No obligations in terms of time.</td>
</tr>
<tr>
<td>Cooperation</td>
<td>1. To constantly exchange mutually useful or specific information; 2. To delegate activities and tasks for pursuance of single-sided or reciprocal goals.</td>
<td>1. Semi-formal structure of relationship is established; 2. Some of the roles are defined; 3. Well-defined communication centre; 4. Boundaries of interacting groups can be established.</td>
<td>1. Leadership oriented to maintenance of relationships; 2. Agreement on positions; 3. Making of complex decisions; 4. Formal communication with central group; 5. Short-term obligations.</td>
</tr>
<tr>
<td>Partnership</td>
<td>1. To constantly exchange mutually useful and/or relevant information; 2. To delegate activities and tasks for pursuance of single-sided or reciprocal goals; 3. To achieve specific and beneficial (to all the partnership subjects) outcomes.</td>
<td>1. Relationships are formalized; 2. Roles are determined; 3. Leadership is shared: a single leader is absent; 4. Informal centre of interacting groups decisions initiation can be identified. 5. Standing and/or interim workgroups are formed to complete objectives provided for in partnership documents.</td>
<td>1. Leadership oriented to maintenance of results and to outcome; 2. Coordination of interests in decision-making; 3. Coordination of interests of informal decision-making centre and subgroups initiating decisions; 4. Medium-term obligations, possibility for continuation of activity; 5. Inter-organizational relations partly oriented on sustainable development.</td>
</tr>
<tr>
<td>Union</td>
<td>1. To constantly exchange mutually useful and/or relevant information; 2. To delegate activities and tasks for pursuance of single-sided or reciprocal goals; 3. To exchange ideas and to create an innovative outcome (a service or product, or a system of service, product or relationships) combining social economic resources.</td>
<td>1. Relationships are formalized 2. Roles are defined 3. Transitional leadership prevails or a leader is elected for a certain term with approval of the majority of members; 4. Standing and/or interim subgroups for preparation of decisions and evaluation and coordination of the activity are formed.</td>
<td>1. Leadership oriented to outcome; 2. Priority over maintenance of relationships among groups; 3. Considerable amount of time and focus is laid on coordination of all the members’ interests; 4. Collegial decision-making; 5. Long-term commitments.</td>
</tr>
</tbody>
</table>
With favorable conditions, inter-organizational interaction is characterized by continuity and progress (Himmelman 1992). The form of interaction changes along with its intensity. The development of inter-organizational interaction is also influenced by the goals of the participant organizations. The more activity areas of each organization are included by the necessity of inter-organizational goal realization, the closer relations are formed (Torres, Margolin 2003) and the higher results of inter-organizational work and sustainability of partnership can be expected. According to this, a conclusion can be made that not all of the interaction forms are equally mature. Intensity of collaboration and sustainability of inter-organizational relationships leads to inter-organizational partnership maturity. This means that on the basis of intensity and sustainability criterions, maturity categories of interaction may be determined. Each higher (more mature) category should contain features of lower (less mature) categories as well as exceptionally specific qualities. However, the form of interaction itself should not be an aspiration. In some cases, choice of the so-called mature form of interaction may be irrational from the perspective of resources. For example, integrated collaboration for pursuance of common goals set by organizations is not necessary in all cases. If organizations are united by a goal to exchange relevant information, all the other activities are independent. Such interaction does not call for special management effort, consensus in decision making, except issues related to nature of information, limits of its sharing and periodicity. Moreover, such interaction is comparatively low time-consuming and does not call for exchange of knowledge, skills or experience. However, innovations are impossible without open exchange of knowledge (which is only possible with high level of trust), share of resources, risk and synergy (Faems et al. 2003). Due to this reason, it could be thought that in inter-organizational interaction of lower sustainability and, at the same time, lower maturity levels, the creation of innovations is unlikely to occur.

4. Shifts of leadership required to implement inter-organizational interaction

The group managers may experience an inner conflict when an increasingly wider circle of specialists are characterized by high work competence, specific information and good team work skills. Managers should always re-ask themselves about their functions as leaders and about competences that enable to be effective in nowadays. These and similar issues have caused shifts in the attitude to leadership. In the practice of traditional management, the belief that leaders know how to manage the organizational concerns best has changed to a comprehension that specialists perfectly know the everyday issues of work content and work process and due to this reason employees’ help with making decisions is indispensable. Management as leadership is becoming less effective than management as followership. As Keast, Mandel (2011) mark, leaders must comprehend the inherent connection between them and their employees. Leaders are not able to reach the group, organizational or inter-organizational goals without any help.
of employees. In addition, old methods of management are practically not functioning.

In recent decades the paradigm of collaborative leadership has crystallized (for ex. McGuire 2006; Torres, Margolin 2003). Collaborative leadership includes coaching, facilitative leadership and servant leadership (Figure 2). Conceptually describing collaborative leadership, it could be stated that it is a joint creative process that takes place in a common environment (Vizgirdaitė 2011: 83). The leader who is orientated to collaboration gives most attention to collective success, team assembling, creation of a favorable environment for collaboration and coordination of group members’ interests and organizational goals. The key principles of the collaborative leadership are mutual trust, group members’ participation in making decisions, effective communication and mutual respect culture (Chrislip, Larson 1994).

![THE COLLABORATIVE LEADERSHIP PARADIGM](image)

**Fig. 2.** Paradigm of the collaborative leadership and its props.

*Source: Author based on McGuire, 2006; Torres, Margolin 2003.*

A modern leader must be able to perceive the best abilities of every particular subordinate and to adapt them in difficult situations of decision making (Linley *et al.* 2009). In other words, the leader must know deeply every group member and „talk to them in their language“. On the other hand, a belief that the leader can inspire the group with his charisma for high achievements that workers are reaching for separately (by taking the responsibility for decisions and results) is regenerating (DeRue *et al.* 2010). Speaking about the sub-types of collaborative leadership it may be observed that all of them have the same relation horizontality when leader is collegially asking the employee’s opinion on how to cope with a particular assignment and what goal would be appropriate to set in the given situation, instead of only expecting that the employee will accomplish the assignment correctly (Sendjaya *et al.* 2008; Pirola-Merlo *et al.* 2002; Linley *et al.* 2009; DeRue *et al.* 2010). Both serving and facilitative leader and the coach motivate education in case of problems instead of punishing.

The value of servant leadership was perceived by Greenleaf (1977). He stated that the hierarchical gap between leaders and employees is not beneficial for the organization. The other sub-type of collaborative leadership - facilitative leadership – is a style of leadership that creates favorable environment for collaboration and the reach for organizational goals (Simonin, Oszomer 2009). A helpful leader is interested in performance expectations, goals and dreams of group members and puts effort to help their realization. Finally, a coacher is learning from and with the group members. The key provision of this leader is that employees have the biggest knowledge about what should be done and how it should be done to reach the goals set and most importantly – to enable them.

Organizations with the aim to improve, enrich and renew their activity, and widen their possibilities increasingly often unite into partnership networks. This also applies to organizations that are expecting social innovations. The collaborating organization leaders’ orientation to innovations in general obtain a special significance. Unfortunately, the leaders’ orientation to development and innovations in Lithuania have been weakly expressed for a long time (Jucevičius 2005: 15). Moreover, individualistic culture and unperceived content of collaboration along with unknown tools for implementation of partnership and collaboration still more or less impede the real possibilities of organizational collaboration (Raišienė 2011). The data of the newest researches on leadership in Lithuania provide some optimism. The leadership competences are becoming more relevant than management skills (Šilingienė 2011). Bakanauskienė, Petkevičiūtė (2003), Skaržauskienė (2010) note that management is related to reaching goals and leadership is related to influence. As Diska (2009:16) states, a manager acts according to determined responsibility and procedures, and does not actually create something new in contrary to leader, who forms assignments and seeks to create. The priorities of a leader are adapting innovations and implementing changes. As a result, it can be stated that when two interacting organizations are reaching for social in-
innovations, the most important factor is the choice of an formal manager: to be a manager or a leader and to be “above the group” or “within the group”.

5. Research findings and discussion

Research about leadership influence on social innovations in the inter-organizational partnership is a part of a broader research of inter-organizational interaction practice in Lithuania’s public and non-profit sector organizations. Empirical research presented in this paper was done in September 2011 – May 2012. Research was based on the qualitative methods: in-depth interview, case study, participant observation and personal reflection, and analysis of documentary materials. Also the new social partnership was initiated in the tested organizations. This instance does not allow forming conclusions due to its one-time nature and due to a fact that the pre-trust factor (the factor of an authority of a person providing the idea of partnership) was not eliminated. Nevertheless, when the gathered research data and the process of creating new partnership were compared, it was noticed that the essential behavior models of organizational leaders and partnership group members reoccurred. This allows making a conclusion that the data of the research is reliable enough and reflects the real practice of inter-organizational partnership well enough.

Three cases in two organizations were studied. The organizations were selected based on the following criteria: i) organizations act in social science R&D field; ii) organizations seek commercialization of the scientific research; iii) each organization demonstrate active social expansion; iii) each case involves an inter-sector and cross-sector social partnerships; iiiii) sufficient information is accessible to triangulate the research findings. In the article, the examined cases are called A, B1 and B2. Primary research data were collected through 7 in-depth interviews with experts for the study of cases B1 and B2 and 4 in-depth interviews with experts for the study of case A. Each interview lasted between 15-45 minutes and then was transcribed and analyzed. Some information about partnership was collected on the base of documentary analysis (partnership contracts, operational guidelines, invitations to meetings/events, reports about operations/events completed etc.). Results of analysis are shown in the Table 2.

Table 2. Features of inter-organizational partnership in studied cases

<table>
<thead>
<tr>
<th>Social partnership dimension</th>
<th>Case A</th>
<th>Case B1</th>
<th>Case B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Number of social partnerships in the organization</td>
<td>18</td>
<td>20</td>
<td>36</td>
</tr>
<tr>
<td>2 Forms of interaction</td>
<td>Network (permanent process of information shearing), cooperation (contribution in activities), partnership (joint projects, resources shearing).</td>
<td>Network (shearing of selected information), cooperation (contribution in activities).</td>
<td>Network (shearing of selected information), cooperation (contribution in activities).</td>
</tr>
<tr>
<td>3 Inter-organizational interaction nature</td>
<td>Constantly developing network.</td>
<td>Interaction between two organizations.</td>
<td>Networking</td>
</tr>
<tr>
<td>4 Ground of picking over the partners</td>
<td>Close or compatible area of activity, purposeful initiative of partnership (a vision of joint activity is present)</td>
<td>Institutions and other organizations of public sector with high probability of social influence</td>
<td>State and non-governmental organizations working in local area</td>
</tr>
<tr>
<td>5 Area of joint activities</td>
<td>Social innovations</td>
<td>Social innovations to implement own organization’s purposes</td>
<td>Social innovations, commercialization of researches</td>
</tr>
<tr>
<td>6 Activity initiator</td>
<td>Initiative from partners and the organization</td>
<td>Initiative from organization</td>
<td>Initiative from organization</td>
</tr>
<tr>
<td>7 Documentation of activity guidelines</td>
<td>Operational guidelines are documented</td>
<td>Operational guidelines are not documented</td>
<td>Operational guidelines are documented</td>
</tr>
<tr>
<td></td>
<td>Commitment</td>
<td>Middle level commitment in planning of joint action. High level commitment in joint projects.</td>
<td>Low level commitment</td>
</tr>
<tr>
<td>---</td>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>9</td>
<td>Attitudes to the risk</td>
<td>Middle risk tolerance</td>
<td>Low risk tolerance</td>
</tr>
<tr>
<td>10</td>
<td>Originator of initiatives of the joint activities</td>
<td>Leader of the organization or/and leaders of partners’ organizations</td>
<td>There are no joint activities planned.</td>
</tr>
<tr>
<td>11</td>
<td>Interaction character</td>
<td>Intensive collaboration for exchanging information and developing new ideas and new products</td>
<td>There is no permanent interaction</td>
</tr>
<tr>
<td>12</td>
<td>Maintaining contacts/ Communication between partners/Members involvement into decision making processes</td>
<td>Intensive communication. Communication initiative flows from organization leader and partners’ organizations. Executives and members of partnering organizations participate in discussions about joint activities.</td>
<td>There is no permanent or periodic communication. Contacts are based on one person gate-keeper (executive of the organization).</td>
</tr>
<tr>
<td>13</td>
<td>Partnership projects in total/Projects for social innovations</td>
<td>6/2</td>
<td>1/0</td>
</tr>
</tbody>
</table>

The concluded insights of the research are illustrated by Figure 3. The research has shown that the closer the goals of interacting organizations are and the better they are expressed between the partners (in the partnership network), the more representatives of these organizations emotionally comprehend themselves as members of the whole – a total derivative and the more actively they undertake the voluntary initiative of acting and creating for the common good.

---

**Main internal organizational preconditions for inter-organizational partnership with potential for social innovations**

1. Adequate estimation of organization external challenges and effective its retransmitting for the staff
2. Developing supportive organizational environment
3. A relevant goal that encourage initiation of partnership

---

**Organizational facilities for inter-organizational partnership’s progress**

1. Effective communication in terms of inter-organizational partnership purpose and expectative benefit
2. Trust in the manager based on charisma or informal authority
3. Enabling of group members

---

**Preconditions for social innovations in inter-organizational partnership**

1. Collaborative leadership
2. Adequate reward for group members for both results and initiatives of collaboration
3. Attention to the sustainable development of inter-organizational relations.

---

**Fig. 3.** The focus of attention of organization leader in different stages of inter-organizational partnership

*Source: Author.*
The research has also shown that joint activities and mutually beneficial goals are realized smoothly and qualitatively when they are initiated being supported by leaders in contrary to the situation when leaders avoid getting involved into the processes of organizational interaction - especially in the initial stages - or do not have enough skills. It is important to mark that i) when there are no mechanisms for the organization members to involve/participate in partnership processes created, but ii) the leader delegate the responsibility for initiating joint work to employees (supposedly encourage collaboration and personal initiatives), the inter-organizational partnership stays formal and do not improve. In such case, a real interaction between the organizations that signed partnership contracts does not take place. This is best seen from case B1. The meta-analysis has shown that most important factor for the interacting organizations is the choice of an official manager: to be a manager or a leader and to be "above" the group or "within" the group. The research discussed in this article has proven that social innovations are motivated the most by a leader who works "within" the group and uses the instruments of collaborative leadership. Along with the good examples (case A), an another phenomenon can be observed in Lithuania, when inter-organizational partnership contracts are signed without having a clear vision and without having thought what is the purpose of the interaction (Raišienė 2011). This is also proven by this research (case B1). As a result, a formal leader is working neither "above" the group nor "within" the group. Instead he is working "near" the formal group. Due to this reason, there are practically no real actions. It seems that the members of partnerships (cases B1 and B2) are satisfied by knowing that the partnership contract (critically evaluating – exchange of contacts) only provides an opportunity to work jointly in the future. This may be assessed both negatively and positively.

On one hand, such artificial social partnerships impede the development of collaborative culture. The employees and clients of the organizations that signed the contracts start doubting in the benefit of collaboration in general when they cannot see real results of inter-organizational interaction. Moreover, they start considering it more theoretical, conceptual than a possible to practically implement and a tangible value having issue. The comprehension of collaboration is impoverished. Collaboration stays an elementary definition that describes a mood of non-competition and does not require real actions or commitments from organizations related by the partnership contract. Of course, such comprehension of collaboration does not help the social innovations and creative changes initiatives to occur.

On the other hand, it is important to regard the fact that not so long ago organizational interaction in Lithuania only seemed possible in the area of politics, and the term of collaboration itself had a very negative shade due to the communist Russia occupation experienced (those who ideologically agreed with Soviet Union were called collaborators). The society had a better understanding about cooperation. However, just a decade ago cooperation was linked with cooperatives and unethical business. Due to this reason, the fact itself that social partner networks are actively created in Lithuania, and organizations begin to comprehend the power of partnership while seeking for economic competitiveness and changes in development, should be very commendable.

The support from the organizations’ management for these partnerships in spite of their informal nature is also positive. Due to a management’s positive attitude to partnership, a next stage of inter-organizational collaboration maturity may be expected: leaders will derive from organizations’ specialists and will be determined to realize their ideas by concentrating the resources of their and partner’s organizations, in that way making a huge step towards the initiation and implementation of social innovations.

The analyzed inter-organizational partnerships have shown that collaborative leadership is a dominant factor when thinking about innovative joint work results. The more active the informal concentrating and inspirational activity of the "ideological" person is, the more qualitative the objective results of joint activity are. Due to this reason, a presumption is made that the success of inter-organizational collaboration committed for social innovations mainly relies on the behavior of key person and his interpersonal skills of focusing, supporting and leading the group towards the goal and developing a team vision, and does not rely on outworn traditional "right" management. The inter-organizational group composition, a nature of common relations, a significance of the goal set for the members of partnership, an effective communication and trust in each other are evidently significant but, however, less important factors for social innovations than adequate leadership which ensures that all of these issues herewith.
It can be pointed out that in less mature forms of inter-organizational interaction, innovations are unlikely, as compared with the inter-organizational partnership and integrative collaboration. However, it is also clear that not every manager can establish and maintain sustainable inter-organizational interaction, and has internal capability to develop partnerships that create social innovation. As shown by the researched cases, it is insubstantial to develop social innovations when limited with signing of Partnership Agreement and with formal encouraging staff to initiate inter-organizational projects. Whilst this conclusion is not original, it could help (Lithuanian) leaders to understand how to achieve more effective performance in inter-organizational partnerships.

The analyzed cases of partnership are not enough to generalize the conclusions. It would be purposeful to examine how the insights of this research reflect in wider investigations about leadership concentrated on the creation of social innovations with the help of inter-organizational partnership.

References


Agota Giedrė Raišienė
Sustainable Development of Inter-Organizational Relationships and Social Innovations


SUSTAINABLE DEVELOPMENT AT ENTERPRISE LEVEL: CSR IN SPAIN AND POLAND

Sánchez-Hernández, M.I.; Gallardo-Vazquez, D.; Dziwinski, P.; Barcik, A.

1, 2 University of Extremadura, Spain; 3, 4 University of Bielsko-Biala, Poland

E-mails: 1isanchez@unex.es, 2dgallard@unex.es, 3pdziwinski@ath.bielsko.pl, 4abarcik@ath.bielsko.pl

Received 15 January 2012; accepted 20 May 2012

Abstract. This paper is an attempt to review the European debate between proponents of the voluntary and the obligatory case for CSR in the middle of the economic crisis that we are living. Starting by the analysis of the current European government-led initiatives to foster CSR among companies we move to the analysis of two specific national government-led initiatives in the EU area, Spain and Poland. Finally, the paper focuses on the comparison of both cases, as an example of the disparities between national policies in Europe. The lack of a regulatory European framework for CSR could explain the misbalance between country initiatives.

Keywords: Corporate Social Responsibility, sustainable development, Spain, Poland, the EU.


JEL Classifications: M14, O52, M38.

1. Introduction

Corporate social responsibility (CSR) can be defined as ethical, economical, social and environmental obligations, beyond legality, that an organization has with their stakeholders. CSR can be treated as sustainable development facets reflected at corporate level (Dudzevičiūtė 2012). These obligations derive from the impact of the organization’s activity on society. The integration of CSR into an organization’s management requires the organization to acknowledge the impact of its activities on the society and to react with some policies to address negative impacts. Mark-Herbert and von Schantz (2007:4) say that “companies are encouraged to actively work with CSR. But it is not only an opportunity given to the companies; it is also in many cases expectation by customers, employees, society and other stakeholders”.

CSR is an increasingly pervasive phenomenon on the European Union (EU) context and an umbrella term overlapping with some, and being synonymous with other, conceptions of business-society relations (Marten and Crane 2005). The European debate between proponents of the voluntary and the obligatory case for CSR is not new. The voluntariness of CSR has been a topic of interest in Europe after the publication of the Green Paper, Promoting a European framework for Corporate Social Responsibility (European Commission 2001). Since this time, a majority of views consider the voluntary nature as essential to the success of CSR policies in the European context (Herrmann 2004). What is new in the debate about CSR? Traditionally, CSR has been considered a mode of implementing human rights, labor, and environmental standards and it has long been discussed as a possible remedy to the inequalities created and exacerbated by globalization (Herrmann 2004). However, during the financial crisis, it is presumed that organizations act more conservatively and defensively and might choose not to engage in CSR projects as Karaibrahimglu (2010)
has recently demonstrated analyzing global operating companies listed in Fortune 500. In this context of crisis, the voluntary nature of the EU’s CSR initiatives calls its efficacy into question.

This paper starts by the analysis of the current European government-led initiatives to foster CSR among companies. We move to the analysis of two specific national government-led initiatives in the EU area, Spain and Poland, confirming the patterns of differences in national emphasis amongst the practices of European nations. Finally, the paper focuses on the comparison of both cases, as an example of the disparities between national policies in Europe. We finish by highlighting the lack of a regulatory European framework for CSR and consequently, the misbalance between country initiatives.

2. CSR in the European Union

The concept of CSR was introduced in the EU through the Green Paper which defined CSR as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis” (European Commission (2001:6)). This definition was reaffirmed by the final report of the Multi-Stakeholder Forum on CSR (2004). The EU’s definition of CSR, clearly focus on its voluntary nature and its intrinsic links with stakeholders (Delbard 2008). In 2006 the European Commission published a policy whose essence was strong support for a business-lead initiative called the European Alliance for CSR (European Commission 2006).

In October 2011 the European Commission published a new policy on corporate social responsibility. The new policy puts forward an action agenda until 2014 covering eight areas of interest:

Enhancing the visibility of CSR and disseminating good practices.

Improving and tracking levels of trust in business.

Improving self-initiatives and co-regulation processes.

Enhancing EU policies in the fields of consumption, investment and public procurement in order to promote market reward for responsible business conduct.

Improving company disclosure of social and environmental information.

Further integrating CSR into education, training and research (European Commission 2011).

Remarking the importance of national and sub-national CSR policies: the Commission invites EU Member States to present or update their own plans for the promotion of CSR by mid 2012.

Better aligning European and global approaches to CSR (the OECD Guidelines for Multinational Enterprises; the 10 principles of the UN Global Compact; the UN Guiding Principles on Business and Human Rights; the ILO Tri-partite Declaration of Principles on Multinational Enterprises and Social Policy; the ISO 26000 Guidance Standard on Social Responsibility).

Related to the importance of national CSR policies, it is recognized that many public policy measures to support CSR are best carried out at national, regional and local level. Local and regional authorities are encouraged to make smart use of EU structural funds to support the development of CSR, especially amongst SMEs, and to partner with companies to better address problems such as poverty and social inclusion (European Commission 2010).

At this respect, The Commission intends to create with Member States in 2012 a peer review mechanism for national CSR policies and invites Member States to develop or update by mid 2012 their own plans or national lists of priority actions to promote CSR in support of the Europe 2020 strategy, with reference to internationally recognized CSR principles and guidelines and in cooperation with enterprises and other stakeholders, taking account of the issues raised in this communication.

3. CSR in Spain and Poland

CSR patterns of differences in national emphasis amongst the practices of European nations have been documented (Adams et al. 1998). Cultural factors may help to explain differences in what CSR is understood as responsible behaviors and there are also considerable influences from the different economical and political structure of societies as well as from accidents of history. In 2011 the European Commission published a compendium of public CSR policies in the EU which gives an overview of public policies on CSR in the 27 EU Member States and the European Union. In this study we examine two European environments, Spain and Poland, taking into account the
lack of a regulatory European framework for CSR.

3.1. CSR developments in Spain

In Spain there is a growing movement in favor of CSR. Associations, top managers of major corporations, academic institutions, NGOs and the media are promoting CSR. Although the degree of CSR implementation could be better, Spanish companies have learnt that CSR could be the way to gain more competitiveness. Well known Spanish multinational companies are in fact following the “journey to CSR” in areas such banking (Santander), telecommunications (Telefónica) or fashion (Inditex).

According to Melé (2004), there have been two “waves” of CSR in Spain. The first was in the 1970s and the second at the beginning of the 21st century. Spain is traditionally a catholic country where there is also a growing interest in the development of the civil society. However, the framework for CSR has been the law, with numerous regulations on ecology, labor and other issues.

Spain’s national government has been gaining prominence in CSR areas, especially during the last years. Spain has not only attached a ministerial responsibility to CSR but has introduced policies to encourage CSR, both domestically and within the global business of Spanish companies. Even regional governments have developed policies for CSR. Consequently, some important legislation has come into force showed below.

LISMI 13/1982: Law for the social integration of handicapped people, among other measures it establishes the obligation of hiring a minimum quota of 2% of handicapped people in companies with more than 50 workers. This low also establishes alternative measures.

Law 39/2006 of 14 December on the Promotion of Personal Autonomy and Care for dependent people. The Dependency Law is the result of the greatest effort of solidarity, humanity and social commitment by Spanish society in the last decade and a way of social innovation for companies. The law regulates home help services madding up of a set of initiatives that are carried out in the home of the dependent person in order to cater for his/her everyday needs, provided by entities or companies that have been accredited for this function.

LO 3/2007- Low for the effective equality between women and men: Especially within the labor market, this Organic Law that pursues to guarantee the effective equality between women and men within all fields.

Law 30/2007 on Public Procurement and PRE/116/2008 the Green Public Bid Plan of the General Administration of the Government and its Public Bodies: Environmental and social criteria are included under certain requirements for the hiring of Civil Servants.

Royal Decree 221/2008 by which the State Council of Social Responsibility of Companies was set up: It’s a multi-stakeholder advisory body for the State Government regarding CSR. It acts as a collegiate quadruplicate advisory and consultancy body for government, with an equal number of representatives from business, the trade unions, civil society and government at central, regional and local levels. It is responsible for fostering and promoting the implementation of CSR policies, and proposing new measures.

In compliance with the established objectives, this State Council has the following functions: To issue reports and carry out studies at the request of the Government or on its own initiative; To draw up and submit an annual report to the Government; To constitute an Observatory on CSR in Spain; To promote and reinforce CSR; To collaborate and cooperate with other similar Councils, including those that operate at international level; To participate, to the extent that is decided, in national and international forums organized to discuss issues of CSR.

Royal Decree 1615/2009, for regulating the granting and use of the distinctive “Equality in the Company”.

Law of CSR in Extremadura (15/2010 of 9 December). At a regional level, there have been some interesting initiatives as illustrated by the Autonomous Community of Extremadura. This law has had an important host national. Based on it, other autonomous communities and the national government itself are considering issuing other regulations.

LO 2/2011 Spain’s Sustainable Economy Organic Law. This law regulates that government-sponsored commercial companies and state-owned business enterprises attached to the central government shall adapt their strategic plans in order to file annual corporate governance reports and sustainability reports in accordance with generally accepted standards, with a special focus on real gender equality, and the full integration of people with disabilities. This suggests that new developments of CSR are to be expected in
Spain in the future. The law contains various measures related to CSR, some of them closely linked to transparency, like the disclosure of the remuneration of company directors, and others closely linked to sustainability in the management of state-owned companies. It also includes a provision on the promotion of CSR. Article 37 creates incentives for companies, in particular SMEs, to incorporate or develop CSR policies. It stipulates that the government shall provide them with a set of performance indicators for their self-assessment with regard to social responsibility, as well as reporting models or references that comply with international standards on the matter. Companies that achieve the minimum threshold in the above indicators may voluntarily request to be recognized as socially responsible companies.

A number of other authorities in Spain, foundations and business associations take also initiatives to promote corporate social responsibility. We highlight AECA Committee for CSR. It is also remarkable the growing number of Spanish non-profit organizations working to promote sustainable management. They encourage collaboration and the exchange of experiences and training. The Retos Network, launched in Spain under the Community eQual initiative, brings an approach to social responsibility that is both multi-dimensional (in that not only companies are socially responsible, but also public bodies, social partners and citizens themselves) and territorial (focusing on local development).

According to CSR Europe (2009, 2010), CSR in Spain is dominated by five key areas: Diversity management, social cohesion and cooperation development; CSR to face economic crisis: CSR contribution to productive economy; Transparency, communication, CSR standards and Reporting; Social Responsible Investment; Integrating CSR in Education Scheme.

3.2. CSR developments in Poland

Poland in the late 80’s and 90’s has undergone the transformation by which the Polish economy, which was a centrally planned economy, has evolved into a free market economy. This process began to bring fast results.

The CSR of business is strongly associated with the concept of business ethics because the Catholic religion is a factor having a significant impact on social and economic behaviour of Polish society. The practical development of business ethics in Poland began after 1989. However this development was slow. One of the first academic centres which finished focused on the development and popularization of this discipline was the research team of Economic Ethics Institute of Philosophy and Sociology in the Polish Academy of Sciences. However the concept of CSR went to Poland a bit later through the Responsible Business Forum which was founded in 2000. It is not only the oldest but the largest non-governmental organization in Poland which deals with the concept of CSR in a comprehensive way. The mission of the Responsible Business Forum’s is to disseminate the idea of responsible business as a standard in Poland in order to increase the competitiveness of enterprises, social satisfaction and improve the environment. It supports companies in becoming more responsible, builds coalitions of companies around the solving of social problems, creates a community of socially engaged companies, creates space for exchange of experience among managers, public administration and social organizations, is actively seeking solutions to social responsibility for companies operating in Poland which are sufficient for their needs and capabilities, works with NGOs and public authorities to build social and political climate which favours the development of the concept of CSR.

The development of CSR in Poland can be summarized as follows. The initial, first phase of the development (1997-2000) was a time of non active undertakings. It was a time of “taming” the problem of CSR. The second phase, between 2000 and 2002 is defined as the period of the reluctance of Polish companies and economic commentators to CSR and it was a time of “deep belief” that only the free market is the solution to all kinds of economic problems. In the third phase (2002-2004) a growing interest in CSR appears. The declarations of commitment to ethics and social responsibility in business are increasingly recognized in public life. The largest Polish companies are beginning to implement the initial projects in the field of CSR. The fourth stage (2004-2005) is the development of specific but only partial projects, covering selected areas of the major companies. It is understood that currently the fifth stage takes place (2006 - present) which is characterized by an attempt to link CSR with other strategies implemented in the company: e.g. communication strategy, personnel strategy, marketing strategy or strategy for corporate governance. This is the stage in which a variety of problems are manifested and even
conflicts between different activities in companies as well as the differences in organizational culture and trade differences. At this point it is worth stressing that the Polish economy is involved in a much accelerated process of implementing CSR. In countries with highly developed economies these stages have been evolving for decades while in Poland they last only few years.

In Poland, Government representatives are actively following the CSR issues developed at European level since 2004 and they have started national activities to increase awareness on the topic. The European Commission (Directorate-General for Employment and Social Affairs) is supporting the United Nations Development Program in a project called “Accelerating CSR in New Europe”, which will enable the measuring and monitoring of CSR performance in central Poland (and other in Central and Eastern European countries).

The Ministry of Economy in Poland is currently the leading body within the government administration in regards to CSR. The Ministry has been entrusted to support the public administrations in developing and implementing CSR as well as to foster dialogue between various stakeholders. These measures were concretized with the publication, in 2009, of a guide for SMEs called “Sustainable business”. The following year, the Ministry developed 4 working groups, each preparing recommendations for enhanced CSR related implemented issues and promotion in Poland, thereby focusing on four main subjects: socially responsible investment (SRI), sustainable consumption, education and promotion of CSR. Furthermore, the topic of CSR is being actively promoted by the Energy Regulatory Office.

The most important challenge for the Polish CSR today is to organize a whole range of issues and problems related to the CSR which are still new. The key drivers of CSR are eco-efficiency and sustainable development, but also compliance with existing laws and regulations (including EU regulations) are the main topics of the CSR debate in Poland (CSR Europe 2009, 2010).

4. Discussion and Conclusion

The capitalistic model is far from perfect as the actual crisis has demonstrated. As Perrini et al. (2006) pointed out, in the 21st century the profit motive is not enough of a goal in itself and economic systems should be based on socially responsible firms. As the invisible hand of market does not exist per se, and adjustments are needed, CSR might contribute to foster the equilibrium in managing firms.

Traditional regulatory models would impose mandatory rules on a country to ensure that companies and other public and private institutions behave in a socially responsible manner. The advantage of regulation in CSR issues is that it brings with it predictability. And, in our opinion, in the middle of the financial crisis, social improvements may be more readily achieved through low (explicit regulation) than via the market alone (companies’ volunteerism).

The lack of a regulatory European framework for CSR could explain the misbalance between the two countries initiatives analyzed. In a number of European countries, the general trend has been until now that corporations have taken on social responsibility on a voluntary basis, without a legal obligation to do so. Although, self-regulation based on Codes of Conduct prepared by multinational corporations or by global NGOs could be the starting point.

As we have analyzed, CSR looks different from country to country. In some EU Member states like Spain the concept is well established and there is a high level of enterprises awareness supported by effective public policies to promote CSR. In other European countries, the awareness and development of CSR is much less advanced, as is still the case of Poland.

Although the degree of implementation of CSR is still superior in Spain than Poland, the study suggests that promising new developments of CSR are to be expected in both countries in the near future approaching positions because, despite differences, a strong consensus have emerged from Spain and Poland, to the effect that CSR is a vital component of national economies in the EU and a strategic variable of core’s business determining future competitiveness.

References


files/2342aguidetocsr02.pdf>


Multistakeholder Forum. 2004. Final report of the Multi-


International Entrepreneurial Perspectives and Innovative Outcomes

Atsakingoji vyr. redaktorė prof. Manuela Tvaronavičienė

Išleido Generolo Jono Žemaičio Lietuvos karo akademija,
Šilo g. 5A, LT-10322 Vilnius, www.lka.lt
Spausdino Krašto apsaugos ministerijos Bendrujų reikalų departamento Leidybos skyrius,
Totorių g. 25/3, LT-01121 Vilnius
Complete guidelines for preparing and submitting your manuscript to this journal are provided below.

The instructions below are specifically directed at the authors who wish to submit a manuscript to the *Journal of Security and Sustainability Issues*.

The *Journal of Security and Sustainability Issues* considers all manuscripts on the strict condition that they have been submitted only to it; that they neither have been published yet, nor they are under consideration for publication or in press elsewhere. It should be clearly indicated if a submission was previously declined by another journal. Authors who fail to adhere to this condition will be charged with all costs which the *Journal of Security and Sustainability Issues* incurs and their paper will not be published.

Contributions to the *Journal of Security and Sustainability Issues* must report original research and will be subject to peer-review.

**General Information**

All papers are to be written in English. The *Journal of Security and Sustainability Issues* is an internationally refereed journal designed to further the frontiers of knowledge in security and sustainability. Each article is reviewed by at least two experts, appointed by the Editorial Board, who will examine the manuscript through a double-blind refereeing process in terms of its relevance, academic rigor and high level applications. An electronic copy prepared in MS Word and printed in Times New Roman typeface should be submitted to the Editorial Board following the requirements presented below.

**Structure of the Article**

An article should include the following parts: title, authors' names, name and address of their work place, summary, keywords, introduction (the object and goal of the research, the methods applied, the review of literature and its analysis, etc.), the main text, conclusions or recommendations, references, short biographical note about the contributors at the end of the article (name, surname, academic title and scientific degree, duties, research interests).

**Format of the Article**

The text of the article should be printed with single intervals on 210x297 mm format pages with the print area of 150x255 mm each. The length of the article should not be less then 8 pages and cannot exceed 25 pages.

The title of the article should be printed in 11 pt bold type and should be centered. There should be a single line space between the title and the author's name.

The name and surname of the authors should be printed in small letters of 11 pt bold type and should be centred. Below the author’s surname, the name of the institution (represented by the author or co-authors) must be printed in 10 pt italic; its address and the author’s e-mail written and centred.

Abstract and Keywords should be printed single spaced, in 9 pt typeface, in one column and after the institution address and space of three lines below the institution address should be left. Words Abstract and Keywords must be printed in bold. The size of the abstract cannot be less than 600 typographic signs. There should be a space of one line between the abstract and keywords. 6-10 keywords should be provided and selected according to Thesaurus, e.g. http://www.esds.ac.uk/search/hassetSearch.asp.

Introduction, main text and conclusions should be printed in 11 pt type single interval in one column at the distance of 1 line from keywords.

Figures or tables should be mentioned in the text and the place should be indicated in the separate line. The numbers of figures and tables and inscriptions below are written in 9 pt regular typeface. Figures and tables are separated from the text by one-line space.

The titles of chapters and sub-chapters are printed in small letters, 11 pt bold-regular type and aligned left. The introduction, titles of chapters and conclusions are numbered. The titles of chapters and sub-chapters should be separated from the text by one-line space.

The name of the author of the source, the year of publication and pages should be presented in the text in brackets. The list of references is given after the conclusions. The word References is spelled in small letters, 11 pt bold-regular type, left ranged and the list of references in 9 pt. The references are to be presented in the alphabetical order, in the original language; translation into English is given in square brackets. References according to the Harvard citation style, e.g. http://libguides.library.uwa.edu.au/harvard.
CONTENTS

2012 2(1) September

Antanas Makštutis, Audronė Balkytė, Vladas Tumalavičius
SECURITY, SUSTAINABILITY AND COMPETITIVENESS: BENCHMARKING ATTEMPTS 5

Jacek Białek, Łukasz Leśniewski
POLAND’S MEMBERSHIP IN THE EUROPEAN UNION AND THE COHESION POLICY: IF CONVERGENCE IS SUSTAINABLE 13

Ilga Lavrinovich, Olga Lavrinenko, Nikolajs Jefimovs
SUSTAINABLE DEVELOPMENT, ECONOMIC GROWTH AND DIFFERENTIATIONATION OF INCOMES OF LATVIAN POPULATION 33

Kamila Borseková, Katarína Petríková, Anna Vaňová
THE METHODOLOGY OF USE AND BUILDING COMPETITIVE ADVANTAGE IN THE REGIONAL LEVEL 41

Mindaugas Laužikas, Gintarė Baipšytė, Viktorija Butaitė
THE DEVELOPMENT OF COMPETITIVE ADVANTAGES OF LITHUANIAN BIOTECHNOLOGY COMPANIES VIA SUSTAINABLE INNOVATION STRATEGIES 51

Giedre Raisiene
SUSTAINABLE DEVELOPMENT OF INTER-ORGANIZATIONAL RELATIONSHIPS AND SOCIAL INNOVATIONS 65

Sánchez-Hernández, M.I.; Gallardo-Vazquez, D.; Dziwinski, P.; Barcik, A.
SUSTAINABLE DEVELOPMENT AT ENTERPRISE LEVEL: CSR IN SPAIN AND POLAND 77