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## Central and Eastern Europe

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# Conditions For The Development Of Polish Agriculture In The Context Of Globalization And European Integration

## Abstract

*Developments in the global food economy and the increasing extent of globalization and trade liberalization pose new challenges for Polish agriculture. To meet these challenges it is essential for the agricultural and food industries to improve their competitiveness.*

*This paper examines whether the funds allocated to Poland in the new budget perspective 2014-2020, and changes in the Common Agricultural Policy (CAP) as well as the increase in demand for food in developing countries will have a positive impact on the Polish agriculture and increase its competitiveness. The following issues will be examined:*

- *The financial framework of the EU budget, with particular emphasis on EU funds for agriculture and rural areas;*
- *The consequences of changes in the CAP;*
- *Analysis of the Rural Development Programme in Poland in the years 2014-2020;*
- *Analysis of the increase in demand for food in developing countries with large populations,*
- *The influence of transnational corporations on the control and formation of prices in the food sector.*

***Keywords****: Common Agricultural Policy, competitiveness of Polish agriculture, EU budget for 2014-2020, transnational corporations*

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## 1. Introduction

In Poland agriculture is much more important than in other EU countries. This is due to historical and economic circumstances as well as production potential. Poland is still a country with the highest share of its labour force in agriculture and the highest proportion of its overall population who make a living from farming and who work in this sector of the national economy. In 2011, the farming population in the EU was 21.0 million, which accounted for 4.2% of the total population. By contrast, in Poland it was 5.5 million, i.e., 14.4% of the total population. The Polish agricultural population accounts for approximately 26% of the agricultural population of the Community. In terms of agricultural area Poland ranks fifth in the EU with 14.6 million hectares, which accounts for 7.8% of the total agricultural area of the EU (Statistical Yearbook of Agriculture 2013, pp. 395-396).

Developments in the global food economy and the increasing globalization and trade liberalization pose new challenges for Polish agriculture. To meet these challenges it is essential for the agriculture and food sector to improve its competitiveness.

This paper examine whether the funds allocated to Poland in the new budget perspective 2014-2020 and changes in the Common Agricultural Policy (CAP), as well as the increase in the demand for food in developing countries, will have a positive impact on the Polish agriculture and increase its competitiveness. The following issues will be examined:

- The financial framework of the EU budget, with particular emphasis on EU funds for agriculture and rural areas;
- The consequences of changes in the CAP;
- Analysis of the Rural Development Programme in Poland in the years 2014-2020;
- Analysis of the increase in demand for food in developing countries with large populations;
- The influence of transnational corporations on the control and formation of prices in the food sector.

## 2. The financial framework of the EU budget for 2014-2020

After many months of negotiations and disputes among EU governments, on 19 November 2013 the European Parliament voted for the new EU budget for 2014-2020. On the basis of the Multi-Annual Financial Framework (MFF) 2014-2020, the EU will allocate 960 billion euros for commitments and more than 908 billion euros for payments. It is worth recalling that the EU budget in the years 2007-2013 amounted to 993 billion euros. For the first time the Multi-Annual Financial Framework for the EU will actually be smaller than the previous one. This is a consequence of the economic crisis and austerity policies advocated by the net contributors.

**Table 1. The Multi-Annual Financial Framework (EU -28)**

| Commitment Appropriations (in 2011 prices) million euros | 2014-2020 |
|---|---|
| 1. Smart and Inclusive Growth | 450 763 |
| - Competitiveness for growth and employment | 125 614 |
| - Economic, social and territorial cohesion | 325 149 |
| 2. Sustainable Growth: Natural Resources | 373 179 |
| of which: Market related expenditure and direct payments | 277 851 |
| 3. Security and Citizenship | 15 686 |
| 4. Global Europe | 58 704 |
| 5. Administration | 61 629 |
| of which: Administrative expenditure of the institutions | 49 798 |
| 6. Compensation | 27 |
| Total commitment appropriations | 959 988 |
| as a percentage of EU GNI | 1.00% |
| Total payments | 908 400 |
| as a percentage of EU GNI | 0.95% |

Source: Report on the EU budget for 2014-2020 No. 120/2013, the Chancellery of the Senate, Brussels, 10 December 2013.

As can be seen, the amount of commitments in a new seven-year EU budget accounts for 1% of the EU GNI. Compared with national wealth the EU budget is therefore small.

More than 325.1 billion euros are earmarked for the EU cohesion policy over seven years. Agriculture is to receive almost 373.2 billion euros, of which more than 277.8 billion euros are allocated for direct payments to farmers and the so-called market measures. The EU's budgetary framework for 2014-2020 gives priority to spending on sustainable economic growth, employment, and competitiveness in line with the EU Europe 2020 strategy for growth. Thus, compared to the previous budget the financial envelope under the heading 'Competitiveness for growth and employment' increased from 91.5 billion euros (9.2% of the budget) to 125.6 billion euros (13.1% of the budget). More than 61.6 billion euros are allocated for the EU administration.[1]

[1] In 2011 prices. In this paper, all general amounts relating to the multi-annual financial framework are expressed in 2011 prices, while amounts for individual programmes or financial instruments are expressed in current prices, including 2 percent inflation. This reflects the approach that was adopted during the negotiations on the Multi-Annual Financial Framework. An overview with the equivalences can be found here: http://bit.ly/HWyZbJ.

The new budget provides for a positive solution in that part of unused funds may be carried over to subsequent years, which is aimed at ensuring the fullest possible utilization of these funds. The new budget also accelerates spending to improve the situation of young Europeans on labour markets, research, support for young people (including the Erasmus programme) and for small and medium-sized enterprises.

The new EU budget provides for 105.8 billion euros (441 billion zlotys) for Poland, of which 72.9 billion euros (303.6 billion zlotys) will be allocated to the cohesion policy, and 28.5 billion euros (118.8 billion zlotys) to Polish agriculture. The allocation of EU funds for our country for the period 2014-2020 is thus nominally higher than that for 2007-2013, which amounted to 101.5 billion euros, of which 68 billion euros fell under the Cohesion Policy (Official Journal of the European Union No. L 347 of 20 December 2013).

## 3. The Common Agricultural Policy in the new EU financial perspective

The legal basis governing the new CAP was accepted by the EU agriculture ministers on 16 December 2013, which ended the legislative process of the Common Agricultural Policy for 2014-2020 with respect to: direct payments, rural development, a common organization of agricultural markets and financing, monitoring, and control of CAP (Official Journal of the European Union No. L 347 of 20 December 2013).

The reformed CAP is the EU's strong response to the contemporary global challenges, which include food security, climate change, sustainable economic growth, and job creation in rural areas. The share of agricultural policy in the financial framework for the period 2014-2020 is distributed as follows: 312.7 billion euros (29%) for market related expenditures and direct aid (Pillar 1); and 95.6 billion euros (9%) on rural development (Pillar 2).[2] Therefore, expenditures on agriculture account for about 40% of the EU budget.

Changes in the Common Agricultural Policy for period 2014-2020 include a number of compromise solutions which will have to be implemented by the Member States. Unfortunately, the amount of subsidies to farmers in the 'new' and 'old' EU will not be equalized. Differences will remain, but will be gradually reduced. Poland managed to extend the simplified system of subsidies for the new Member States (SAPS) till 2020 and maintain the partial national farm aid, but failed however to reach a subsidy threshold higher than €2,000, above which subsidies will be subject to reduction if necessary. This may happen in the case of disasters such as drought, or when the pool of EU subsidies is exceeded. Owners of

[2] Current prices. In 2011 prices: 277.85 billion euros (Pillar 1) and 84.9 billion euros (Pillar 2).

small farms are satisfied, because the rules have been simplified, including those on entitlement for farm subsidies. Small farms will not be meticulously inspected as to whether they meet European standards. The greening requirement and support for environmental actions will not apply to farms of less than 10 hectares. Sugar quotas are to be abolished in 2017 and milk quotas will expire in 2015: (www.minrol.gov.pl/pol/ Informacje- branżowe/WPR-po2013roku).

When assessing the financial aspects of the CAP negotiations attention should be paid to the redistributive effect of the new EU budget and changes in the allocation of resources between Member States. Poland, along with Latvia, Romania, Bulgaria, Estonia, Lithuania, Malta, Hungary, Slovakia, Cyprus, the Czech Republic, and Slovenia, is in the group of countries whose total allocations for direct payments and the CAP Pillar 2 in the new financial perspective will nominally increase compared to the envelope for years 2007-2013. Poland is the biggest beneficiary of the CAP Pillar 2, as well as of the cohesion policy. In terms of the level of direct payments Poland ranks sixth in Europe (behind France, Germany, Spain, Italy, and the United Kingdom). Taking into account the entire CAP budget, Poland ranks fifth (behind France, Germany, Spain, and Italy).

It should be emphasized that the anticipated EU CAP budget for Poland in the years 2014-2020 will be (in current prices) a little over 32 billion euros, while in the years 2007-2013 it was 28.6 billion euros (in current prices) (Council Regulation (EC) No. 1782/200).

While planning the new financial perspective, the Ministry of Agriculture strives to achieve a comprehensive approach to the needs of the agricultural sector in the context of the opportunities offered not only the CAP, but also by the cohesion policy. Work is underway on the implementation of a new system of direct payments and on the development of the Rural Development Programme for 2014-2020 (RDP 2014-2020). In the case of direct payments, the new system will be implemented in 2015. In 2014, direct payments will be paid in accordance with the transitional rules, on terms similar to those in 2013.

**Table 2. EU funds for Poland under direct payments and rural development for the period 2014-2020 (EUR million, current prices)**

| Type of support | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | In total, 2014-2020 |
|---|---|---|---|---|---|---|---|---|
| Direct payments | 2,970 | 2,987 | 3,005 | 3,022 | 3,042 | 3,062 | 3,062 | 21,148 |
| Rural Development | 1,570 | 1,567 | 1,565 | 1,563 | 1,561 | 1,559 | 1,556 | 10,941 |
| Total payments and RDP | 4,541 | 4,557 | 4,573 | 4,589 | 4,607 | 4,625 | 4,623 | 32,081 |

Source: Consolidated draft Regulation of the European Parliament and the Council (Council document 13294/13 REV 1 and 13349/1/13 REV1).

## 4. The new CAP and the competitiveness of Polish agriculture in the period 2014-2020

The budgetary agreement and financial resources allocated for the period 2014-2020 have met with a favourable response in Poland. However, it is worth examining in more detail the importance of these measures for Poland, assessing both opportunities and threats. We are at the start of the new budget period and to consider the funds as a great success would be a premature conclusion. Economists from Invest Bank are optimistic about the future possibility of using EU funds for Poland, but it is a cautious optimism, expressed as follows: 'Surely this money will allow a somewhat faster growth of the Polish economy than if it was not there, although it is difficult to expect that it will be a permanent driver of our growth in medium- and long-term.' According to the economists, although the value of transfers from the EU is significant, we should not be fascinated by the numbers - the funds that will flow into Poland in the years 2014-2020 are not extremely high: 'Even if we hypothetically assume that the amount of 73 billion euros (approximately 300 billion zlotys) that is given to us in the context of cohesion policy is fully utilized in the next seven years, it would turn out that it is an additional financial injection of an average of 43 billion zlotys per year. For comparison, capital expenditures in 2012 in Poland amounted to a total of 310 billion zlotys' (*Polska ma otrzymać blisko 106 mld euro budżetu UE na lata 2014-2020 – perspektywa napływu funduszy unijnych a rozwój gospodarczy Polski– szanse i zagrożenia*, pp. 2-3).

All indications are that the new EU budget for 2014-2020, together with the funds earmarked for the implementation of the reformed CAP, will be the last project of such a dimension. Therefore it is important to rationally use the funds and the CAP programmes, especially since the public aid for agriculture will, as a result of the liberalization process of the world economy, probably play a lesser role after 2020 than today.

Based on studies in the literature studies, below it is presented the most important issues that may increase the competitiveness of Polish agriculture in the international market.

The instruments and actions of the reformed CAP are aimed at strengthening the market position of small farms, both in Pillar 1 and Pillar 2, for example through flat rate direct payments for small farms, cap on aid to large farms, support for diversification of income in Pillar 2, and by developing thematic sub-programs for small farms under RDP. Support for small, unprofitable farms means that they remain on the market, which indirectly means blocking the development of the best farms.

Direct payments in the new budget period will, as before, be the main instrument for financial support for Polish agriculture. However, assessment of their impact on the development of agricultural holdings varies. Many economists believe that direct payments are spent largely on consumption rather than on the development of agricultural holdings. Two well-known economists, S. Tangermann and M. Hofreither, (Walkowski 2012) have called for major changes in the CAP direct payments. In their view, direct payments are in fact treated as part of the fight against poverty in the countryside, which should be dealt with by social policy, and not by the state agricultural policy. In contrast, the studies of W. Czubak and K. Pawlak (Czubak, Pawlak 2008) show that 93% of area payments received by farms in the years 2004-2008 was spent on production.

The programme of direct payments for 2014-2020 includes two components: the basic payment scheme (70% of the envelope), and the greening payment (30% of the envelope). The basic payment includes payments for young farmers (up to 2%), coupled support (up to 15%), support for areas with natural constraints (up to 5%), and a simplified small farmers scheme (up to 10%). J. Kulawik (Kulawik 2012) argues that such solutions in the operation of direct payments do not substantially alter the existing functions of this instrument. However the introduction of changes would imply significant cost for the paying agencies. Farmers may also incur costs connected with adapting to changes, and later transaction costs with respect to the use of payments.

The so-called greening payment, which is designed to foster improved competitiveness, at least in the short term, is a bad solution as it restricts, at least to a certain degree, the specialization of farms, because they must grow at least three crops. Farms which are not exempt must assign and declare 5% of arable land as ‘Ecological Focus Areas (EFAs)’. Especially in the case of large farms, this “greening” entails an increase in production costs, and thus a corresponding decrease in competitiveness (Chechelski 2012). This solution results from the fact that the new CAP is of a more pro-environmental character. In the short term, the so-called “social competitiveness” decreases the “economic competitiveness.”

The CAP for 2014-2020 introduced new rules for determining areas with natural constraints (ANCs). Only biophysical properties will decide on the inclusion of an area into the ANC category, which may result in a reduction of the area and a territorial shift.

The Young Farmers’ Scheme has been positively evaluated and is an important instrument of the reformed CAP. The main objective of this activity is to facilitate generational exchange in the agricultural sector and to provide financial resources to take up and develop agricultural activities. This support should encourage many young farmers to continue economic activity in agriculture, which in the future may increase the competitiveness of Polish agriculture.

Member States can keep up to 10% of the national ceiling for payments, and some countries (such as those that apply SAPS, including Poland), up to 15% of the envelope. This payment should not lead to an increase in production, but only to maintaining it. The purpose of this support is to prevent a decline in production in sectors facing some difficulties and which are of particular importance for economic, social or environmental reasons. In the case of Poland this will concern the livestock sector, sugar beet, fruit, and vegetables. The support given to these sectors should improve their competitiveness.

It is very difficult to evaluate the impact of individual RDP 2014-2020 measures on increase of the competitiveness of Polish agriculture. It is only possible to identify measures which can contribute to improving the competitiveness of Polish agriculture in the international market.

Financial assistance instruments designed in the Programme are primarily aimed at the development of farms and include: Modernization of agricultural holdings, Restructuring of small farms, Bonuses for young farmers, and Payments to farmers eligible for the small farmers' scheme, which involves transfer of a holding to another farmer. The first instrument is designed to increase the competitiveness of Polish agriculture and is primarily targeted at larger farms, but is very extensive and therefore one should clearly specify which projects should be supported (Chechelski 2012). In turn, B. Wieliczko (Wieliczko) believes that the payments to farmers who transfer small farms are not high enough to be an equally attractive support as benefits received under the 'structural pensions', which have also failed to be effective.

Such financial assistance instruments as Knowledge transfer and innovation, and Agricultural counselling (the Farm Advisory System) should contribute to the further development of the agricultural sector and increase its competitiveness. Cooperation is a new instrument aimed at supporting the implementation of innovation in the agri-food sector. The positive effects of knowledge transfer and innovation are to be expected in the longer term (Chechelski 2012).

In order to improve the organization of the food chain, the RDP 2014-2020 provides for support for investments related to the processing and marketing of agricultural products, as well as the further development of groups and producer organizations and quality schemes for agricultural products and foodstuffs. In addition, in order to facilitate the direct sales of agricultural products, continued support for the construction and modernization of marketplaces is planned.

New instruments of risk management in agriculture are an important part of the so-called "safety net" in the new RDP. These instruments will be particularly important in the future. After 2020, together with the liberalization of trade in the world the EU will have to reduce support in the form of direct payments and replace it with instruments relating to the insurance of production risk and environmental protection.

In order to ensure sustainable rural development the CAP will have to foster the development of entrepreneurship and the revival of rural areas and rural development, including the technical infrastructure, which will be implemented under separate actions as well as by ‘Leader’ local action groups. Continued implementation of the Local Development Strategy (Leader) will strengthen the implementation of the grassroots initiatives of local communities.

## 5. Development of agriculture: Global conditions

Over the past two decades the global food economy has experienced various phenomena which may greatly affect the development of EU agriculture, including Polish agriculture. These phenomena include, above all, the increase in demand for food, particularly in the developing countries. The dynamic development of the countries with large populations (China, India, Brazil, Mexico, South Africa, Nigeria, and the countries of South-East Asia) has resulted in an increased demand for food. Due to economic growth, the societies of these countries are becoming richer, and thus their food needs increase. These include not only quantitative changes but also changes in the structure of consumption. Dietary habits rich in animal products are spreading rapidly and becoming synonymous with wealth for the middle class in these countries.

The above-mentioned group of developing countries has contributed significantly to the increase in the global demand for food. For example, China alone accounts for more than one fifth of the global consumption of wheat, corn, rice, and soybeans; its share of global imports of soybeans is almost 40%. China has shifted from a net exporting country to a net importing country in meat products. For example, in 2012 imports of pork increased by 1.1 million tonnes. Despite the increase in consumption however, the Chinese still consume on average three times less milk and meat compared to rich countries such as the USA, Australia, and the United Kingdom (Chechelski, Grochowska, Wigier 2012, p.12).

According to a report published by the British Institute of Grocery Distribution (IGD) (*Chiny liderem rynku żywności* 2012), in 2011 China became the world’s largest grocery market and surpassed the U.S. in this respect. The value of the grocery market in China reached 970 billion dollars, while in the U.S. it was 914 billion dollars. The Chinese food sector is predicted to reach 1.5 trillion dollars by 2015, a threefold increase compared to 2006. The report also draws attention to the rapid increase in the value of the grocery market in the other BRIC countries, i.e., Brazil, India, Russia, and South Africa (incorporated into the group in 2011). According to the IGD, the entire group was projected to be among the top five grocery markets in the world in terms of value by the end of 2014. The United States was also taken into account in this group, but in comparison to the emerging markets the U.S. market is growing slower. In subsequent years, the dominance of the large developing countries is likely to be even stronger. So in India, according to a report by the Boston Consulting Group, in the case of food one should expect an almost threefold increase in its consumption in 2020 compared to 2010.

The liberalization of trade poses many risks to Polish agriculture. EU agriculture, including Polish agriculture, is “more expensive” and thus is not able to meet open competition on the world market. EU agricultural holdings are characterised by low individual potential, a high proportion of family labour, low scale of production, low levels of specialization and relatively high prices of land. If the EU engages in too far-reaching concessions in the liberalization of its agricultural policy, European agriculture will shrink. This can lead to increased imports of cheaper food, poorly controlled in terms of health, and also might have negative consequences for the labour market and the foreign trade balance. The European model of agriculture may not survive in the era of a globalising economy dominated by openness, liberalism, and all-encompassing flows of capital, goods, and information. Poland should ensure that EU countries make consistent, common, and significant effort to defend the European agricultural model based on multi-functionality and sustainability.

Until recently, the most important mechanism that determined prices was the law of supply and demand. However, recent years have shown that world market prices for food are increasingly dependent on the political, economic, social, technical, and climatic factors, as well as speculative activities. One can assume that the coming decades will see a persistent upward trend in global food prices. Projections made by the OECD, FAO, the World Bank, and USDA are all similar in this respect. It is worth mentioning that higher prices have not - so far - translated into higher incomes for farmers, since the profits have been taken over by companies representing other links in the food chain.

Transnational corporations (TNCs) are another relatively new phenomenon in the global economy. In Poland, the presence of transnational corporations is particularly evident in the food industry. The impact of TNCs on the changes taking place in this sector has been significant, and has been both positive and negative and variable in time. TNCs had a positive impact on Poland’s transformation processes, including processes of concentration and specialization of production. They accelerated the restructuring of many industries and the technical and technological progress, and improved the quality of goods and services on the market. However, apart from the positive impact of TNCs, one can see their negative impact, such as monopolistic practices, transfer of profits abroad, and different product quality under the same brand for rich and poor countries. Their activities also contributed to the collapse of many domestic companies and thus to an increase in unemployment. The share of TNCs in the production of Polish food industry is estimated at about 40% and is slowly but steadily increasing. Thus the activities of TNCs create serious competition for domestic producers.

The impact of production, trade, and financial corporations in the food economy is increasing. These are companies with global systems of production and distribution of food, often of an oligopolistic nature. TNCs gain excessive market power, which is manifested, *inter alia*, in their controlling and fixing prices and in an unequal distribution of profits. The determinants of the global food economy related to the activities of transnational corporations and the progress of science are (Chechelski, Grochowska, Wigier 2012, p.14):

- a systematic increase of the share of transnational corporations in the production and sale of food, which has resulted in the aggravation of monopolistic practices (e.g., six transnational corporations control 85% of the world grain trade, and the share of the four largest corporations in the world production of beer and tobacco exceeds 50%);
- the great possibility of manipulating the prices of raw materials and agricultural products by the world financial corporations operating on stock exchanges (relatively small markets of agricultural raw materials facilitate this practice);
- the possibility of manipulating exchange rates;
- limited access for agricultural producers to the latest technology, due to high costs or dependence on transnational corporations through various concessions (leasing, franchising);
- the development of progress in science which is uncontrolled and not proven in practice. The solutions to increase food production through the use of agricultural chemicals are in particular critically evaluated, mainly because of the risks to human and animal health and environmental degradation.

Other relevant macroeconomic conditions which may affect the development of the Common Agricultural Policy, and indirectly also the Polish food economy, include natural factors limiting the volume of production of world agriculture, such as:

- climate change, growing water shortages, shrinking arable land due to soil sterilization, urbanization, infrastructure development, etc.;
- political and economic events: the establishment of BRICS, the extension of the ASEAN and MERCOSUR groups, the suggestions to liberalize trade between the markets of the European Union and MERCOSUR, the cooperation between China and the U.S. for the improvement of the quality of food produced, etc.;
- the pace and duration of today's economic crisis. The prolonged economic crisis is still a problem. The largest economies in the world are trying, each in their own way, to fight it. In this situation, the lack of strong coordinating

institutions is clearly felt. The EU budget and the amounts allocated to the CAP depend on the future development of the crisis. If the funds are relatively small, it will be difficult for the countries in the EU to reach a consensus, for example, about the future European model of agriculture.

These conditions, resulting from the globalization of the world food economy, can be regarded as external determinants shaping the future of the Common Agricultural Policy. Their impact will likely increase over time and will destabilize and weaken the CAP.

## 6. Conclusions

It seems that under the influence of the increasing liberalization of the world food economy and the changes taking place in the same Community, the EU CAP should move towards a stronger market orientation. Meanwhile, it follows from the foregoing considerations that the issue of priorities in the EU agricultural policy is complex and in many respects debatable and controversial. The shape of the new CAP, adopted for 2014-2020, indicates that the changes are primarily the result of a political compromise. The implementation of many objectives provided for in the reformed CAP, often contradictory, may weaken the competitiveness of Polish agriculture.

The situation of Polish agriculture, compared to agriculture in the highly developed countries, is unfavourable, with its high level of employment, low labour and land productivity, low profitability of agricultural activities, and above all the inadequate agrarian structure. Moreover, some of the actions of the new CAP preserve the existing agrarian structure instead of changing it e.g., a simplified system of direct payments to small farms, support for small farms and too low annual payments for farmers who want to transfer their holding to another farmer. The funds allocated to Poland in the new EU budget can therefore act to weaken the need to improve the effectiveness of farming, intensify agricultural production and transform agricultural structures.

Modification of some CAP instruments related to ecology may also decrease the competitiveness of many farms. The reformed CAP is not conducive to the development of the largest, the most efficient and competitive farms and their specialization (e.g., greening, reduction of payments).

The increase, *vel non*, of the competitiveness of Polish agriculture in the period 2014-2020 will largely depend on the entrepreneurship of the farmers themselves, especially their propensity to innovate production methods, work organization and the marketing of agricultural products. The RDP measures related to advisory services, knowledge transfer, and creation of producer groups should constitute an important source of support for farmers.

As in any other business, the condition of agriculture and its changes depend on the level of development of the country, the pace of the development and on structural transformations. To improve the competitiveness of agriculture it is particularly important to create jobs outside agriculture.

The conditions of development of Polish agriculture are a consequence of global conditions and internal EU policy, as well as of the important role of the state in shaping the priorities for the development of this sector and the creation of a good business environment. It can be assumed that the new CAP will not have a significant impact on the volume of agricultural production in Poland, but will contribute to changes in the cost of production. In contrast, Poland's large domestic market, the increasing demand of the food industry for agricultural products and interest of developing countries in Polish food should contribute to the growth of agricultural production in Poland.

In summary, it can be expected that the instruments and the related financial resources allocated to Poland under the new EU budget perspective for 2014-2020 will not substantially bridge the gap between agriculture in Poland and in the developed countries.

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## Streszczenie

## UWARUNKOWANIA ROZWOJU POLSKIEGO ROLNICTWA W WARUNKACH GLOBALIZACJI I INTEGRACJI EUROPEJSKIEJ

*Współczesne badania nad świadczeniami (usługami) ekosystemów (środowiska) potwierdzają rangę i znaczenie środowiska przyrodniczego i jego zasobów dla kształtowania dobrobytu człowieka. Szczególnie mocno akcentują ochronę żywych zasobów przyrody dla zachowania bioróżnorodności, która jest niezbędna dla utrzymania podstawowych procesów ekologicznych oraz zapewnienie trwałości użytkowania tychże zasobów. W efekcie ochrona bioróżnorodności to nie tylko problem przyrodniczy, ale również problem ekonomiczny i społeczny, dobrobytu i jakości życia. Zatem różnorodność biologiczna jest niezbędnym warunkiem zapewnienia bezpieczeństwa ekologicznego zachowania ciągłości procesów przyrodniczych, warunków i jakości życia oraz potencjału gospodarczego.*

*Głównym celem artykułu jest wskazanie teoretycznych podstaw ochrony bioróżnorodności z perspektywy nauk przyrodniczych i ekonomicznych oraz identyfikacja zróżnicowań poziomu ochrony bioróżnorodności w krajach Unii Europejskiej. Celem szczegółowym jest wskazaniu form ochrony przyrody jako instrument ochrony bioróżnorodności oraz dokonanie przeglądu ustanawianych form ochrony przyrody w wybranych krajach UE. Dla realizacji tak założonego celu dokonano przeglądu literatury z zakresu nauk przyrodniczych, ekonomicznych i prawnych oraz aktualnych czasopism z zakresu nauk* *przyrodniczych prezentujących badania naukowe w obszarze bioróżnorodności. Analiza porównawcza została przygotowana w oparciu o dane statystyczne pochodzących z różnorodnych zasobów statystyki międzynarodowej (OECD, EUROSTAT, EEA).*

***Słowa kluczowe****: wspólna polityka rolna, konkurencyjność polskiego rolnictwa, budżet UE 2014-2020, korporacje transnarodowe*

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# Poland's Innovativeness Against The Background Of EU Countries (Recent Research Results)


## Abstract

*Innovativeness in Europe has been a formulated goal of the EU since the Lisbon Strategy. One of the goals of the new Europe 2020 Strategy is smart growth, i.e. growth based on knowledge and innovation. This requires improving the quality of education and research results, the transfer of knowledge and innovations between countries, and broader commercialization of research results. Hence, the measurement of innovation evolves in order to reflect the factors that determine the level of innovativeness of economies. The purpose of this paper is to present the level of Poland's innovativeness against the background of the EU countries, using the SII (Summary Innovation Index).*


**Keywords:** *innovation indicators, Europe 2020, measurement of innovation, innovation leaders*

## 1. Introduction

Innovation is one of the key factors that leads to economic growth and enhanced competitiveness. Achieving a sustainable competitive advantage by introducing innovations is primarily associated with the accumulation of knowledge and experience. The role of innovations in the search for sources of competitive advantage is constantly growing, along with the simultaneously increasing costs and risks associated with their implementation. Innovations are no longer treated only

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endogenously but also as exogenous. This means that their level depends not only on R&D expenditures, but is affected by many factors and business innovations are dependent on both the private and the public sector. Therefore there are many factors besides the expenditures on R&D (funded by the state budget, companies, universities, the non-profit sector, and foreign funds) that determine the level of innovativeness of individual countries. Indicators used for measuring innovation are being increasingly re-calibrated to capture measurable factors determining the level of innovativeness. It should be kept in mind, however, that the level of innovativeness is also affected by a number of immeasurable factors.

Obviously innovation policy is designed to promote the innovativeness of the economy, by the introduction of new products, services, processes, as well as techniques and methods of management and organization. This requires the creation of a pro-innovative climate, fostering innovation culture in firms and the development of services to assist innovative businesses. In spite of the economic downturn, the debate on economic policy emphasizes providing an appropriate framework that promotes innovations which lead to structural changes and influence the international competitive advantage of countries.

The priority for the EU in the twenty-first century is to increase the role of knowledge and innovation - the driving forces behind the development of economies in the future. Achieving this goal requires better knowledge combined with economic practices, as well as a financial infrastructure that encourages innovation.

The Europe 2020 Strategy and its recommendations focus on investments in education, research and innovation as key to smart and sustainable development. The goal is to create the best possible environment for innovative activities for researchers and firms, including in the public sector.

The success of the Europe 2020 Strategy will depend largely on effective coordination of the implementation of EU reform programs, combined with the co-responsibility of all Member States for carrying out effective structural reforms.

The goal of this paper is to present the level of innovativeness in Poland against the background of the EU countries, measured by the SII (Summary Innovation Index) and calculated on the basis of parameters from three areas: Enablers, Firm activities. and Outputs.

## 2. Innovativeness of the EU countries in the second decade of the twenty–first century, with particular focus on Poland

Innovation is an important driver of economic progress and competitiveness in both the developed and developing countries. Many governments have put innovations at the centre of their growth strategies. There is a growing awareness of the fact that the definition of innovation has been widened (Krawczyk 2012, p. 52) and is no longer limited to production activities but also includes the public sector, which cooperates with business. Business sector firms are dependent on the public sector as they maintain direct or indirect relations with this sector. These relations include, among others, regulatory requirements (everything from filling out online forms to the implementation of other requirements relating to pollution or safety, spatial planning, etc.), direct contracts (e.g. public procurement) and use of public services such as subsidies, grants, training programs, on-line services (European Public Sector Innovation Scoreboard 2012, p. 6).

Innovations are becoming more general and horizontal in nature and include both social innovations and business model innovations. Attention is increasingly paid to linkages between various entities in the area of innovation, which in turn stimulates innovation growth. These linkages include interactions between firms and scientific and research institutions and research universities and scientists from around the world.

The importance of innovation in the development of modern economies is reflected by the fact that, already in 2000 at the Lisbon summit, the European Union established innovation as a key goal of EU programs set out in the Lisbon Strategy. It was recognized that in order to become the most competitive and dynamic economy in the world, the European Union has to base its economy on knowledge, the implementation of information society policies, expenditures on research and development and human capital.

A special goal of the Lisbon Strategy, renewed in 2005, was to achieve economic growth and high employment. The importance of investments in R&D and innovation activities was also stressed. In this context, attention was paid to education and acquiring those new skills needed to increase productivity and competitiveness. Because of the crisis, the EU's assumptions and implemented changes aimed at achieving an innovative economy did not result in the expected economic growth.

One of the primary sources of information about the innovativeness of economies is the "Innovation Union Scoreboard" report. The Summary Innovation Index (SII) presented in the report is used to assess the innovativeness of the EU countries and is calculated based on 25 sub-indices. This allows for monitoring the changes in the level of innovativeness of economies and pointing out the differences between countries in their level of adaptation to the EU policy.[1]

[1] The values of individual and aggregated indicators have been published since 2010. Both the number and the formula for calculating the indicators underwent changes. In the most recent 2014 report 25 indicators are used for measuring the innovativeness of economies.

The SII level indicates a country's potential to increase the innovativeness of its economy. On the basis of the SII index, Member States can be divided into four groups:

- Innovation leaders,
- Innovation followers,
- Moderate Innovators,
- Modest innovators.

The countries in Group 1 - innovation leaders - include Sweden, Denmark, Germany and Finland. Their respective SII indices are more than 20% higher than the average for the EU countries.

Group 2 - Innovation followers – consists of Luxembourg, the Netherlands, Belgium, United Kingdom, Ireland, Austria, France, Slovenia, Estonia and Cyprus. The Summary Innovation Index for these countries is between 90% and 120% of the average for the EU countries.

Group 3 - moderate innovators – perform at a level 50% and 90% of the average for the EU countries. This group includes Italy, the Czech Republic, Spain, Portugal, Greece, Hungary, Slovakia, Malta, Croatia, Lithuania and Poland.

Group 4 - modest innovators - are characterized by an SII below 50% of the average for the EU countries. This group includes Romania, Latvia and Bulgaria.

The changes in innovation performance of the EU countries during the period 2006-2013 are presented in Table 1. The complete construction of the index is presented in Annex 1.

Overall, the EU annual average growth rate of innovation performance based on the SII reached 1.7% (Innovation Union Scoreboard 2014, p. 5) over the analyzed eight year period 2006-2013. Increases were reported in the following areas:

- human resources–by 2.3%,
- open, excellent and attractive research systems–by 4.5%,
- intellectual assets–2.1%,
- innovators–by 0.7%,
- economic effects–by 1.2%;

Whereas decreases in the level of innovativeness were reported in:

- finance and support–by 5%,
- firm investments–by 1.4%,
- linkages and entrepreneurship–by 0.1%.

The overall growth rate of the SII was primarily a result of increases in International scientific co-publications, non-EU doctorate students, and Community trademarks. The growth ratios for these indicators were over 6%.

**Table 1. The dynamics of innovation in the EU-27 in 2006-2012 (by SII)**

| Main type/innovation dimension/indicator | Growth indicator 2006=100% |
|---|---|
| **HUMAN RESOURCES** | **102.3%** |
| 1.1.1 New doctorate graduates | 102.8% |
| 1.1.2 Population aged 30-34 having completed tertiary education | 103.6% |
| 1.1.3 Youth aged 20-24 with upper secondary level education | 100.5% |
| **OPEN, EXCELLENT AND ATTRACTIVE RESEARCH SYSTEMS** | **104.5%** |
| 1.2.1 International scientific co-publications | 106.0% |
| 1.2.2 Top 10% most cited scientific publications worldwide | 101.4% |
| 1.2.3 Non-EU doctorate students | 106.3% |
| FINANCE AND SUPPORT | **95.0%** |
| 1.3.1 R&D expenditures in the public sector | 101.8% |
| 1.3.2 Venture capital investments | 97.2% |
| **FIRM INVESTMENTS** | **98.6%** |
| 2.1.1 R&D expenditures in the business sector | 102.0% |
| 2.1.2 Non-R&D innovation expenditures | 95.3% |
| **LINKAGES & ENTREPRENEURSHIP** | **99.9%** |
| 2.2.1 SMEs innovating in-house | 103.8% |
| 2.2.2 Innovative SMEs collaborating with others | 101.2% |
| 2.2.3 Public-private scientific co-publications | 102.2% |
| **INTELLECTUAL ASSETS** | **102.1%** |
| 2.3.1 PCT patent applications | 100.0% |
| 2.3.2 PCT patent applications in societal challenges | 99.9% |
| 2.3.3 Community trademarks | 106.9% |
| 2.3.4 Community designs | 101.6% |
| **INNOVATORS** | **100.7%** |
| 3.1.1 SMEs introducing product/process innovations | 101.3% |
| 3.1.2 SMEs introducing marketing/organisational innovations | 100.8% |
| 3.1.3 Fast-growing innovative firms | 100.0% |
| **ECONOMIC EFFECTS** | **101.2%** |
| 3.2.1 Employment in knowledge-intensive activities | 100.7% |
| 3.2.2 Contribution of MHT product exports to trade balance | 100.2% |
| 3.2.3 Knowledge-intensive services exports | 101.0% |
| 3.2.4 Sales of new to market and new to firm innovations | 100.5% |
| 3.2.5 License and patent revenues from abroad | 103.7% |

Source: Calculations based on the Innovation Union Scoreboard 2014, European Commission, p. 25.

The comparison of innovativeness of EU countries with main global competitors in the period 2006-2013 shows that the EU average is lower than that of South Korea, the United States and Japan, and is higher than that of Canada, Australia and the BRICS countries (China, India, Russia, Brazil, South Africa).[2]

The EU innovation leaders dominate especially in such indicators as R&D expenditures in the business sector, public-private scientific co-publications, PCT patents, and the population aged 30-34 having completed tertiary education.

There is a difference in the level of innovativeness between EU countries, especially between the 'old' and the 'new' EU. Poland occupies 25th position in the overall ranking, i.e. is not even a leader in Central and Eastern Europe.

**Table 2. EU annual growth performance in 2013**

| Main type/innovation dimension/indicator | **EU-27** | **Finland** | **France** | **Poland** | **Bulgaria** |
|---|---|---|---|---|---|
| **ENABLERS** | | | | | |
| **HUMAN RESOURCES** | | | | | |
| 1.1.1 New doctorate graduates | 1.7 | 2.3 | 1.6 | 0.5 | 0.6 |
| 1.1.2 Population aged 30-34 having completed tertiary education | 35.8% | 43.0% | 43.6% | 39.1% | 26.9% |
| 1.1.3 Youth aged 20-24 with an upper secondary level of education | 80.2% | 72.0% | 84.4% | 89.8% | 85.8% |
| **OPEN, EXCELLENT AND ATTRACTIVE RESEARCH SYSTEMS** | | | | | |
| 1.2.1 International scientific co-publications | 343 | 1840 | 707 | 226 | 213 |
| 1.2.2 Top 10% most cited scientific publications worldwide | 11.0% | 14.5% | 10.4% | 3.8% | 3.2% |
| 1.2.3 Non-EU doctorate students | 24.2% | 17.7% | 31.5% | 1.9% | 3.8% |
| **FINANCE AND SUPPORT** | | | | | |
| 1.3.1 R&D expenditures in the public sector | 0.75% | 1.02% | 0.78% | 0.56% | 0.24% |
| 1.3.2 Venture capital investments | 0.277% | 0.296% | 0.307% | 0.234% | 0.038% |
| **FIRM ACTIVITIES** | | | | | |
| **FIRM INVESTMENTS** | | | | | |
| 2.1.1 R&D expenditures in the business sector | 1.31% | 1.96% | 1.45% | 0.33% | 0.39% |
| 2.1.2 Non-R&D innovation expenditures | 0.56% | 0.51% | 0.25% | 1.02% | 0.28% |

[2] This comparison was based on 12 indicators. For more, see: Innovation Union Scoreboard 2014, European Commission, p. 29.

| | | | | | |
|---|---|---|---|---|---|
| **LINKAGES & ENTREPRENEURSHIP** | | | | | |
| 2.2.1 SMEs innovating in-house | 31.8% | 40.8% | 29.9% | 11.3% | 13.0% |
| 2.2.2 Innovative SMEs collaborating with others | 11.7% | 15.5% | 11.1% | 4.2% | 3.3% |
| 2.2.3 Public-private scientific co-publications | 7.3 | 13.1 | 7.0 | 2.3 | 2.0 |
| **INTELLECTUAL ASSETS** | | | | | |
| 2.3.1 PCT patent applications | 1.98 | 2.55 | 2.05 | 0.67 | 0.59 |
| 2.3.2 PCT patent applications in societal challenges | 0.92 | 1.45 | 0.90 | 0.25 | 0.22 |
| 2.3.3 Community trademarks | 5.91 | 7.45 | 4.131 | 3.21 | 5.30 |
| 2.3.4 Community designs | 4.75 | 8.14 | 3.70 | 4.76 | 3.18 |
| **OUTPUTS** | | | | | |
| **INNOVATORS** | | | | | |
| 3.1.1 SMEs introducing product/process innovations | 38.4% | 41.6% | 32.7% | 14.4% | 16.6% |
| 3.1.2 SMEs introducing marketing/organisational innovations | 40.3% | 42.6% | 42.8% | 19.9% | 16.3% |
| 3.1.3 Fast-growing innovative firms | 16.2 | 19.2 | 18.2 | 13.7 | 11.8 |
| **ECONOMIC EFFECTS** | | | | | |
| 3.2.1 Employment in knowledge-intensive activities | 13.9% | 15.5% | 14.3% | 9.7% | 8.3% |
| 3.2.2 Contribution of MHT product exports to trade balance | 1.27% | -3.34% | 5.23% | 0.58% | -5.23% |
| 3.2.3 Knowledge-intensive services exports | 45.5% | 65.1% | 33.7% | 28.3% | 25.5% |
| 3.2.4 Sales of new to market and new to firm innovations | 14.4% | 15.0% | 14.7% | 8.00% | 7.6% |
| 3.2.5 License and patent revenues from abroad | 0.77% | 0.89% | 0.70% | 0.21% | 0.21% |

Source: Own elaboration based on the Innovation Union Scoreboard 2014, pp. 82-83 (Annex A) and pp.70-71 (Annex B).

Table 2 shows the Summary Innovation Index (SII) and the sub-indices in the analyzed areas for selected countries representing the four groups (Innovation leaders, Innovation followers, Moderate innovators, Modest innovators).

The data shows that the level of innovativeness in Poland lags behind the EU average in the following areas:

I. Human resources: New doctorates and Youth aged 20-24 with upper secondary education. The value of the indicator for Population 30-34 having completed tertiary education, however, exceeds the EU average (Geodecki et al. 2013, p.23).

II. Poland lags behind the EU the most in the area of research systems, lagging behind in all indicators describing this area. The values of the indicators 'international publications' and 'scientific publications among the top 10% most cited scientific publications worldwide' are too small. In the second case the value is more than three times lower than the EU average. The value of the indicator 'non-EU doctorate students' is more than twelve times lower than the EU average.

It may be said that while Poland is undergoing structural changes towards a knowledge-based economy, the pace is still too slow.

The research system consists of financing and support. Expenditures on R&D financed from the state budget in relation to GDP are lower in Poland than the EU average, and the largest differences occur in the area of firm expenditures, which are four times lower than the EU average.

The relatively underdeveloped venture capital market in the EU is also upsetting, and also here Poland lags behind the EU average (Żylicz 2013, p. 38).

The area 'Linkages and entrepreneurship' relates specifically to the SME sector. Despite the considerable amounts of structural funds provided under the Innovative Economy Programme, the indicators for Poland in this area are three times lower than the EU average.

Poland also lags behind the EU in the area of 'inventions', both at the stage of applying for patents as well as obtaining a patent. This results in relatively low revenues from the licensing or sales of patents.

Product and process innovations implemented by SMEs in relation to the total number of SMEs are approx. 2.5 times lower in Poland than the EU average. In case of marketing and organizational innovations this lag is smaller.

Employment in knowledge-intensive activities in Poland clearly lags behind the EU average. This also applies to the export of knowledge-intensive services.[3]

The research conducted in Europe shows that more and more countries are developing and implementing various incentives in the form of tax credits and grants (Przegląd zachęt na działalność B+R na świecie 2013, Deloitte, 2013; R&D incentives and services. Adding value across Europe, Middle East and Africa [EMEA], 2012).

[3] For more on knowledge-intensive services, see Majewska, Truskolaski 2013, pp. 91-108.

Weak tax incentives affect the level of expenditures on R&D and, according to KPMG experts and the entrepreneurs, it is thus necessary not only to expand the scope and scale of tax relief but also to sustain the system of grants. Repayable assistance should be granted in the implementation phase of a project, because it is associated with a lower risk than the work on the project. Business innovations are very risky, hence guaranty insurance or even tax exemptions should be considered.[4]

Poland is ahead of Bulgaria with respect to most of the indicators that make up the SII, and it outperforms France and Finland in sub-indicators relating to the number of people with higher and secondary education.

The development of the EU economy is inextricably linked with the necessity of raising its competitiveness. A competitive economy provides a higher standard of living and employment for its citizens. Increasing production brings about rising social welfare and economic growth. In this respect Europe still significantly lags behind developed countries such as the United States, where production is over 20% higher than in the EU (The Europe 2020 Competitiveness Report: Building a More Competitive Europe 2012, p. 6). The EU is trying to reduce the development gap between itself and the more developed economies from other continents. Among the ways to achieve this goal one must certainly include the efforts to increase innovativeness. Innovativeness improves the quality of production and the rate of its growth, which enables an increase in employment and wages, which in turn raises quality of life and well-being of the society (Bal-Wozniak 2012, p. 51).

After failing to reach the goal set out in the Lisbon Strategy (R&D expenditures equal to 3% of the EU's GDP), European leaders decided to develop a new strategy called Europe 2020, the goal of which is smart, sustainable and inclusive growth, to be achieved through increased coordination of national and European policies (Strategia na rzecz inteligentnego i zrównoważonego rozwoju sprzyjającego włączeniu społecznemu 2010, p. 2). This strategy is a response to the growing competition from global leaders such as the United States, Japan, India and China, the latter two of which are emerging economic powers (Strategia na rzecz inteligentnego i zrównoważonego rozwoju sprzyjającego włączeniu społecznemu 2013, p. 3). The main target group is entrepreneurs, with particular focus on co-operation between science and business.

The Europe 2020 Strategy aims at growth that is intelligent, knowledge- and innovation-based, and designed to use R&D and innovation in order to solve the problems of climate, energy, health, demographic change and scarcity of resources.

The Europe 2020 strategy is realized through National Reform Systems, created to bridge the large gaps in economic and social situations between the

[4] Interesting insights in this area can be found in: Badania i rozwój w Polsce, Raport 2013, p. 4.

EU member states, especially between those of northern and southern Europe. These countries have different starting point and target with respect to what can be achieved within a predetermined period of time. Therefore, the European Commission has committed Member States to translate the main objectives of the Europe 2020 Strategy into national targets, and to define methods for their implementation. This has resulted in the preparation of documents called National Reform Programmes (NRP), which set out national targets and the measures necessary to achieve them.

The EU innovation policy is multidirectional and employs a variety of instruments that allow for the inclusion of numerous stakeholders in the process of its implementation, including national and local authorities, companies, research units, financial institutions and social partners,. Therefore the speed and success of the process of building an innovative EU economy depends on the involvement of the above-mentioned entities in the process of creating the EU's smart growth (Zygierewicz 201, p.134).

Moreover, the principle of "smart consolidation" - sustaining or if possible increasing expenditures promoting growth, such as expenditures on research and development - were to be widely used among EU countries.

However, the ongoing crisis has revealed structural weaknesses in the innovation in Europe. One of them is that the process of 'innovation convergence' among member countries has stopped, which has resulted in more and more visible growth differences between EU countries. Therefore, the EU economy needs to be refreshed, become more dynamic, and has to introduce new solutions, applications and business models that will help existing traditional industries to develop and maintain their competitiveness. Europe needs radical innovations that will help to make structural changes in industry. In the upcoming decade the EU has to do everything possible to attract the most talented individuals and to reward innovative companies, thus creating better opportunities for business start-ups and development (State of the Innovation Union 2012, pp. 4-5).

## 3. Conclusions

1. The effects of the economic crisis in the area of R&D and innovation in Europe have been presented based on the Innovation Union Scoreboard 2014 report, which shows the achievements of the EU countries and also the strengths and weaknesses of innovation systems.
2. The emerging concept of a two-speed Europe does not auger well for improving the situation on the continent. Hence, steps should be taken in order to develop a program focused on increasing the level of innovativeness of the

EU and on closing the existing gaps, much like when emphasis was put on levelling the differences between various regions within countries in the previous financial perspective 2007–2013.

3. In Poland, current economic growth is a result of entrepreneurship, a cheap labour force, and import of technology. This is not the way to ensure sustained development in the upcoming decades. There are too few exporters, especially among SMEs which produce mainly for the domestic market. The internationalization of activities, i.e. exports, contacts with partners from abroad, and the creation of cooperation networks, is a major challenge for the development of SMEs. This is reflected in the new perspective called Smart Europe 2014-2020. The growth observed in developed countries is a result of their increase in productivity and improvements of the factors of production, i.e. innovation and the ability to implement and sustain it.
4. A particular gap is observed in the area of cooperation between science and business. This phenomenon is also confirmed by the results of other studies (Czerniak 2013, p. 223). The reasons for the weak linkages between business and science are numerous, also including a lack of existing financial solutions. There is no proof-on-concept system, which means providing non-repayable grants to researchers which allows them to verify the results of their scientific work (regardless of whether they work at the university or in business) (Żylicz 2013 p. B8). Poland’s innovativeness of Poland is slowed down not only by the low level of expenditures on R&D, but also by the unsatisfactory effects of these expenditures. In the new perspective “Smart Europe”, EU funds are allocated to companies willing to cooperate with universities.
5. The percentage of firms involved in financing research and development in Poland is relatively low. Research shows that the more developed is the innovation system in a given country, the lower is the share of public expenditures on R & D. The commercialization of research results is more effective in the business sector, where the motivation to make good use of money spent is higher (Hausner 2013, p. 96). Liberal regulations with respect to tax credits and incentives to support the innovativeness of firms need to be created. It is also necessary to closely observe the practices functioning in other countries and their impact on increasing innovativeness.
6. The key factor for the effectiveness of innovation policy is concentration on the systemic dimension of innovation and on building strong linkages between the participants in the innovation process. More attention should be paid in Poland to the interactions between the institutions involved in the innovation process. Reforms of the Polish R&D system comprise the appointment of the Centre for Research and Development and the National Science Centre and the establishment of two advisory bodies for applied and basic research: the Scientific Policy Committee and the Committee for

Evaluation of Scientific Units. These bodies should bring about change and contribute to the creation of an efficient innovation system subordinated to the new legal regulations, reducing bureaucracy and financial barriers.

7. The EU earmarked 16 billion zl during the period 2014-2020 for business development. The first competitions will begin in 2015. Most of the funds - 8.6 billion zl are designed to be allocated to entrepreneurs within the "Smart growth" programme, which will replace the "Innovative economy" programme. Its main objective is to promote innovativeness in the economy, which is expressed mainly in increasing expenditures on R&D. The support provided within this programme will be focused primarily on stimulating the demand for innovation by firms by such measures as:
   - "from concept to market" projects,
   - creation and development of firms' R&D infrastructure,
   - supporting the implementation of results of R&D activities,
   - preparation of scientific institutions and firms to participate in international programs,
   - internationalization of innovative firms and supporting the activities of venture capital funds, business angels, and seed capital funds.
8. The second main source of funds for firms will come from sixteen regional operational programs managed by the provinces. They will be mainly related to increasing the competitiveness of the SME sector. This means the creation of new firms as well as supporting the development of existing ones.
9. Consolidation of public finance is probably the most important challenge for Poland. A development strategy based solely on the inflow of EU funds and low-cost labour attracting foreign investors - the model functioning in recent years - has to change.

**Annex 1. Innovation Union Scoreboard indicators**

| **Main type/innovation dimension/indicator** | **Data source: Numerator** | **Data source: Denominator** | **Years covered** |
|---|---|---|---|
| ENABLERS | | | |
| Human resources | | | |
| 1.1.1 New doctorate graduates (ISCED 6) per 1000 population aged 25-34 | Eurostat | Eurostat | 2004 – 2011 |
| 1.1.2 Percentage of population aged 30-34 having completed tertiary education | Eurostat | Eurostat | 2005 – 2012 |
| 1.1.3 Percentage of youth aged 20-24 having attained at least upper secondary level education | Eurostat | Eurostat | 2005 – 2012 |

| | | | |
|---|---|---|---|
| Open, excellent and attractive research systems | | | |
| 1.2.1 International scientific co-publications per million population | Science-Metrix (Scopus) | Eurostat | 2005 – 2012 |
| 1.2.2 Scientific publications among the top 10% most cited publications worldwide as % of total scientific publications of the country | Science-Metrix (Scopus) | Science-Metrix (Scopus) | 2004 – 2009 |
| 1.2.3 Non-EU doctorate students[2] as a % of all doctorate students | Eurostat | Eurostat | 2006 – 2011 |
| Finance and support | | | |
| 1.3.1 R&D expenditure in the public sector as % of GDP | Eurostat | Eurostat | 2005 – 2012 |
| 1.3.2 Venture capital investment as % of GDP | Eurostat | Eurostat | 2007 – 2012 |
| FIRM ACTIVITIES | | | |
| Firm investments | | | |
| 2.1.1 R&D expenditure in the business sector as % of GDP | Eurostat | Eurostat | 2005 – 2012 |
| 2.1.2 Non-R&D innovation expenditures as % of turnover | Eurostat (CIS) | Eurostat (CIS) | 2004, 2006, 2008, 2010 |
| Linkages & entrepreneurship | | | |
| 2.2.1 SMEs innovating in-house as % of SMEs | Eurostat (CIS) | Eurostat (CIS) | 2004, 2006, 2008, 2010 |
| 2.2.2 Innovative SMEs collaborating with others as % of SMEs | Eurostat (CIS) | Eurostat (CIS) | 2004, 2006, 2008, 2010 |
| 2.2.3 Public-private co-publications per million population | CWTS (Thomson Reuters) | Eurostat | 2005 – 2011 |
| Intellectual assets | | | |
| 2.3.1 PCT patents applications per billion GDP (in PPS€) | OECD | Eurostat | 2003 – 2010 |
| 2.3.2 PCT patent applications in societal challenges per billion GDP (in PPS€) (environment-related technologies; health) | OECD | Eurostat | 2003 – 2010 |
| 2.3.3 Community trademarks per billion GDP (in PPS€) | Office for Harmonization in the Internal Market | Eurostat | 2005 – 2012 |
| 2.3.4 Community designs per billion GDP (in PPS€) | Office for Harmonization in the Internal Market | Eurostat | 2005 – 2012 |

| OUTPUTS | | | |
|---|---|---|---|
| Innovators | | | |
| 3.1.1 SMEs introducing product or process innovations as % of SMEs | Eurostat (CIS) | Eurostat (CIS) | 2004, 2006, 2008, 2010 |
| 3.1.2 SMEs introducing marketing or organizational innovations as % of SMEs | Eurostat (CIS) | Eurostat (CIS) | 2004, 2006, 2008, 2010 |
| 3.1.3 Employment in fast-growing firms of innovative sectors | *Eurostat* | Eurostat | 2009, 2010 |
| Economic effects | | | |
| 3.2.1 Employment in knowledge-intensive activities (manufacturing and services) as % of total employment | Eurostat | Eurostat | 2008 – 2012 |
| 3.2.2 Contribution of medium and high-tech product exports to the trade balance | United Nations | United Nations | 2005 – 2012 |
| 3.2.3 Knowledge-intensive services exports as % total service exports | Eurostat | Eurostat | 2004 – 2011 |
| 3.2.4 Sales of new to market and new to firm innovations as % of turnover | Eurostat (CIS) | Eurostat (CIS) | 2004, 2006, 2008, 2010 |
| 3.2.5 License and patent revenues from abroad as % of GDP | Eurostat | Eurostat | 2005 – 2012 |

Source: Innovation Union Scoreboard 2014, p. 10.

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## Streszczenie

## INNOWACYJNOŚĆ POLSKI NA TLE KRAJÓW UE (NAJNOWSZE WYNIKI BADAŃ)

*Innowacyjność Europy stała się celem UE już w Strategii Lizbońskiej. W nowej Strategii Europa 2020 jednym z celów jest rozwój inteligentny czyli oparty na wiedzy i innowacji. Wymaga to podniesienia jakości edukacji, wyników działalności badawczej, transferu wiedzy i innowacji między krajami i większej komercjalizacji wyników badań. Stąd pomiar innowacyjności ewaluuje by ująć czynniki, które decydują o poziomie innowacyjności gospodarek. Stąd celem opracowania jest przedstawienie poziomu innowacyjności Polski na tle krajów UE za pomocą SII (Summary Innovation Index).*

***Słowa kluczowe**: wskaźniki innowacyjności, Europa-2020, pomiar innowacji, liderzy innowacji*

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JOANNA DZIAŁO[*]

# Tax Competition Or Tax Coordination? What Is Better For The European Union?

## Abstract

*Tax competition is defined as the use of tax policy that will allow to maintain or increase the attractiveness of a particular territory for business location. Tax competition is used especially by the relatively under-developed countries, as foreign capital inflow gives them the possibility to implement modern technology, new management methods, or to increase exports. One of the effects of tax competition is the formation of tax havens, i.e. countries or territories offering preferential tax rates in order to gain capital from abroad. A comparative analysis of the income tax rates in the EU countries and certain tax havens shows that despite the progressive reduction of the rates of these taxes in the EU, the phenomenon of tax competition is still very strong, and the position of tax havens as countries with relatively low or very low taxes seems to be unthreatened. The question arises whether tax competition is a real problem for the EU Member States and if there exist arguments for tax harmonization, or at least tax coordination within the EU countries. The discussion in this paper suggests that the arguments for tax coordination in the EU are not yet strong enough. However, both tax competition and tax coordination have their supporters and opponents.*

***Keywords***: *tax competition, tax havens, tax harmonization, tax coordination*

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## 1. Introduction

The emergence and development of tax havens is inextricably linked with the phenomenon of globalisation, although the origins of their creation date back to antiquity; to the sixth century BC when, for example, the Islands of Rhodes and Delos were considered as tax havens. Nowadays, it is difficult to imagine international tax planning without considering such an important element as tax havens. Their tax policy is used by international corporations, as well as by less significant companies that operate globally, and even by individuals.

Tax havens are, therefore, an international phenomenon, and their existence is primarily associated with the presence of international tax competition, which, generally speaking, means differentiated tax rates imposed by different tax authorities. By lowering tax rates, countries often try to stimulate their economies and increase their investment attractiveness (mainly for businesses with foreign capital). Thus, international tax competition contributes to maximising benefits, especially for legal persons. Hence prohibitive tax rates (primarily CIT), especially in highly developed countries, appear to be the impetus for the creation of tax havens.

The aim of this paper is to conduct a comparative analysis of income tax rates in the EU countries and certain tax havens. The author argues that the observed process of reducing the rates of PIT and CIT in the EU countries is not significant as a factor that may increase the tax attractiveness of these countries. Moreover, the author formulates the question whether tax competition is a real problem for the EU Member States and seeks arguments for tax coordination within the EU countries.

## 2. Tax competition as a significant cause of the creation of tax havens

The earliest articles dealing with the consequences of uncoordinated tax policies by different political jurisdictions were presented by Tiebout (Tiebout 1956, pp. 416-424) and then by White (White 1975, p. 73). They both put relatively high emphasis on the "voting with one's feet" rationale. They argue that tax autonomy allows local governments to offer citizens and firms different tax and expenditure bundles. As citizens (and firms) can choose jurisdictions, tax competition leads to an efficient outcome where different preferences of economic units regarding public expenditure are translated into different tax rates.

Recent papers argue instead that jurisdictions engaging in tax competition end up providing too few public goods: in order to attract mobile production factors they set lower than optimal tax rates (Bradford, Oates 1971, pp. 416-439; Oates 1972, p. 85). It is, however, unclear whether a reduction in the size of the public sector due to tax competition is necessarily bad. According to Brennan and Buchanan governments are "Leviathans" whose primary interest is to maximize tax revenues as such. They argue that governments do not tax to provide essential public goods but because higher tax revenues enhance the power and prestige of government officials (Brennan, Buchanan 1980, p. 18).

On the other hand, the papers by Wilson or Zodrow and Mieszkowski adhere to the notion of benevolent governments (Wilson 1986, pp. 296–315; Zodrow, Mieszkowski pp. 356–370). These authors predict a shift of taxes from mobile capital to immobile factors of production and hence a "race to the bottom" in the taxation of mobile factors. The prevailing view that tax competition is harmful and leads to sub-optimally low tax rates on the mobile production factors was supported by, among others: Wilson, Bucovetsky, and Wildasin (Wilson 1999, pp. 269–304; Bucovetsky 1991, pp. 167–181; Wildasin 1998, pp. 229–240).

A further strand of the literature on tax competition is built on the so-called New Economic Geography models. In this framework, certain jurisdictions have agglomeration advantages. Because of these advantages, firms that settle in these jurisdictions can expect higher profits. Therefore, jurisdictions that offer more agglomeration advantages can afford to levy higher tax rates (Ludema, Wooton 2000, pp. 331–357; Baldwin, Krugman 2004, pp. 1–23).

Finally, a branch of the literature on international tax competition is concerned with the consequences of tax coordination. Coordination, if it were possible and costless, would result in the optimal outcome. However, due to various limits to coordination it is not clear whether tax coordination improves welfare on average (Wang 1999, pp. 974–981; Peralta, Ypersele 2006, pp. 708–726; Konrad 2009, pp. 109–111).

Generally, tax competition is defined as the use, by entities that participate in it, of such activities within the tax policy that will allow to maintain or increase the attractiveness of a particular territory as a convenient business location. This competition may take place within a single country (between regions, due to a better match of the tax burden to the needs of a particular region), or may take place between countries (Oręziak 2007, p. 86).

The process of international tax competition concerns the introduction of additional legal norms to the legislation in force in a given country. These norms favour reducing the tax burden for foreign investors, thus attracting their capital. The issue of international tax competition refers to two main aspects:

- the situation whereby, by not taxing the interests of their residents, individual countries seek to make the investment of funds at home more attractive;
- attempts to obtain external capital through low tax rates and other tax preferences.

The first aspect relates primarily to natural persons making portfolio investments which enable tax evasion. The second includes direct investments of multinational corporations that enable tax avoidance (Lipowski 2004, p. 98). Economists present diverse opinions on international tax competition, as there are many premises concerning both the favourable and unfavourable aspects of this phenomenon. Proponents of tax competition, in order to prove the validity of their views, put forward the following arguments:

- due to reduced tax rates, tax competition forces the rationalising of public expenditure;
- lower taxes affect the development of entrepreneurship and economic recovery through an increase in profits generated by companies;
- tax competition limits the ability of politicians to intervene in the economy, as without the pressure to reduce taxes, they would have a greater ability to raise tax rates;
- reduced tax rates can be seen as an inducement for foreign investors in the countries with poorly developed infrastructure, less-educated workforce, or an unfavourable location;
- the effect of tax competition is the inflow of capital from abroad, which increases chances for economic growth of the country and as a result reduces disparities between more and less developed countries.

Opponents argue that tax competition is associated with the following dangers:

- a lower level of public revenue contributes to the reduced supply of public goods and as a result to reducing the redistributive function of the state budget;
- the government may seek to compensate for losses caused by lower revenues to the budget by increasing the tax burden in relation to less mobile factors of production, or by increasing indirect tax rates, which may reduce consumer demand;
- reduced spending on infrastructure, research and development or education may weaken the long-term competitiveness of the economy;
- tax reduction is not the only way to increase the attractiveness of a country. It can also be done, for example, through modernisation of technical infrastructure, a better educated population, higher expenditures on research and development or efficient functioning of public administration;
- investing capital in a country with more favourable tax rates contributes to the loss of hypothetical budget revenues in the home country, which means that

investors behave as so-called "free riders", since despite their use of public goods in the home country they do not participate in their co-financing (Krajewska 2012, p. 144).

The analysis of tax competition in this paper will mainly focus on the issue of its harmfulness. It must be emphasised, however, that the belief in harmful competitive activities of a foreign country in relation to tax is mainly due to subjective criteria on the part of the country issuing an opinion on the foreign legal system. These criteria include, among others:

- the level of effective tax burden in the assessed legislation;
- the structure of the assessed tax legislation;
- the level of the development of the given country;
- economic conditions.

It should be noted that the criteria by which it is recognised that a foreign state engages in harmful tax competition may vary in different countries. (Nawrot 2011, p. 48).

Any activity of a foreign and independent state apparatus which disrupts the conduct of fiscal policy in a given country is perceived as harmful tax competition. These actions result in the outflow of capital and labour from the territory of this country, as its taxpayers are urged to start and run a business in the area of foreign tax authority. At the summit in Brussels in 1997, the European Commission defined the concept of harmful tax competition as "a level of freedom in the field of tax law which contributes to the emergence of significant differences between the taxation of domestic and foreign investment and even to the exemption of the latter from tax in some EU countries" (Hybka 2002, p. 8).

The phenomenon of harmful tax competition has drawn a response from international organisations such as the OECD and the EU. Their response has focused on an attempt to reduce this phenomenon and its negative effects. The result of the actions taken in this regard is the development of a variety of reports whose primary purpose is to stop unfair tax competition.[1] The following are examples of such documents: the OECD reports entitled "*Harmful Tax Competition: An Emerging Global Issue"* of 1998 and "*Progress in Identifying and Eliminating Harmful Tax Practises*" of 2000, or the EU document of 1998 "*Code of Conduct on Business Taxation*".

[1] Due to the limited volume of the paper, the contents of these documents will not be the subject of analysis.

## 3. Tax havens – origins, nature, types

The prevalence of tax havens is caused by many factors.[2] There is no doubt, however, that international tax competition has played and still plays, a major role in the creation and expansion of tax havens. In order to obtain foreign investors, and hence their capital, countries decide to use various preferential tax solutions. It is often the only effective solution to ensure national economic growth and provide the country's residents with better living conditions. Thus tax havens are usually small territories or countries that do not have valuable natural resources and have a weak internal market.

According to the OECD definition, a tax haven is an area which, by the use of its tax apparatus, allows foreign entities to reduce their tax obligations in their home country. Moreover, the OECD has also listed the criteria by which it can be determined whether or not a given tax system is considered a tax haven. These criteria mainly include such aspects as (*Harmful Tax Competition: An Emerging Global Issue* 1998, p. 44):

- lack of or abnormally low level of tax burden;
- no mandatory, transparent and clear regulations, which allows certain entities to make use of specific tax privileges;
- uneven treatment of income generated from sources located in a particular country compared to profits "transferred" to this country, with the latter guaranteed tax privileges;
- no obligation to conduct business in the area of tax haven;
- lack of effective exchange of information resulting from the reluctance of the administration of a particular country to participate in the exchange of tax information and to waive provisions on banking secrecy.

In addition to the above-presented criteria affecting the competitiveness of a specific area as a tax haven, a few other aspects are worth mentioning. One of these aspects is the economic and political stability of a specific area, since during the implementation of foreign investment such threats as the possibility of an armed conflict, expropriation, nationalisation, a natural disaster or a collapse of the country's economy are particularly important. The political structure of the state, the implemented economic policy, the system of government, the social culture and the operation of (or lack of) terrorist organisations are also important. Favourable legislation also affects the attractiveness of tax havens as may guarantee simplified procedures, devoid of unnecessary red tape, in the process of starting and running a business. Minimal formalisation and the lack of

[2] Due to the limited volume of the paper, these factors will not be presented here.

mandatory physical presence in a given territory provide a significant level of comfort (Głuchowski 2006, pp. 166-167). An advanced infrastructure, as broadly understood, is another important factor influencing the choice of a tax haven by a taxpayer. The level of medical care, housing conditions or privacy – understood as a lack of obligation to divulge information relating to one's property, income and expenses – are also of importance for natural persons. Inflation and the operation of free trade zones also have an impact on the choice of an appropriate tax haven (Głuchowski 1998, pp. 114-115).

Tax havens can be classified in various ways, depending on the adopted criterion. One of the classifications, the most traditional one, concerns the tax rates in force in a particular country. According to its assumptions tax havens are divided into two main categories (Kuchciak 2012, pp. 69-70).

- **No-tax havens,** that is, countries that do not impose any tax obligations (e.g.: Nauru, Bermuda, Cayman Islands). This group of countries is also referred to as neutral tax jurisdictions. These countries do not impose direct or indirect taxes on natural and legal persons. Budgetary revenues in such countries come from customs duties, property taxes or various fees. In addition, this group includes countries respecting the principle of territoriality, which advocates imposing taxes on the income from sources located exclusively in its territory. Thus, income of foreign origin is tax-exempt.
- **Low-tax havens**, that is, countries that impose low taxes (e.g.: the Bahamas, Andorra), although the recognition of specific tax rates as low is often relative and ambiguous. These countries do not relinquish entirely the revenue gained through taxes, although sometimes these revenues are merely symbolic.

These criteria in the division of tax havens is not exhaustive as there are many factors that help to differentiate different groups of tax havens, such as the tax status of business entities operating in the form of companies, the size of the territory occupied by tax havens, their political status, or their geographical location (Lipowski 2004, pp. 156-157).

Many countries and international organisations draw up lists of tax havens. The custom of developing such lists is spreading, especially among states and international organisations that seek to reduce tax avoidance. Their disadvantage, however, lies in their subjectivism, which results in the appearance of differences in the lists drawn up by certain countries and organisations.

The areas using harmful tax competition are mainly the underdeveloped island areas located mostly in the Sargasso Sea, between North and South America. Several of these areas are also situated in Europe and in the Pacific Ocean (east of the Australian coast). These locations are not accidental since the developed countries from which, thanks to the reduced tax burden, many investors can be attracted are located relatively close to the tax havens. Interestingly, countries classified as tax havens comprise only 1.2% of the world's population and only 3% of the global GDP. They accumulate, however, nearly 26% of assets and 31% of profits made by American corporations (Szafoni 2011, pp. 116-118).

## 4. Income tax rates in the EU countries and selected tax havens

The subject of this part of the paper is a comparative analysis of rates of personal income tax (PIT) and corporate income tax (CIT) in the EU and in selected tax havens. Table 1 shows how PIT and CIT rates have developed over the last 14 years in the EU countries. In the year 2000, the average rate of PIT amounted to nearly 45%. The countries of Belgium, Denmark, the Netherlands and France imposed the highest (approx. 60%) rate. The countries that were not yet members of the EU at the time – Estonia and Latvia – had the lowest rates of this tax (approx. 25%). Over the years, the majority of the member states have noticeably reduced, albeit more or less, the rate of personal income tax. As a result, the average rate of personal income tax in the EU in 2014 is 38.6%. The largest reductions in this period have been introduced by Bulgaria, Lithuania, Romania and Hungary, which have decreased their rates respectively by 30, 18, 24 and 28 percentage points, as a result reaching a level of PIT even below 20%. The PIT tax burden varies significantly between the member states, as along with to the above-mentioned countries with relatively low rates of PIT there are also countries with income tax rates in the upper bracket in excess of 50% (e.g.: Denmark, Portugal and Sweden).

In the case of corporate income tax rate, in 2000 the rates ranged from 24% (Ireland and Lithuania) to almost 52% (Germany). The average rate of the tax was then 32%, but in subsequent years there have been constant reductions, which has resulted in a rate of slightly more than 22.5% in 2014. Bulgaria and Germany have introduced the largest reductions, lowering their CIT rates by up to 22 percentage points. Particularly favourable tax rates for corporate income tax are found in Bulgaria, Cyprus, Ireland, Lithuania and Latvia. Based on the data presented in Table 1, it can also be observed that lower corporate tax rates are found primarily in the countries that joined the EU in 2004 or in subsequent years.

**Table 1. Top rates of PIT and CIT in the EU countries in the years 2000-2014 (%)**

| Country | PIT rates | | | | CIT rates | | | |
|---|---|---|---|---|---|---|---|---|
| | 2000 | 2008 | 2014 | 2000-2014 difference (percentage points) | 2000 | 2008 | 2014 | 2000-2014 difference (percentage points) |
| Austria | 50 | 50 | 50 | 0 | 34 | 25 | 25 | -9 |
| Belgium | 60.6 | 53.7 | 50 | -10.6 | 40.2 | 34 | 34 | -6.2 |
| Bulgaria | 40 | 10 | 10 | -30 | 32.5 | 10 | 10 | -22.5 |
| Croatia | 45 | 45 | 40 | -5 | 35 | 20 | 20 | -15 |
| Cyprus | 40 | 30 | 38.5 | -1.5 | 29 | 10 | 12,5 | -16.5 |
| Denmark | 62.9 | 62.3 | 55.6 | -7.3 | 32 | 25 | 24,5 | -7.5 |
| Estonia | 26 | 21 | 21 | -5 | 26 | 21 | 21 | -5 |
| Finland | 54 | 50.1 | 51.3 | -2.7 | 29 | 26 | 20 | -9 |
| France | 59 | 45.8 | 50.2 | -8.8 | 37.8 | 34.4 | 36,1 | -1.7 |
| Greece | 45 | 40 | 46 | +1 | 40 | 35 | 26 | -14 |
| Spain | 48 | 43 | 52 | +4 | 35 | 30 | 30 | -5 |
| Netherlands | 60 | 52 | 52 | -8 | 35 | 25.5 | 25 | -10 |
| Ireland | 44 | 41 | 41 | -3 | 24 | 12,5 | 12,5 | -11.5 |
| Lithuania | 33 | 24 | 15 | -18 | 24 | 15 | 15 | -9 |
| Luxembourg | 47.2 | 39 | 43.6 | -3.6 | 37.5 | 29.6 | 29,2 | -8.3 |
| Latvia | 25 | 25 | 24 | -1 | 25 | 15 | 15 | -10 |
| Malta | 35 | 35 | 29 | -6 | 35 | 35 | 35 | 0 |
| Germany | 53.8 | 47.5 | 47.5 | -6.3 | 51.6 | 29.8 | 29,8 | -21.8 |
| Poland | 40 | 40 | 32 | -8 | 30 | 19 | 19 | -11 |
| Portugal | 40 | 42 | 53 | +13 | 35.2 | 26.5 | 23 | -12.2 |
| Czech Republic | 32 | 15 | 22 | -10 | 31 | 21 | 19 | -12 |
| Romania | 40 | 16 | 16 | -24 | 25 | 16 | 16 | -9 |
| Sweden | 51.5 | 56.4 | 57 | +5.5 | 28 | 28 | 22 | -6 |
| Slovakia | 42 | 19 | 25 | -17 | 29 | 19 | 22 | -7 |
| Slovenia | 50 | 41 | 50 | 0 | 25 | 22 | 17 | -8 |
| Hungary | 44 | 40 | 16 | -28 | 19.6 | 21.3 | 19 | -0.6 |
| UK | 40 | 40 | 45 | -5 | 30 | 30 | 23 | -7 |
| Italy | 45.9 | 44.9 | 47.3 | +1.4 | 41.3 | 31.4 | 31,4 | -9.9 |
| **EU -28 average** | **44.782** | **38.167** | **38.571** | **-6.85** | **32.025** | **23.821** | **22.571** | **-9.453** |

Source: based on *Taxation trends in the European Union*, Eurostat, Statistical Book, 2013 edition.

The analysis of income tax rates in tax havens encompasses only some of these territories due to the difficulties in accessing to data. The tax havens include: Andorra, Bahrain, Bermuda, Gibraltar, Hong Kong, Cayman Islands, Liechtenstein, Macao, Mauritius, Panama and Vanuatu. Detailed information concerning the income tax rates in these selected tax havens is presented in Table 2.

**Table 2. Tax rates in selected tax havens in 2014**

| Country or territory | PIT rate | CIT rate | Other taxes on natural and legal persons | Withholding tax[3] |
|---|---|---|---|---|
| **Andorra** | - 10% | - the rate is 10%, even though the taxpayer may apply for the reduction of 80% of the tax base | - capital gains are treated as ordinary taxable business income and are taxed at the rate of 10%<br>- dividends received from resident and non-resident entities are exempt from tax if certain requirements are met<br>- no capital and payroll tax<br>- the employer provides 14.5% of gross pay for the employee's social security<br>- no capital, property, inheritance and estate tax for natural persons<br>- employees provide 5.5% of their gross salary for social security | - 10% - the overall rate of taxation of non-residents' incomes<br>- dividends paid to non-residents are exempt from tax<br>- interests paid to non-residents are exempt from tax<br>- the withholding tax on royalties of non-residents is 5% |
| **Bahrain** | - 0% | -0%<br>- 46% only for oil companies, the tax levied on the net profit | - no property, capital and payroll tax | - no withholding tax on dividends, interest, royalties |
| **Bermuda** | - 0% | - 0% | - no dividend and capital gains tax | - no taxation of dividends, interest, royalties |

[3] Tax levied in the case of cross-border payments in which the entity receiving the income (the taxpayer) has a different tax residence than the entity making the payment (the resident of the country where the sources of income are located).

| | | | | |
|---|---|---|---|---|
| **Gibraltar** | - 15-20%, depending on the amount of income (the vast majority of taxpayers have such a rate) | - 10% standard rate<br>- 20% paid only by companies that abuse their dominant position and by public utility institutions | - no tax on sales, capital gains, inheritances and gifts<br>- no corporate tax on capital, payroll and property | - no withholding tax on dividends, interest, royalties |
| **Hong Kong** | - rates from 2% to 17% | - 16.5% overall rate<br>- 15% rate applies only to companies without legal personality | - tax on capital imposed on legal persons was abolished on 1st June 2012<br>- corporate capital gains are not taxed, but profits from the sale of assets may be subject to tax if the disposal of shares constitutes a commercial transaction<br>- natural and legal persons that own properties are subject to property tax on income from rental property in the amount of 15% of the net value of the property specified by the lease<br>- no capital tax from natural persons | - no withholding tax on interest payments |
| **Cayman Islands** | - 0% | - 0% | - no tax | - no withholding tax |
| **Liechtenstein** | - 3.23% minimum rate – 17% maximum rate | - 12.5% flat tax | - no capital, payroll and property tax (legal persons)<br>- the employer is obliged to pay about 50% of the employee's social security | - no withholding tax on dividends from 1st January, 2001 |
| **Macao** | - 5%, 7%, 12% | - rates from 9% to 12% | - no capital and payroll tax (legal persons)<br>- a property tax from legal and natural persons of 6% or 10%<br>- no capital tax from natural persons | - no withholding tax on dividends, interest, royalties |

| | | | | |
|---|---|---|---|---|
| **Mauritius** | - 15% | - 7.5%, 10%, 15% | - no capital, payroll and property tax (legal persons)<br>- the employer pays 6% of the monthly basic salary of the employee for social security contributions<br>- no capital and property tax (natural persons)<br>- employees pay social insurance contributions at the amount of 3% of their monthly salary | - no withholding tax on dividends,<br>- 10% is generally the rate on interest,<br>- 15% is the tax rate on royalties,<br>- 0% rate applies to certain non-residents |
| **Panama** | - 15%, 25% | - 4.75% of net income – 25% of gross income, | - no capital tax<br>- a property tax is levied depending on the location of the property – from 1.75% to 2.1% of its value (natural and legal persons)<br>- the employer provides 13.5% of the monthly total salary of the employee for social security contributions, the employee's contribution is 9.75%<br>- no capital tax from natural persons | - dividends from registered shares paid to non-residents are subject to 5% or 10% rate of withholding tax<br>- 12.5% is the rate of taxation of royalties of non-residents<br>- 12.5% is the rate on interest of non-residents |
| **Vanuatu** | - 0% | - 0% | - no property and capital gains tax | - no withholding tax |

Source: the author's own compilation based on reports of KPMG, PwC, Deloitte, 2013.

Based on the data listed in Table 2, the tax havens can be divided into several groups:

- havens that do not enforce any taxes (e.g.: Bermuda, Cayman Islands, Vanuatu);
- havens that in principle impose income taxes, both on domestic and foreign entities, but offer the advantage of an exemption or relief for certain, specific forms of activities (e.g. Andorra, Panama);
- havens that have favourable agreements regarding the avoidance of double taxation and use very moderate tax rates (e.g.: Macao, Mauritius).

Comparative analysis of the income tax rates in the EU countries and selected tax havens shows that, despite the progressive reduction of the rates of these taxes in the EU, the phenomenon of tax competition is still very strong and the position of tax havens as countries offering relatively low or even very low taxes seems to be unthreatened. Activities of international organisations aimed at reducing the incidence of harmful tax competition have shown only moderate effects. Since this situation is not likely to change radically in the upcoming years, relatively highly developed countries should increase their efforts to intensify competition for capital through the use of factors other than low taxes, such as political stability, relatively low labour costs, transparent and unambiguous legislation supporting the development of business, simple procedures to establish a business, promoting the development of entrepreneurship, good cooperation with local and central authorities, the development of road infrastructure and telecommunications/Internet, highly skilled labour force or quality of land for investments.

## 5. Is tax coordination a good solution for the European Union?

The above-presented comparative analysis of tax rates in the EU and some tax havens proves that there exist significant differences in the income tax rates in both groups of countries. Additionally, there also exist differences between PIT and CIT tax rates among particular EU Member States. The question then arises: Is tax competition a real problem for Europe? In order to answer this question, two separate issues must be addressed.

First, the question of whether tax revenues really suffer because of tax competition. Empirical studies that explore tax competition at the international level do not indicate that tax competition leads to large revenue losses. Even if (effective) tax rates seem to have declined in the last few years in European countries, revenues have remained largely stable (Devereux, Loretz 2012, p. 35). But even if tax competition were to lead to revenue losses, it is not obvious how to evaluate such consequences. Much depends on whether governments are perceived as benevolent or as Leviathans. If governments are benevolent, the negative features of tax competition will prevail over the positive ones. But if they are not, then it is not clear that cuts in tax rates (a race to the bottom) is undesirable. In reality, some governments will conform more to the ideal of benevolence than others. Whether the European Union as a whole will benefit from tax coordination is thus unclear for this reason alone (Baskaran, Lopes da Fonseca 2013, pp. 22-47).

Second, even if governments are benevolent and tax competition is truly a threat to public budgets, it can be questioned whether tax coordination is the appropriate answer. Although corporate tax coordination, including tax rate harmonization, has been the subject of intense discussion in the European Union for many years, EU member states still operate with independent and significantly varied corporate income tax systems. Interest in tax coordination has increased recently, however, prompted in part by fears that tax competition among the economically integrated EU nations will over time significantly reduce the level of capital income taxation (Zodrow 2003).[4] Another reason for increasing interest in tax coordination is that today the EU Member States are facing huge challenges in their efforts to consolidate their public finances. Consolidation by cutting expenditure is of course essential, but this will not be enough given the magnitude of the deficits. Therefore raising taxes should also be considered. In this context, Member States have to care for the quality of their tax systems. They need to define how best to raise revenues while providing the right incentives for employment, innovation and long-term investment. They must also ensure that their tax reforms are resistant to economic fluctuations. The latest EU effort to coordinate tax systems is included in the "Euro Plus Pact". The Pact rightly indicates that, in order to foster employment and economic growth and to consolidate public finance, particular attention should be given to tax reforms.[5]

However, tax policy cannot be seen only as a tool for coordinated budget adjustment. Tax coordination is also important for the competitiveness of European companies. To improve the business environment, tax obstacles should be abolished in the single market The European Commission believes that the only systematic way to reduce tax obstacles which exist for companies operating in more than one Member State is to provide companies with a consolidated corporate tax base for their EU-wide activities–The Common Consolidated Corporate Tax Base (CCCTB). It is a single set of rules that companies operating within the EU could use to calculate their taxable profits. As a consequence, a company would have to comply with just one EU system for computing its taxable income, rather than different rules in each Member State in which they operate (European Council 2011).

One should keep in mind, however, that not all countries will benefit equally from coordination. Theoretical models show that the gains of coordination will be spread unevenly; some jurisdictions might even be worse off. Indeed, the fact that there would be losers to tax coordination might be the reason why the EU has hitherto found it difficult to make much progress in this area. It can also be questioned whether tax coordination within the EU is the best way if there remains the possibility of tax competition with other regions of the world. Sorensen attempts

[4] Under the most extreme scenario, tax competition leads to a “race to the bottom” in which all countries abandon capital income taxation and rely solely on the taxation of labour income and consumption.

[5] The Euro Plus Pact was adopted at a European Council meeting on 25 March 2011. All the euro area countries and the other EU countries except the Czech Republic, Hungary, Sweden and the United Kingdom signed up to the Pact. The four goals of the Pact are: fostering competitiveness, fostering employment, contributing to the sustainability of public finances, reinforcing financial stability. An additional fifth issue is tax policy coordination. As to tax policy coordination, member states "commit to engage in structured discussions on tax policy issues, notably to ensure the exchange of best practices, the avoidance of harmful practices and proposals to fight against fraud and tax evasion.”

to quantify the welfare gains from tax coordination within a group of countries and finds that such gains are modest relative to those that could be obtained if taxes were harmonized world-wide (Sorensen 2004, pp. 1187–1214).

Another disadvantage of tax coordination could be that national autonomy over a fiscal policy area would be effectively abolished. Uniform fiscal policy would probably have a positive impact on the functioning of the EU economy as a whole, but it would take place at the expense of the economic condition of particular Member States. They would be forced to comply with an imposed fiscal policy that might be contrary to that considered necessary at a given time in a given economy.

On the other hand, many economists believe that the bad condition of public finances in the EU countries is to some extent conditioned by the lack of a common fiscal policy. Greater coordination of fiscal policy among the EU countries appears to be an important prerequisite for reducing the negative impact of the economic crisis on their functioning. Analysis of data on fiscal policy pursued by the EU countries in the past two decades indicates that it was generally expansionary, which resulted in a significant increase in the public debt of these countries in relation to GDP. It is widely believed that this was a significant factor in the increase in inflation and forced central banks to pursue restrictive monetary policies (Skiba 2011, p. 37).

It seems that the need for substantial tax coordination in the EU is rather weak. This, however, should not be taken to imply that there is no room at all for tax coordination in the EU. Some degree of harmonization in national tax laws would certainly be beneficial. Harmonized tax bases will lower administrative costs and thus benefit both firms and tax administrations. Joint action against tax loopholes and other instruments to evade taxes would be beneficial as well. As long as such benefits arising from tax coordination exist, the debate about the best way forward will and should continue.

## 6. Conclusions

The process of globalisation is manifested in, *inter alia*, the liberalisation of capital transfer and in the lowering of transaction costs, which in turn affects the search for favourable investments abroad by companies and individuals. In order to maximise the inflow of investments into their countries, authorities mainly take measures to lower taxes, which makes the country more attractive to potential entrepreneurs. Tax competition is used especially by relatively underdeveloped countries, as foreign capital provides them the opportunity for the inflow of modern technology, new management methods and consequently export growth.

One of the effects of tax competition is the creation of tax havens, i.e. countries or territories using preferential tax rates in order to acquire capital from abroad. Tax havens promote themselves as areas free from taxes, differentiating the legal and tax positions of residents and non-residents. This makes it possible to evade the tax burden in the country of residence and even allows to legalise the income generated through criminal activity (money laundering).

The comparative analysis of income tax rates in the EU countries and selected tax havens proves that the phenomenon of tax competition is still very strong and the position of tax havens as countries offering relatively low taxes seems to be unthreatened. Additionally, there also exist differences between PIT and CIT tax rates among particular EU Member States. As a consequence, the question arises whether tax competition is a real problem for the EU. Empirical studies do not indicate that tax competition leads to large revenue losses. But even if tax competition reduces budget revenue, it is not obvious how to evaluate that phenomenon. Much depends on whether governments are perceived as benevolent or as Leviathans. If governments are benevolent, the negative features of tax competition will prevail over the positive ones. But if they are Leviathans, then cuts in tax rates could even be desirable.

The discussion in this paper suggests that the argument that tax competition necessitates corporate tax rate harmonization in the EU is not yet compelling. This suggests that a cautious approach to tax coordination is appropriate, and that attention should be focused on relatively modest initiatives rather than attempts at full harmonization of corporate income tax rates. It seems that efforts should focus on defining "unfair" tax competition and identifying measures to combat it. There are factors other than low tax rates that potentially give rise to unfair tax competition. These factors include (among others) the absence of information exchanges, bank secrecy laws, nontransparent tax provisions or negotiable tax treatment.

Even if tax competition is a real threat to public finance, it can be disputed whether tax coordination is the appropriate solution. Not all countries will benefit equally from coordination. Moreover, national autonomy over a state's fiscal policy would be significantly limited. Uniform fiscal policy would probably have positive impact on the EU economy as a whole, but particular countries would be forced to implement fiscal policies that might not be in line with their interests at a given point in time.

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## Streszczenie

## KONKUREWNCJA PODATKOWA CZY KOORDYNACJA PODATKÓW? CO JEST LEPSZE DLA UNII EUROPEJSKIEJ?

*Konkurencja podatkowa to stosowanie takiej polityki podatkowej, która pozwoli na utrzymanie lub zwiększenie atrakcyjności danego obszaru dla lokalizacji inwestycji. Konkurencja podatkowa stosowana jest zwłaszcza przez kraje stosunkowo słabo rozwinięte, gdyż napływ kapitału zagranicznego daje im możliwość wdrożenia nowoczesnych technologii, nowych metod zarządzania i zwiększenia eksportu. Jednym ze skutków konkurencji podatkowej jest powstawanie rajów podatkowych, krajów lub terytoriów korzystających z preferencyjnych stawek podatkowych w celu pozyskania kapitału z zagranicy. Analiza porównawcza stawek podatku dochodowego w krajach UE i niektórych* *rajach podatkowych pokazuje, że pomimo stopniowego obniżania stawek tych podatków w UE, zjawisko konkurencji podatkowej jest nadal bardzo silne, a pozycja rajów podatkowych jako terytoriów oferujących relatywnie niskie stawki podatkowe wydaje się być niezagrożona. W tym kontekście powstaje pytanie, czy konkurencja podatkowa jest prawdziwym problemem dla państw członkowskich UE oraz czy istnieją argumenty przemawiające za harmonizacją lub przynajmniej koordynacją podatków w krajach UE. Rozważania prowadzone w niniejszym artykule wskazują, że argumenty za wprowadzeniem koordynacji podatków w UE nie są jeszcze zbyt silne. Zarówno konkurencja podatkowa, jak i koordynacja podatków mają swoich zwolenników i przeciwników.*

***Słowa kluczowe:*** *konkurencja podatkowa, raje podatkowe, harmonizacja podatków, koordynacja podatków*

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# Is There A Stable Long-run Relationship Between Unemployment And Productivity?[**]

## Abstract

*This paper assesses whether productivity and unemployment have a stable long-run relationship. We explore a panel of 19 OECD countries between 1970 and 2012 and rely on recently developed time series econometric methods. Our findings suggest that unemployment and productivity are non-stationary in levels and in many individual cases these series are cointegrated, even after accounting for possible structural breaks. For many individual countries the long-run effect seems to be generally positive. There is also evidence of two-way causality, but the stronger directional relationship runs from unemployment to productivity.*

***Keywords****: stationarity, structural breaks, cointegration, DOLS, Granger causality*

## 1. Introduction

Productivity, in its broadest meaning, refers to an economy's ability to efficiently convert inputs into outputs. Macroeconomists devote a lot of their attention to productivity-related variables in order to date productivity slowdowns and revivals as well as to account for their causes and consequences. The empirical literature dealing with productivity distinguishes between the 1948-1973 period - the Golden Age -, and the post-1973 period - characterized by a productivity slowdown.

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The most common explanation for such a slowdown is based on the oil price shocks (Griliches 1988; Fisher 1988; Dolmas et al. 1999). There are, however, other explanations for the post-1973 productivity slowdown,[1] and the current paper is particularly interested in those related to labour market conditions, such as the increase in female labour force participation (Bowman, 1991) and the increase in the growth rate of labour inputs (Romer 1987).

Our main goal is to evaluate whether (labour) productivity and unemployment have a stable long-run relationship. Despite the existence of several theoretical papers relating these two variables (see Section 2), the empirical evidence remains small and/or inconclusive. To this end we use a panel of 19 advanced countries between 1970 and 2012. We rely on recent time series techniques, such as (individual) unit root and cointegration tests allowing for structural breaks, Granger-causality and Dynamic OLS estimation.

Empirical findings suggest that unemployment and labour productivity are non-stationary in levels and in many individual cases these series are cointegrated, even after accounting for possible structural breaks. Long-run cointegration estimates seem to suggest a positive co-movement between unemployment and productivity, therefore providing evidence in support of those models (Caballero and Hammour, 1994) which suggest a positive (long-run) co-movement between these two variables. Causality is found to be bi-directional in many countries, with the stronger relationship running from unemployment to productivity.

In Section 2 we review the literature, and in Section 3 outline the econometric methodology. Section 4 presents and discusses the empirical results, and the final section offers conclusions.

## 2. Literature Review

In terms of theoretical contributions, a recent paper by Barnichon (2010) shows that, by means of a New-Keynesian search model of unemployment with nominal rigidities and variable labour effort, technology shocks can generate a positive unemployment-productivity correlation, whereas non-technology shocks tend to produce the opposite. Moreover, the author argues that the correlation between unemployment and productivity changed in the mid-1980s

[1] We can refer here to the growth of the underground economy and under-reporting of income (Fichtembaum, 1989); demand constraints (Walker and Vatter, 1989); under-measurement of output in the services sector (Griliches, 1994); price mis-measurement ( Gordon, 1996); and a decrease inf energy consumption (Beaudreau, 1998).

from significantly negative to significantly positive.[2] Despite the existence of a variety of factors that are likely to influence this relationship (e.g. interest rates, hiring and firing costs, income taxation, non-labour costs, unemployment benefits, saving behaviour), one can distinguish between two opposite views on whether periods of economic expansion lead to higher productivity in the long-run. The first is that during times of low economic activity we have smaller productivity (King and Rebelo 1988 and Stiglitz 1993).[3] On the other hand, the New-Schumpeterian approach does not support the view that unemployment is negatively correlated with output (Caballero and Hammour 1994).

Empirically, the strict focus on the correlation between these two series has led to mixed results. Earlier studies (for the US economy or for a small set of advanced countries), based on the neo-Marxian hypothesis that average labour productivity is significantly related to labour market conditions, is attributed to Weisskopt et al. (1983) and Weisskopt (1987). Taking a broader view, Bean and Pissarides (1993) examined cross-country correlations for the OECD economies between unemployment and labour productivity for the period 1955-1985. There was no clear correlation except over the period 1975-85, where a weak negative coefficient appears to be significant. However, such cross-sectional analyses are fragile in nature since country-specific effects can weaken the underlying relations (due to different institutional and economic factors which are unrelated to productivity). Looking at time series data for a particular country seems more reasonable, especially if we take into account the relative constancy of institutions within each nation over time. Caballero (1993) looked at quarterly time series evidence from the US and UK between 1966 and 1989. The author used a Hodrick-Prescott filter to remove the high-frequency components, however the evidence he found was not conclusive. For medium frequencies, both countries demonstrated a positive relation between the two variables under scrutiny.[4] More recently, Brauninger and Pannenberg (2002) took a generalised augmented Solow-type model and found that unemployment reduces long-run productivity. They then confirmed this theoretical result empirically with a panel of 13 OECD countries between 1960 and 1990. Muscatelli and Tirelli (2001) applied Structural Time Series Models to 11 OECD countries between 1955 and 1990 and found evidence in favour of those theories predicting a negative co-movement between unemployment and productivity.

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[2] Other studies include the pioneering work by Gali (1999), followed by more recent papers from Holly and Petrella (2008) and Gali and Gambetti (2009).

[3] Stadler's (1990) learning-by-doing model emphasizes the link between employment and growing productivity through human capital investments.

[4] Other approaches have used VAR models, but these ended up having mixed results as well (Saint-Paul, 1997).

## 3. Methodology

### 3.1 Unit Roots and Structural Breaks

When it comes to stationarity assessments, in addition to standard Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) unit root tests - for purposes of robustness and completeness[5] - we also conduct the four tests (M-tests) proposed by Ng and Perron (2001) (NP) based on modified information criteria (MIC): the modified Phillips-Perron test $MZ_{\alpha}$ ; the modified Sargan-Bhargava test (MSB); the modified point optimal test $MP_T$ ; and the modified Phillips-Perron $MZ_T$ . These improve the PP-tests both with regard to size distortions and power.

We then resort to unit root tests allowing for breaks and we begin with the Zivot-Andrews (1992) (ZA) test. This endogenous structural break test is a sequential test which utilizes the full sample and uses a different dummy variable for each possible break date. The break date is selected where the t-statistic from the ADF test of unit root is at a minimum (most negative). Consequently a break date will be chosen where the evidence is least favourable for the unit root null.[6] We complement this with the modified ADF test proposed by Vogelsang and Perron (1998) (VP), also allowing for one endogenously determined break. Finally, we take the two-break unit root test described by Clemente, Montanes and Reyes (1998) (CMR). This tests the null of unit root against the break-stationary alternative hypothesis and provides us supplementary insights vis-a-vis the conventional unit root tests, which do not account for any break in the data.

For the unit root tests that allow for one or two endogenously determined breaks it is assumed that the shift can be modelled by a dummy variable $DU_t = 0$ for $t \leq TB$ and for $t > TB$, where $TB$ is the shift date (time break). In the time series literature, two generating mechanisms of shifts are distinguished - the additive

[5] This test is especially appropriate under certain dynamic data structures and when their random components are not white noise.

[6] The critical values in Zivot and Andrews (1992) are different from the critical values in Perron (1989): the selection of the time of the break is treated as the outcome of the estimation procedure, rather than predetermined exogenously.

outlier (AO) and innovational outlier (IO) models. The former results in an abrupt shift in the level, whereas the latter allows for a smooth shift from the initial level to a new level. Although both results are reported, we will mainly discuss tests constructed for AO models.[7]

However, it is important to recognize some important drawbacks in both earlier unit root tests, particularly, the ZA and VP tests. In particular, with respect to the VP test it has been shown that the critical values are substantially smaller in the *I(0)* case than in the *I(1)* case, therefore suggesting that the test is conservative in the *I(0)* case. The solution was then to devise a procedure that would have the same limit distribution in both cases. This was first attempted by Vogelsang (2001), but simulations provided support for the lack of power in the *I(1)* case. Perron and Yabu (2009) (PY) were more successful in this endeavour by proposing a new test for structural changes in the trend function of the time series without any prior knowledge of whether the noise component was stationary or integrated. This newer test has better properties in terms of size and power.[8]

### 3.2. Cointegration, Stability and Causality

Consider the following (cointegrating-relationship) regression:

$$prod_{it} = \alpha_i + \beta u_{it} + \varepsilon_{it}\,. \tag{1}$$

where $prod_{it}$ is the log of productivity and $u_{it}$ the log of unemployment. $\varepsilon_{it}$ is a standard iid disturbance term.

Given the nonstationarity of each individual time series (to be tested and confirmed in Section 4), the relevant question becomes whether a linear combination of these variables is stationary. If such a combination exists, productivity and unemployment become cointegrated, which implies that the variables are attracted to a stable long-run (equilibrium) relation and any deviation from this relation reflects short-run (temporary) disequilibria.

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[7] As discussed in Vogelsang and Perron (1998), the AO framework may be preferable to the IO statistics.

[8] We thank Pierre Perron and Tomoyoshi Yabu for providing their GAUSS code.

We test for cointegrating (long-run) relations between productivity and unemployment using the Johansen and Juselius (1990) methodology. This approach estimates the long-run attracting set in a VAR context, that incorporates both the short- and long-run dynamics of the various models. However, and as in the case of unit roots, a test for co-integration that does not take into account possible breaks in the long-run relationship will have lower power. The test will tend to under-reject the null of no co-integration if there is a co-integration relationship that has changed at some time during the sample period. Therefore, in order to further evaluate the previous results one should also entertain the possibility that the series are co-integrated, but that the linear combination has shifted at an unknown point in the data sample; in other words, that there might be a relevant break date. Following Gregory and Hansen (1996), the hypothesis of a structural shift in the co-integration relationships was then studied.[9] In order to estimate the parameter $\beta$ in (1) we resort to the method of Dynamic Ordinary Least Squares (DOLS) of Stock and Watson (1993), following the methodology proposed by Shin (1994).[10]

As has been emphasized by Bruggemann et al. (2003), it is important to formally investigate the stability of the cointegrating vectors further once a long-run relationship has been identified. The temporal stability of estimated relations is also indicative of the usefulness of these estimated relations for policy (forecasting) purposes. Hansen and Johansen (1993) outline a procedure that formally tests the constancy of cointegrating vectors in the context of Full Information Maximum Likelihood (FIML) estimations. Holding the short-run dynamics of the model constant, the procedure then treats these estimates as the null hypothesis in consecutive recursive tests. In this way, any rejection of the null of cointegration stability (constancy) should emanate from a breakdown in the long-run relation, rather than from any positive shift in the underlying short-run dynamics (Hoffmann et al., 1995). We apply this approach to test the stability of the cointegrating relation.

By taking a VAR approach we can further extract two important additional tools: Granger-causality tests and Variance Decompositions. Many tests of Granger-type causality have been derived and implemented to test the direction of causality – Granger (1969). These tests are grounded in asymptotic theory.[11] Also, it is well documented that the exclusion of relevant variables induces spurious significances and inefficient estimates. In dealing with these

[9] We thank Bruce Hansen for making the GAUSS routine available.

[10] This method has the advantage of providing a robust correction to the possible presence of endogeneity in the explanatory variable, as well as of serial correlation in the error terms of the OLS estimation.

[11] For further discussions, see Toda and Phillips (1994).

problems, and for robustness purposes, we employ the Toda and Yamamoto (1995) and Dolato and Lutkepohl (1996) approach for Granger causality. They suggest a technique that is applicable irrespective of the integration and cointegration properties of the system. The method involves using a Modified Wald statistic for testing the significance of the parameters of a VAR(s) model (where *s* is the lag length in the system).[12]

We follow Rambaldi and Doran (1996) in formulating these tests. Defining $d_{\max}$ as the maximum order of integration in the system, a VAR( $k + d_{\max}$ ) has to be estimated to use the Modified Wald test for linear restrictions on the parameters of a VAR($k$) which has an asymptotic $\chi^2$ distribution.[13] In our case, we will run a 2 variables' VAR, with $k$=2 (AIC-based) and $d_{\max} = 1$, but for the sake of notation simplicity we denote them as $y_i, i = 1,2$ . For our VAR(3) we estimate the following system of equations:

$$\begin{bmatrix} y_{1t} \\ y_{2t} \end{bmatrix} = A_0 + A_1 \begin{bmatrix} y_{1t-1} \\ y_{2t-1} \end{bmatrix} + A_2 \begin{bmatrix} y_{1t-2} \\ y_{2t-2} \end{bmatrix} + A_3 \begin{bmatrix} y_{1t-3} \\ y_{2t-3} \end{bmatrix} + \begin{bmatrix} e_{y_1} \\ e_{y_2} \end{bmatrix}$$

The above system of equations is estimated via the seemingly unrelated regression (SUR) method. This test consists of taking the first $k$ VAR coefficient matrix (but not all lagged coefficients) to make Granger causal inference. If, for example, we want to test that $y_{2t}$ does not Granger-cause $y_{1t}$ , the null hypothesis will be $H_0 : a^{(1)}{}_{12} = a^{(2)}{}_{12} = 0$ , where $a^{(i)}{}_{12}$ are the coefficients of $y_{2t-i}, i = 1,2$ .

[12] As demonstrated by Toda and Yamamoto (1995), if variables are integrated of order *d*, the usual selection procedure is valid whenever $k \geq d$ . Thus, if *d = 1*, the lag selection is always consistent.

[13] The traditional F tests and its Wald test counterpart to determine whether some parameter of a stable VAR model are jointly zero are not valid for non-stationary processes, as the test statistics do not have a standard distribution (Toda and Phillips, 1994).

## 4. Empirical Results

First, our data for a set of 19 advanced economies comes from the OECD Stat. The two main variables of interest are unemployment and (labour) productivity, measured as output per worker (both in logs).

Starting with an analysis of stationarity properties, Table 1 presents the results for several individual unit root tests allowing for none, one or two structural breaks in the underlying series. In general, unemployment series are I(1) in levels, with the exception of Belgium and Switzerland for the ADF test and Portugal for the PP test. Sweden and the US are the only two countries for which the null of stationarity is rejected in the case of the NP test(s). If one turns to tests allowing for breaks, then depending on the test we may get different results, with the overwhelmingly conclusion that most series keep their I(1) status (with the exception of Spain and Sweden), and don't reject the null of break stationarity for the ZA, VP and CMR tests. One can also note the different power attributed to the PY2009 test (particularly as the ZA and VP are conservative in the I(0) case and show a lack of power in the I(1) case), where in all but three cases we reject the null of unit root. Turning to the labour productivity series we find similar results, with the non-rejection of the null of unit root in levels for most countries (with the exception of Portugal and Spain). We observe fewer rejections of the null of unit root in the break-type tests (Portugal and Switzerland for the ZA test).

**Table 1. Unit Root Tests and Structural Breaks 1970-2012**

| Series | ADF | | PP | | NP | | | | ZA | VP(AO) | VP(IO) | CMR(AO) | CMR(IO) | PY2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Levels | FD | Levels | FD | MZa | MZt | MSB | MPT | | | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| **Unemployment** | | | | | | | | | | | | | | |
| **Australia** | -1.44 | -1.35 | -1.97 | -6.83*** | -1.70 | -0.68 | 0.40 | 35.93 | 1992 | 1976 | 1973 | 1976, 1984 | 1973, 1980 | 1981*** |
| **Austria** | -1.25 | -2.39 | -1.38 | -4.04** | -8.28 | -1.93 | 0.23 | 11.31 | 1982 | 1984 | 1979** | 1983, 1992 | 1979, 1989** | 1980*** |
| **Belgium** | -4.15** | -3.12 | -1.96 | -3.12 | -7.68 | -1.95 | 0.25 | 11.87 | 1988 | 1991 | 1986 | 1984, 1991 | 1986, 1995 | 1996 |
| **Canada** | -1.74 | -4.45*** | -1.03 | -4.79*** | -7.54 | -1.80 | 0.23 | 12.35 | 1982 | 1979** | 1973 | 1979, 1992 | 1973, 1980 | 1980*** |
| **Denmark** | -2.09 | -4.79*** | -2.37 | -4.79*** | -6.39 | -1.77 | 0.27 | 14.24 | 1994 | 1996** | 1992 | 1988, 1995 | 1985, 1992 | 1993*** |
| **Finland** | -2.78 | -5.91*** | -1.56 | -2.81 | -5.53 | -1.47 | 0.26 | 15.96 | 1991 | 1994 | 1989** | 1979, 1993** | 1974, 1989** | 1990 |
| **France** | -1.10 | -4.55*** | -0.99 | -4.43*** | -2.92 | -1.02 | 0.35 | 26.32 | 1981 | 1978** | 1973** | 1976, 1982 | 1973, 2000** | 1983*** |
| **Greece** | -3.17 | -3.64** | -3.19 | -3.83** | -10.13 | -2.07 | 0.20 | 9.75 | 1998 | 1993 | 1990** | 1992, 1997 | 1990, 1994 | 1995*** |
| **Ireland** | -0.56 | -4.10** | -0.59 | -3.67** | -3.23 | -1.07 | 0.33 | 24.20 | 1991 | 1984 | 1978 | 1984, 2002 | 1972, 1978 | 1992*** |
| **Italy** | 0.49 | -6.15*** | 1.02 | -6.33*** | 0.31 | 0.14 | 0.47 | 57.48 | 1986 | 2005 | 1973 | 1980, 2002 | 1973, 2000 | 1988*** |
| **Japan** | -2.12 | -4.06** | -1.77 | -4.05** | -14.65* | -2.55 | 0.17 | 7.08 | 1998 | 1995 | 1991 | 1977, 1995 | 1973, 1991 | 1997*** |
| **Netherlands** | -2.26 | -5.03*** | -2.22 | -3.23* | -8.52 | -1.97 | 0.23 | 10.98 | 1988 | 1977 | 1978 | 1984, 2000 | 1979, 1986 | 1984*** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Norway** | -0.88 | -4.70*** | -1.06 | -3.82** | -5.43 | -1.39 | 0.25 | 16.01 | 1996 | 1984 | 1979 | 1980, 1990 | 1979, 1986 | 1994*** |
| **Portugal** | 0.90 | -2.76 | -4.59*** | -5.47*** | -0.27 | -0.36 | 1.31 | 314.95 | 1987 | 1977 | 1976 | 1989, 2004 | 1976, 1985 | 1982*** |
| **Spain** | -1.31 | -3.21* | -1.11 | -3.30* | -4.49 | -1.38 | 0.30 | 19.39 | 1984** | 1979 | 1973** | 1977, 1982 | 1973, 1995** | 1982*** |
| **Sweden** | -2.99 | -3.74** | -1.77 | -3.21* | -24.78*** | -3.44*** | 0.13*** | 4.10** | 1992** | 1994** | 1989** | 1983, 1993 | 1979, 1989** | 1990*** |
| **Switzerland** | -5.39*** | -5.21*** | -1.54 | -4.55*** | -9.38 | -2.08 | 0.22 | 10.05 | 1979 | 1977 | 1972 | 1976, 1992** | 1973, 1990 | 1979 |
| **UK** | -1.74 | -6.41*** | -1.20 | -3.69** | -2.31 | -0.96 | 0.41 | 34.43 | 1980 | 2002 | 1973 | 1977, 1998 | 1973, 1995 | 1982*** |
| **US** | -3.04 | -4.43*** | -2.48 | -5.68*** | -14.34* | -2.64* | 0.18* | 6.52* | 1986 | 1976 | 1972 | 1976, 1996 | 1972, 1981 | 1982*** |
| **Labour Productivity** | | | | | | | | | | | | | | |
| **Australia** | 0.55 | -6.41*** | 0.81 | -6.40*** | 2.20 | 2.53 | 1.14 | 110.76 | 1990** | 2000 | 1991 | 1980, 1995 | 1976, 1991 | 1988*** |
| **Austria** | -1.99 | -5.81*** | -1.97 | -5.80*** | 1.61 | 1.74 | 1.08 | 90.01 | 1981 | 1996 | 1994 | 1985, 1997 | 1986, 1996 | 1979*** |
| **Belgium** | -0.94 | -5.80*** | -0.94 | -5.80*** | 1.68 | 2.19 | 1.31 | 129.81 | 1988 | 1991 | 1986 | 1985, 1997 | 1985, 1995 | 1979* |
| **Canada** | 0.53 | -4.08*** | 0.42 | -3.98*** | 1.51 | 0.94 | 0.62 | 33.79 | 1982 | 1996 | 1992 | 1986, 1996 | 1986, 1996 | 1980** |
| **Denmark** | 0.69 | -5.63*** | 0.68 | -5.63*** | 2.11 | 2.20 | 1.03 | 91.03 | 1994 | 1995 | 1992 | 1983, 1995 | 1982, 1992 | 1992*** |
| **Finland** | -0.19 | -3.68*** | 0.12 | -3.08** | 0.77 | 0.38 | 0.49 | 21.67 | 1991 | 1990 | 1992 | 1983, 1998 | 1981, 1995 | 1990 |
| **France** | -1.33 | -3.64** | -2.11 | -4.81*** | 1.01 | 0.79 | 0.78 | 45.38 | 1988 | 1991 | 1984 | 1985, 1998 | 1984, 1996 | 1991*** |
| **Greece** | -0.92 | -4.70*** | -1.17 | -4.63*** | 2.37 | 1.33 | 0.56 | 32.44 | 1993 | 2001 | 1998 | 1972, 2000 | 1995, 1999 | 1979*** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ireland** | -0.29 | -4.16*** | 0.05 | -4.02*** | 1.00 | 0.63 | 0.63 | 31.54 | 1985 | 1998 | 1993 | 1991, 1998 | 1986, 1993 | 1981 |
| **Italy** | -2.27 | -6.54*** | -1.90 | -6.94*** | -7.36 | -1.74 | 0.23 | 12.66 | 1994 | 1989 | 1986 | 1981, 1992 | 1983, 1991 | 1993* |
| **Japan** | -2.35 | -4.34*** | -2.07 | -4.23*** | -5.56 | -1.56 | 0.28 | 16.09 | 1988 | 1985 | 1983 | 1980, 1989 | 1983, 2002 | 1991*** |
| **Netherlands** | -1.91 | -4.72*** | -1.91 | -4.58*** | -11.30 | -2.36 | 0.20 | 8.12 | 1981 | 1996 | 1995 | 1993, 1998 | 1986, 1995 | 1979*** |
| **Norway** | -2.56 | -6.44*** | -2.28 | -6.82*** | -8.94 | -2.10 | 0.23 | 10.21 | 1994 | 1993 | 1989 | 1981, 1994 | 1982, 1991 | 1992* |
| **Portugal** | -4.12** | -4.26*** | -2.66 | -6.06*** | -34.55 | -4.09 | 0.11 | 2.95 | 1991** | 1989 | 1984 | 1981, 1993 | 1984, 1993 | 1986 |
| **Spain** | -3.53* | -3.50* | -2.79 | -3.61** | -13.06 | -2.55 | 0.19 | 6.98 | 1981 | 1998 | 1993 | 1986, 1998 | 1985, 1996 | 1979*** |
| **Sweden** | -1.44 | -4.54*** | -1.44 | -4.47*** | -2.05 | -0.84 | 0.41 | 35.27 | 1980 | 2001 | 1992 | 1988, 2001 | 1982, 1996 | 1992*** |
| **Switzerland** | -2.42 | -5.40*** | -2.49 | -5.61*** | -7.66 | -1.93 | 0.25 | 11.93 | 1991*** | 2001 | 1996 | 1978, 1999 | 1977, 1996 | 1989*** |
| **UK** | -1.73 | -4.73*** | -1.21 | -5.14*** | -7.12 | -1.79 | 0.25 | 12.91 | 1980 | 1995 | 1991 | 1989, 1999 | 1981, 1992 | 1979*** |
| **US** | -2.43 | -4.64*** | -1.52 | -4.93*** | -9.41 | -2.14 | 0.22 | 9.79 | 1982 | 1995 | 1981 | 1985, 1995 | 1981, 1992 | 1980 |

Note: All variables are in logs. ADF critical values: -4028, -3.445, -3.145 for 1, 5 and 10% levels respectively. For the Ng-Perron test (NP), none of the test statistics are significant at the usual levels. The critical values are taken from Ng and Perron (2001), Table 1 and the autoregressive truncation lag (zero) has been selected using the modified AIC. The ZA test statistic reported is the minimum Dickey-Fuller statistic calculated across all possible breaks in the series, when both a break in the intercept and the time trend is allowed for. The year in parenthesis denotes the year when this minimum DF statistic is obtained. The 1% critical value is -5.57 and the 5% critical value is -5.08. As for the VP test, "AO" means addictive outlier and "IO" means innovational outlier and critical values are taken from Perron and Vogelsang (1992), in particular, -3.56 (AO) and -4.27 (IO) for 5% level. As for CMR the 5% critical value is -5.49 (both AO and IO), also taken from Perron and Vogelsang (1992). In column 10 we run the Perron-Yabu (PY) unit root test. For the structural-break type tests only dates are presented and when applicable, a statistically significant symbol is added. The null in the non-break type tests is of unit root. The null in the break-type tests is of unit root against the break stationary alternative hypothesis.

Source: author's calculations.

Having covered stationarity, we move to cointegration issues by analysing the relationship between unemployment and productivity. Table 2 presents the results for the Johansen-Juselius cointegration test. We find evidence of one cointegrating relationship in six countries (Austria, France, Ireland, Italy, Japan and Spain). Moreover, in these cases the results from the Hansen-stability test did not reject the null hypothesis that the series are cointegrated at conventional levels (with p-values larger than 20%).

**Table 2. Johansen-Juselius Cointegration Tests: Productivity and Unemployment**

| | **labprod** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Null | Alternative | Aus | Aut | Bel | Can | Den | Fin | Fra | Gre | Ire |
| | | | | | | | | | | |
| $r=0$ | $r \geq 1$ | 27.03* | 24.04 | 19.94 | 20.43 | 21.16 | 15.93 | 37.88* | 22.72 | 27.13* |
| $r \leq 1$ | $r \geq 2$ | 3.11 | 7.83 | 6.54 | 5.93 | 7.07 | 5.27 | 11.64 | 7.06 | 6.03 |
| $\lambda_{max}$ | | | | | | | | | | |
| $r=0$ | $r=1$ | 23.91* | 16.21 | 13.39 | 14.50 | 14.08 | 10.65 | 26.23* | 15.11 | 21.09* |
| $r \leq 1$ | $r=2$ | 3.11 | 7.83 | 6.54 | 5.93 | 7.07 | 5.27 | 11.64 | 7.06 | 6.03 |
| Cointegration* | | Yes | No | No | No | No | No | Yes | No | Yes |

**(Cont.)**

| | **labprod** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Null | Alternative | Ita | Jap | Net | Nor | Por | Spa | Swe | Swi | UK | US |
| | | | | | | | | | | | |
| $r=0$ | $r \geq 1$ | 18.96* | 36.46* | 20.79 | 15.26 | 18.96 | 16.43* | 19.63 | 21.37 | 18.00 | 19.67 |
| $r \leq 1$ | $r \geq 2$ | 0.02 | 5.34 | 5.60 | 6.62 | 3.97 | 0.54 | 8.53 | 7.73 | 6.78 | 7.19 |
| $\lambda_{max}$ | | | | | | | | | | | |
| $r=0$ | $r=1$ | 18.94* | 31.11* | 15.18 | 8.64 | 14.98 | 15.89* | 11.10 | 13.64 | 19.38 | 12.47 |
| $r \leq 1$ | $r=2$ | 0.02 | 5.34 | 5.60 | 6.62 | 3.97 | 0.54 | 8.53 | 7.73 | 12.51 | 7.19 |
| Cointegration* | | Yes | Yes | No | No | No | Yes | No | No | No | No |

Note: * denotes rejection of the null hypothesis at the 5% level (based on MacKinnon-Haug-Michelis p-values).

Source: author's calculations.

As previously discussed, we further test the hypothesis of a structural shift in the cointegration relationship for all countries in our sample by using the Gregory and Hansen (1996) procedure. Table 3 presents our results. After taking into account the possibility of breaks in the series, we get rejections of the null of no cointegration in eight countries for the ADF* statistic.

**Table 3. Testing for regime shifts in cointegration of productivity and unemployment: Gregory-Hansen**

| | Labour Productivity | | | |
|---|---|---|---|---|
| **Country** | **ADF test** | | **Phillips Test** | |
| | $ADF^*$ stat | Estimated break date | $Z_\alpha^*$ stat | Estimated break date |
| Australia | -4.34 | 1986 | -27.23 | 1987 |
| Austria | -4.04 | 1975 | -24.13 | 1974 |
| Belgium | -5.24 | 1994 | -25.90 | 1994 |
| Canada | -4.56* | 1996 | -28.56 | 1997 |
| Denmark | -6.82*** | 1992 | -32.28 | 1992 |
| Finland | -4.60* | 1995 | -28.12 | 1995 |
| France | -4.14 | 1982 | -20.14 | 1974 |
| Greece | -3.89 | 1985 | -22.08 | 1987 |
| Ireland | -5.15** | 1974 | -23.08 | 1974 |
| Italy | -4.26 | 1981 | -25.23 | 1981 |
| Japan | -4.00 | 1995 | -19.20 | 1996 |
| Netherlands | -4.25 | 1983 | -20.44 | 1981 |
| Norway | -4.94** | 1993 | -30.50 | 1992 |
| Portugal | -4.22 | 1999 | -15.87 | 1989 |
| Spain | -4.65* | 1983 | -21.96 | 1974 |
| Sweden | -4.05 | 1977 | -24.38 | 1977 |
| Switzerland | -4.97** | 1989 | -29.94 | 1989 |
| UK | -5.39** | 1983 | -27.20 | 1983 |
| US | -4.16 | 1998 | -25.35 | 1999 |

Note: $ADF^*$ and $Z_\alpha^*$ refer to the Augmented Dickey-Fuller (ADF) and to the Phillips $Z_\alpha^*$ tests statistics; null of no cointegration. *, ** and *** denote significance at 10, 5 and 1% levels, respectively, using the critical values from Gregory and Hansen (1996), table 1.

Source: author's calculations.

We are now in a position to estimate the parameter $\beta$ in Eq. (1). The estimation is made using the DOLS of Stock and Watson (1993) as previously described. The results of the estimation of this equation for each country, in terms of the coefficient $\beta$ and the statistic $C_\mu$, a LM statistic from the DOLS residuals which tests for deterministic cointegration (i.e., when no trend is present in the regression), appear in Table 4. Two main results can be obtained from the Table. First, since all the cointegration statistics are highly significant at usual levels, the null of deterministic cointegration is rejected. And, second, the estimates of $\beta$ are, in 9 out of 11 cases, positive. Up to this point our results provide evidence in support of those models (Caballero and Hammour, 1994) which suggest a positive (long-run) co-movement between productivity and unemployment. That is, this favours New-Schumpeterian theories that suggest that prolonged recessions, which are typically associated with high unemployment, foster long-run productivity improvements.

**Table 4. Estimation of long-run relationships between productivity and unemployment: Stock-Watson-Shin cointegration**

| Country | Labour productivity | | |
|---|---|---|---|
| | $\beta$ | $\bar{R}^2$ | $C_\mu$ |
| Australia | 0.21 (0.03)*** | 0.78 | 4.29 (0.07)*** |
| Austria | 0.09 (0.08) | 0.53 | 4.48 (0.24)*** |
| Belgium | -0.61 (0.38) | 0.14 | 6.35 (0.99)*** |
| Canada | 0.16 (0.12) | 0.29 | 4.21 (0.37)*** |
| Denmark | -0.53 (0.09)*** | 0.76 | 5.90 (0.20)*** |
| Finland | 0.22 (0.05)*** | 0.63 | 4.13 (0.13)*** |
| France | 0.20 (0.06)*** | 0.70 | 4.06 (0.22)*** |
| Greece | 0.31 (0.11)** | 0.51 | 3.86 (0.31)*** |
| Ireland | 0.20 (0.15) | 0.37 | 4.21 (0.34)*** |
| Italy | 0.37 (0.09)*** | 0.75 | 3.48 (0.32)*** |
| Japan | 0.34 (0.05)*** | 0.79 | 3.54 (0.19)*** |
| Netherlands | -0.04 (0.04) | 0.16 | 4.85 (0.10)*** |
| Norway | 0.24 (0.05)*** | 0.67 | 4.37 (0.10)*** |
| Portugal | -0.18 (0.32) | 0.06 | 4.94 (0.80)*** |
| Spain | 0.09 (0.05) | 0.43 | 4.37 (0.17)*** |
| Sweden | 0.16 (0.03)*** | 0.66 | 4.30 (0.07)*** |
| Switzerland | 0.02 (0.01)*** | 0.56 | 4.72 (0.01)*** |
| United Kingdom | -0.15 (0.09)* | 0.48 | 5.15 (0.29)*** |
| United States | 0.10 (0.36) | 0.09 | 4.39 (1.39)*** |

Note: The $C_\mu$ is the Shin (1994) LM statistic, which tests for deterministic cointegration. The critical values are taken from Shin (1994), Table 1, for m=1. Standard errors are in parentheses, adjusted for long-run variance. The long-run variance of the cointegrating regression residuals was estimated using the Barlett window with $l = 5 \approx INT(T^{1/2})$ as proposed by Newey and West (1987). The number of leads and lags selected was $q = 3 \approx INT(T^{1/3})$ as proposed in Stock and Watson (1993). *, ** and *** denote significance at 10, 5 and 1% levels, respectively.

Source: author's calculations.

Our final exercise is to explore the causality direction between our measures of productivity and unemployment. Tables 5.a and 5.b present our results for both the standard Granger causality test and also the Toda-Yamamoto test. In general, the evidence suggests stronger effects running from unemployment to productivity, but in some countries a two-way causality is found (e.g. Australia, Canada, Finland, UK and US in Tables 5.a and 5.b).

**Table 5.a Granger causality tests**

| **Country\Dep. Var.** | **Labour productivity** | | | |
|---|---|---|---|---|
| | $u \rightarrow prod$ | **Yes/No** | $prod \rightarrow u$ | **Yes/No** |
| Australia | 15.28*** | Yes | 24.19*** | Yes |
| Austria | 3.63 | No | 5.48* | Yes |
| Belgium | 10.23*** | Yes | 9.42*** | Yes |
| Canada | 10.50*** | Yes | 11.08*** | Yes |
| Denmark | 9.86*** | Yes | 6.66* | Yes |
| Finland | 10.30*** | Yes | 28.24*** | Yes |
| France | 1.46 | No | 4.43 | No |
| Greece | 9.88*** | Yes | 0.42 | No |
| Ireland | 0.72 | No | 4.48 | No |
| Italy | 2.92 | No | 11.10*** | Yes |
| Japan | 3.28 | No | 31.59 | No |
| Netherlands | 0.01 | No | 1.50 | No |
| Norway | 11.38*** | Yes | 1.31 | No |
| Portugal | 2.28 | No | 0.67 | No |
| Spain | 0.39 | No | 1.80 | No |
| Sweden | 9.16** | Yes | 6.29** | Yes |
| Switzerland | 5.81* | Yes | 4.30 | No |
| United Kingdom | 9.85*** | Yes | 22.78*** | Yes |
| United States | 16.77*** | Yes | 12.00*** | Yes |

Note: In these tests the null is of non-Granger causality. These tests are based on a VAR with lag equal to 2, as identified using different lag-length criteria. *, ** and *** denote significance at 10, 5 and 1% levels, respectively.

Source: author's calculations.

**Table 5.b Toda–Yamamoto causality tests**

| Country\Dep. Var. | Labour productivity | | | |
|---|---|---|---|---|
| | $u \rightarrow prod$ | Yes/No | $prod \rightarrow u$ | Yes/No |
| Australia | 41.65*** | Yes | 30.41*** | Yes |
| Austria | 0.40 | No | 1.81 | No |
| Belgium | 2.93 | No | 10.53*** | Yes |
| Canada | 10.13*** | Yes | 13.74*** | Yes |
| Denmark | 1.32 | No | 1.54 | No |
| Finland | 6.16** | Yes | 10.69*** | Yes |
| France | 1.83 | No | 5.37* | Yes |
| Greece | 1.53 | No | 0.11 | No |
| Ireland | 0.47 | No | 4.98* | Yes |
| Italy | 3.25 | No | 4.89* | Yes |
| Japan | 2.23 | No | 29.16*** | Yes |
| Netherlands | 1.60 | No | 6.56** | Yes |
| Norway | 7.95** | Yes | 0.69 | No |
| Portugal | 1.54 | No | 4.59 | No |
| Spain | 0.02 | No | 1.69 | No |
| Sweden | 4.02 | No | 3.95 | No |
| Switzerland | 2.51 | No | 0.09 | No |
| United Kingdom | 11.62*** | Yes | 7.86** | Yes |
| United States | 12.56*** | Yes | 5.76* | Yes |

Note: In these tests the null is of non-Granger causality. These tests are based on a VAR(3) – see the main text for details. *, ** and *** denote significance at 10, 5 and 1% levels, respectively.

Source: author's calculations.

## 5. Conclusions

This paper has empirically uncovered the existence of a stable long-run relationship between productivity and unemployment in several economies within a set of 19 OECD countries between 1970 and 2012. By applying recently developed time series econometric methods, empirical findings reveal that unemployment and labour productivity are non-stationary in levels (but stationary in first-differences, hence I(1)) and in many individual cases unemployment and productivity series are cointegrated, even after accounting for possible structural breaks. Long-run cointegration estimates seem to suggest a positive co-movement between the levels of unemployment and productivity. Hence, our results provide evidence in support of those models which suggest a positive (long-run) co-movement between productivity and unemployment. Even though causality is found to be bi-directional in many cases, the stronger relationship runs from unemployment to productivity.

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## Streszczenie

## CZY ISTNIEJE STABILNY DŁUGOOKRESOWY ZWIĄZEK MIĘDZY BEZROBOCIEM A PRODUKTYWNOŚCIĄ?

*Artykuł jest próbą ustalenia czy istnieje stabilny długookresowy związek między produktywnością a bezrobociem, Badania obejmują dane dotyczące 19 państw OECD, pochodzące z lat 1970-2012 i są oparte o najnowsze ekonometryczne metody analizy szeregów czasowych. Wyniki badań wskazują, że poziomy bezrobocia i produktywności cechują się niestacjonarnością a w licznych indywidualnych przypadkach szeregi te są skointegrowane, nawet po uwzględnieniu możliwych załamań strukturalnych. W przypadku wielu indywidualnych państw efekty długoterminowe wydają się być generalnie pozytywne. Istnieją również dowody występowania przyczynowości dwukierunkowej, ale silniejszy ukierunkowany związek zachodzi między bezrobociem a produktywnością.*

***Słowa kluczowe:*** *stacjonarność, załamania strukturalne, kointegracja, DOLS, przyczynowość w sensie Grangera*

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**ELŻBIETA KAWECKA-WYRZYKOWSKA***

# The EU-Georgia Association Agreement: An Instrument To Support The Development Of Georgia Or Lip Service? [1]

## Abstract

*On 1 September 2014, the Association Agreement (AA) between the EU and Georgia partially came into force. Its main pillar is a "deep and comprehensive free trade agreement" (DCFTA). It provides for the full liberalisation of trade in industrial products and substantial reduction of barriers in agricultural trade. A significant part of the AA is devoted to the elimination of regulatory barriers to trade (e.g. technical standards). The Agreement provides for a progressive and partial liberalisation of trade in services as well as for fast and deep elimination of barriers to capital flows. The liberalisation of the movement of workers is of a very limited scope however.*

*Provisions of the EU–Georgia AA resemble the earlier Europe Agreements (EAs) signed by the Central and Eastern European Countries, albeit there are many differences as well. It is expected that the AA will bring about a number of advantages for Georgia, including: (a) stabilisation of its economic and legal system, thus making it more predictable for investors and more business friendly; (b) alignment of many business laws to those in the EU, which will broaden the market for Georgian products and services; (c) better implementation of business laws. The short term advantages resulting from trade liberalisation will be modest for Georgia, partly because it granted open access*

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[1] This paper is a result of research conducted by the author at the Ilja State University in Tbilisi in the framework of Erasmus Mundus Programme MID 2012.

*to its market before the AA entered into force. Implementation of the Agreement will involve adjustment costs, which are usually an inevitable part of the path to increasing exports to the huge EU market.*

***Keywords**: Association Agreement, European Neighbourhood Policy, free trade area, EU – Georgia relations*

## 1. Introduction

On 1 September 2014, the Association Agreement[2] (AA) between the EU and Georgia partially came into force (it still requires ratification by all EU Member States). We should add that similar AAs were signed on the same day (on 27 June 2014) by the EU with Moldova and Ukraine. While the general concept of these agreements is the same, the details are different.

The AAs are aimed at deepening the political and economic relations between the EU and the associated countries and at the gradual integration of these countries into the EU legal and economic system. They've been negotiated by the EU with its neighbours in recent years within the framework of the European Neighbourhood Policy, and constitute the EU's response to the democratisation processes in Eastern Europe and the Caucasus in 2003-2005, and in the Middle East in 2011.[3]

The EU–Georgia Agreement is centred around a "deep and comprehensive free trade agreement" (DCFTA) and a broad programme of approximation of Georgia's legislation to EU laws. The Agreement resembles the earlier Europe Agreements (EAs) signed with and by the Central and Eastern European Countries (CEECs). For the CEECs, Europe Agreements were an important instrument for stabilising their political situations and legal systems, inducing producers to upgrade the competitiveness of their products and anchoring them in the market economy system (Kawecka-Wyrzykowska 2014, pp. 49-52). The first research objective of this paper is to check whether this is true also in the case of the AA

[2] Its full name is: Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Georgia, of the other part (OJ L 261 of 30 August 2014).

[3] The EU launched its European Neighbourhood Policy (ENP) after the 2004 enlargement, in order to avoid creating new borders in Europe and to enhance stability and security along its borders. DCFTAs, together with EU financial support, are the main instruments for implementation of this policy. They are currently offered by the EU to Armenia, Georgia, Jordan, Egypt, Moldova, Morocco, Tunisia and Ukraine.

between Georgia and the EU. The second, related research objective is to assess the costs and benefits of the AA for the Georgian economy. When assessing the AA we concentrate on trade and trade-related matters (Title IV of the AA).

The research hypothesis is that the Association Agreement is an important instrument for making the Georgian economy more business attractive, stimulating structural changes in the economy and expanding exports to the huge EU internal market in long term.

The paper starts with short analysis of the timetable and coverage of trade liberalisation under the DCFTA. Next, the EU-Georgia Association Agreement is compared with Europe Agreements signed by the EU at the beginning of the 1990s with partners from Central and Eastern Europe. Then we try to assess the importance of the AA for Georgia itself. This part is supplemented by quantitative estimates of trade changes and non-quantitative opinions on DCFTA which are available in literature. The paper ends with concluding remarks.

## 2. Timetable and coverage of trade liberalisation

Before the AA entered into force, relations between the EU and Georgia were regulated by a number of agreements. The oldest, and at the same time the broadest in scope, was the Partnership and Cooperation Agreement (PCA) which was signed in 1996 and entered into force in 1999. Ten years later, in 2009, Georgia was included in the European Neighbourhood Policy (ENP), which marked a significant step forward in the EU-Georgian relations. During the period of provisional application of the new Association Agreement, some provisions of the 1996 EU-Georgia Partnership and Cooperation Agreement, which do not fall within the scope of the AA, will remain valid. The PCA will become invalid upon the full entry into force of the AA.[4]

The commercial part of the DCFTA also includes energy issues, detailed rules on the approximation of Georgian laws on sanitary and phytosanitary measures (SPS) with EU laws, as well as provisions relating to competition and transparency, intellectual property rights, technical barriers, establishment, trade in services, current payments and capital movements.

Both sides fully liberalised trade in industrial products on the day the Agreement entered into force. The elimination of all import tariffs with the entry into force of the Agreement also applies to Georgian imports of EU agricultural products. Liberalisation of Georgian agricultural exports to the EU is of limited

[4] http://www.mfa.gov.ge/index.php?lang_id=ENG&sec_id=30&info_id=18015.

character: 1) for garlic, the EU established a duty free quota (amounting to 200 tons); 2) for a number of products (fruit and vegetables), liberalisation consists of the exemption of the *ad valorem* component of the import duty (other protective elements have not been eliminated); 3) there is a long list of processed and non-processed agricultural products which are subject to the anti-circumvention mechanism. The average annual volume of imports from Georgia into the EU for each category of those products is provided for. When those imports reach 100% of the volume established, the EU may temporarily suspend the preferential treatment for the products concerned. Most of those products are not exported from Georgia to the EU right now. Thus the liberalisation of Georgia's agricultural exports to the EU is of limited character, albeit negative implications of these provisions may appear only in the upcoming years.

No export duties or quantitative restrictions are allowed. As both partners are WTO members, the general WTO exceptions can be applied, including recourse to Articles XX and XXI of GATT 1994. Also, all WTO safeguard measures can be applied by partners (including antidumping and countervailing measures and those under Article XIX of GATT 1994).

A substantial part of the Agreement is devoted to detailed provisions on the elimination of technical barriers to trade. This will be done through gradual alignment of Georgian laws to the EU *acquis communautaire*, in line with timetables contained in Annexes. A list of the measures for approximation (21 EU New Approach and Global Approach Directives) is set out in Annex III. Concrete dates for the adoption of these measures by Georgia are listed as well. Moreover, an indicative list showing priorities in the approximation of other EU laws (mostly on marketing and standardisation of products) is enclosed in one of the Annexes. The approximation of laws will be achieved by Georgia adopting a series of laws related to standardisation, metrology, accreditation and conformity assessment. Georgia will also continue to gradually approximate its sanitary and phytosanitary, animal welfare and other legislative measures to those of the EU. The list of concrete laws in Georgia to be aligned with EU laws (including priority areas) is to be presented by Georgia not later than six months after the entry into force of the Agreement.

Apart from liberalisation of trade in goods, the objective of DCFTA is to "lay down the necessary arrangements for the progressive reciprocal liberalisation of establishment and trade in services." (Art. 76) The instruments of liberalisation are mostly national treatment and most favoured nation treatment (MFN). Both rules apply to the establishment of the Parties' subsidiaries, branches and representative offices. Both partners, however, presented long lists of economic activities which are excluded from establishment (Arts. 78-80).[5] Services mentioned in the AA are described in a very detailed way, and most of them contain reservations to concrete modes of supply of those services. Moreover, reservations at the EU level are supplemented by many national reservations, which reduces the access to the EU market for Georgia's service providers and makes the legal conditions of operating on the EU market extremely complex and burdensome. Besides, some sectors have been excluded from national treatment and MFN treatment by the Parties as regards the cross border supply of services (Art. 83). Due to many exceptions from general rules, the liberalisation attained of the supply of services and conduct of service suppliers seems to be modest. For the same reason, it is impossible to assess *ex ante* to what extent the provisions on improved access to the market will be implemented in practice.

The AA also contains provisions on the temporary presence of natural persons for business purposes (on the basis of mutuality). Separate provisions apply for key personnel, graduate trainees, business agents, contractual service suppliers and independent professionals (Art. 88). The objective of these provisions is to make business easier. In each case, however, there are general limitations sometimes accompanied by national (EU Members') separate reservations. For example, under Article 89 key personnel and graduate trainees have received the right to be employed in the Parties' establishments covered by the Agreement but for a limited period (usually for a period of no longer than three years, and one year for graduate trainees). Independent professionals (natural persons) are allowed to supply services in the territory of the other Party on a temporary basis. They have to obtain a service contract for a period not exceeding twelve months. Reservations at the EU level are supplemented by many national reservations. For example, residency is required for auditing services offered in Denmark. All these provisions reduce the access to the EU market for Georgia's service providers and make the legal conditions of operating on the EU market extremely complex and burdensome.

The Parties undertook to impose no restrictions on payments and transfers on the current account of mutual balance of payments (Art. 137). Also, they ensured the free movement of capital related to direct investments, including the acquisition of real estate. In addition, each Party ensured the free movement of capital related to credits for commercial transactions, to portfolio investments, financial loans and credits by the investors of the other Party, etc. It should be noted that these provisions provide for totally free access to the capital markets of the Parties, including access to the weaker market of Georgia.

[5] The excluded activities cover, among others: mining, manufacturing and processing of nuclear materials; production of or trade in arms, munitions and war material; audio-visual services; national maritime cabotage; and some types of air transport services (Art. 78).

Chapter 8 of the AA relates to public procurement. It provides for clear and transparent minimum rules (based on EU practice) on tendering procedures for awarding public works. Over the coming years Georgia will adopt current and future EU public procurement legislation. Chapter 10 covers competition rules. Here, Parties prohibit and commit to addressing certain practices that could distort free competition and trade, e.g. cartels, abuse of a dominant position and anti-competitive mergers. The parties agree to maintain effective anti-trust and merger laws and an effectively functioning competition authority. Chapter 11 applies to trade-related energy, including electricity, crude oil and natural gas. The Parties have committed themselves not to regulate the prices of gas and electricity for industrial purposes. Also, the interruption of energy transit is prohibited.

## 3. The Association Agreement and Europe Agreements: similarities and differences

The DCFTA and the entire AA between the EU and Georgia replicate – in general - the concepts underlying the Europe Agreements (EAs) signed by the European Communities with Central and Eastern European countries (CEECs) at the beginning of the 1990s, and later with other countries which commenced transformation of their economic and political systems. The core provisions of both types of agreements include trade liberalisation and legal alignment of the associated countries with the EU *acquis communautaire*. Nevertheless, some details differ in the two types of Agreements, which results in their differing assessment.

The CEECs negotiated their EAs with a view toward future EU accession. The first EAs were signed in December 1991 by Czechoslovakia (as the country was then named), Hungary and Poland. At that time, the European Communities were not ready to accept the prospect of future eastward enlargement.[6] Nevertheless the EC accepted a general clause in the preamble of the Agreement negotiated with the first CEE country – Poland - which stated: "recognizing the fact that the final objective of Poland is to become a member of the Community and that this association, in the view of the Parties, will help to achieve this objective […]" This clause became later a reference point for the four Visegrad countries (Czech Republic, Hungary, Slovakia and Poland) to repeat their strong political desire to apply for EU accession. The possibility of EU accession became more realistic only after the political decision was taken by the Copenhagen European Council Summit in June 1993. Under the pressure of

[6] For the Community, the main function of the Europe Agreements was to stabilise the political situation in Europe after the collapse of the "iron curtain".

CEEC, the Summit conclusions stated formally, albeit somewhat vaguely, that it was possible for those countries to join the EC if they " desire so" and "satisfy the economic and political conditions required[7]".

In the case of Georgia there is neither a direct nor indirect reference to Georgia's accession to the EU. There is, however, a chance that this could happen in the future. The Agreement recognizes Georgia as an Eastern European country. In addition, Georgia declared its commitment to implementing and promoting EU values. Even stronger prospects for closer future relations are declared in the paragraph of the Preamble which states that "[t]his Agreement shall not prejudice and leaves open the way for future progressive developments in EU-Georgia relations."

As regards the coverage of both types of agreements, the following comparative remarks concerning trade and trade-related issues seem to be important (Kawecka-Wyrzykowska, Meisel 2014, pp. 35- 47). Both Agreements provide for full liberalisation of trade in non-agricultural products. Under the AA, the opening up of the market took place on the day of the entry of the Agreement into force. It might be noted that neither of the partners made substantial concessions here, as they both offered a relatively open access to their markets before the AA entered into force. For example: (a) the MFN import duties in Georgia were already very low (see more – Table 1); (b) for many years the EU had offered Georgia GSP plus status which resulted in easy access to the EU market; (c) Georgia played (and still plays) a very insignificant role in EU trade (less than 0.1% of total external EU imports and exports); and (d) there are almost no processed industrial products imported from Georgia to the EU, thus posing a very insignificant competitive threat to EU producers.

Under the EAs, the liberalisation timetable for industrial products was quite long, and in the case of several sensitive types of products it even stretched to 5-7 years. The reason, from the EU side, was that traditionally CEECs' producers were relatively strong competitors on the EEC market (due to production cost advantages) in several sectors, mostly in textiles, clothes and metallurgical products. EEC producers wanted to have a period of several years to make adjustments to cheaper competition. From the CEECs' side, where import duties were usually relatively high in order to protect domestic uncompetitive products (except for the above-mentioned sectors), there was a slow and gradual liberalisation, lasting in the case of the most sensitive products until 2000 (or even until 2002 in the case of cars imported to Poland). The reason for this gradual approach to the elimination of import duties was to inject competition and force domestic producers to upgrade their products on one hand, while on the other to not "kill" domestic producers.

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[7] For more on these criteria, see: http://europa.eu/legislation_summaries/glossary/accession_criteria_copenhague_en.htm.

In the area of trade in agricultural products, Georgia immediately opened up its market for EU products. Once again this decision did not greatly increase competition as the Georgian market was relatively open earlier. The liberalisation implemented by the EU in this area was partial and selective. In the case of EAs, the liberalisation of agricultural products also applied only to some products and consisted in reduction, not full elimination, of various protective components. This reflected, on one hand, the strongly protectionist approach of the EEC towards its agricultural sector at that time, and on the other hand the comparative advantages of many agricultural products offered by CEECs.

Another difference between EAs and the AA applies to the approximation of the partners' laws to the EU *acquis communautaire*. Both types of agreements recognize the crucial role to be played by such approximation for making partners' goods and services more compatible with the EU requirements, hence increasing their export to the EU market. The Georgian AA, however, is much more detailed and comprehensive in this area. It provides for extremely detailed rules for many sectors of the Georgian economy (in particular services, technical standards for industrial goods, and sanitary and phytosanitary requirements for agricultural products) and for some areas of economic policy (e.g. public procurement).

Under the EAs, while in general limited access to the EU labour market was offered to workers from the CEECs, there was the possibility of (a) undertaking self-employment by workers from CEECs and (b) employment in the EU countries of so-called "key personnel" (persons working in CEECs' companies which operated in the EU) without the need to apply for a work permit. Under the AA, the provisions on movement of workers are more restrictive and are conditioned upon meeting numerous requirements. These reduce the practical importance of some formal facilitations of the Agreement.

As regards the right of establishment of companies and supply of services, the main instrument for eliminating restrictions in these areas – under both agreements – is the principle of 'national treatment', i.e. the affording foreign companies and nationals no less favourable treatment than that accorded to a country's own companies and nationals. Thus, with the exceptions listed hereafter, on the day the EA entered into force each Member State of the EC accorded national treatment to the establishment of companies from the CEECs, while the CEECs offered such treatment to EC companies and nationals later (under the so-called asymmetry of concessions). Some sectors, however, were excluded from this rule (e.g. purchase of agricultural land, natural resources, air transport services, legal services). The list of sectors and modes of supply of services which are excluded from national treatment under the AA is longer than in the case of EAs.

Another area of economic activities which should make business easier is the movement of capital. The CEECs, in their EAs (i.e. on the day the EAs entered into force) accepted the unrestricted flow of payments related to the current account balance. Also, they did not have problems with the elimination of restrictions (if any) on the free movement of FDI, as they were very interested in attracting FDI in order to modernise their economies. These same solutions are repeated in the AA. The approach to other capital payments is different however. The CEECs did not agree on the free flow of some types of capital, in particular of portfolio capital (which is, at least in part, of a speculative nature) nor on the free outflow of capital (except for the types mentioned before). They feared a massive export of private capital which otherwise could be invested at home, to the benefit of the development of those countries. The deadline for liberalisation of such capital flows was not even provided for in the EAs, but it was adopted later by CEECs when their economic situation improved.

Surprisingly, Georgia did not follow this approach and accepted a much broader concept of free flow of capital once the AA came into force, including free movement of capital related to portfolio investments, financial loans, and credits by investors of the other Party. This reflects the more open approach to the movement of capital which had already existed in Georgia before the AA's implementation. There is, however, a safeguard providing for the temporary imposition of capital restrictions in exceptional circumstances, including balance of payments difficulties.

Summing up the provisions on the opening of markets, we may state that trade in goods and movement of capital in Georgia will be opened up to EU competitors faster than was the case in the CEECs on the basis of their EAs. Contrary to the situation of the CEECs, these decisions will not radically change the situation of Georgia because the pre-association situation was different. Already at that time Georgia was a very open economy, with very low import barriers to trade in goods and a relatively free flow of capital. By the same token, the advantages resulting from the elimination of border protection will be smaller in the short run. The situation is different in the case of movement of workers and supply of services, where very modest liberalisation is foreseen (by both partners). And these are the two areas where Georgia has comparative advantages. As regards legal adjustments to the EU legal system, in Georgia they seem to cover a much broader range of issues than those in the CEECs' EAs.

## 4. The level of external protection of Georgia's economy

An important benefit always expected from trade liberalisation is an increase in trade and a corresponding improvement in the overall welfare of the countries involved. In the case of Georgian imports, this effect is not very important as the level of protection for non-agricultural products was very low already before the implementation of the AA (Table 1). Also, the average import duties on agricultural products were not very high. Thus, liberalisation of Georgian imports (i.e. elimination of border protection) has not unduly affected the choices of Georgian consumers, at least in the short term.

**Table 1. Average applied tariffs (MFN levels, %) in the EU and in Georgia in 2010**

| | Agriculture | Industry | All goods |
|---|---|---|---|
| EU-27 | 13.5 | 4.6 | 5.9 |
| Georgia | 7.7. | 0.3 | 1.3 |

Source: Messerlin, Emerson, Jandieri, Vernoy 2011, p. 22.

The EU market was more protected but – as already mentioned – for many years the EU has offered quite open access to its market for Georgian products under the GSP plus. Table 2 reveals that in 2013 almost 68% of Georgian exports to the EU entered duty free under the general status of MFN (which applied to all WTO members). This resulted mostly from the commodity pattern of Georgian exports to the EU, dominated by raw materials and semi-processed products subject to 0% duties (including oils and copper ores, the main export items of Georgia to the EU market). An additional 28% of Georgian products benefited in 2013 from preferential status (among others: hazelnuts and ammonium nitrate).[8] As a result, the vast majority of Georgian products exported to the EU enjoyed easy border access. Thus, under the DCFTA the previously free access to the EU market under the GSP plus and MFN has simply been replaced in many cases by a permanent mechanism of the AA. What is probably more important, duty free access was also offered for products not currently exported, hence making the diversification of Georgian exports easier.

[8] This was a relatively high share of Georgian exports to the EU which enjoyed a preferential access to the EU market. On average, only 13% of exports of the countries enjoying unilateral preferences (GSP, GSP plus etc.) on the EU market benefited from those preferences. The majority of their exports (68.0% in 2012) entered the EU market on duty free basis resulting from 0% duties based on most favoured nation treatment. The main reason for such proportions was the commodity pattern of beneficiaries' exports, which was dominated – as in the case of Georgia –by raw materials and semi-processed products subject to 0% MFN duties.

**Table 2. EU imports from Georgia by type of market access (2004-2013)**

| Year | Pattern of imports by type of market access (%) | | | | | | | | | Total imports (ths EUR) | Preferential imports (ths EUR) | Share of preferential imports in total import (%) | Rate of utilisation of preferences (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Imports on MFN basis | | | Imports potentially preferential | | | | | Other imports not classified by preferences | | | | |
| | | | | Imports on MFN basis | | Imports on preferential basis | | | | | | | |
| | MFN =0 | MFN >0 | Unknown customs duty | MFN=0 | MFN >0 | pref.=0 | pref.>0 | Unknown customs duty | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10=1 to 9 | 11=6+7+8 | 11/10 | 11/ (4+5+11) |
| 2004 | 73.0 | 0.5 | 0.0 | 0.0 | 2.7 | 10.9 | 10.1 | 2.1 | 0.6 | 289,460 | 67,014 | 23.2 | 89.4 |
| 2005 | 45.5 | 1.0 | 0.0 | 0.0 | 7.8 | 32.2 | 8.0 | 3.5 | 1.9 | 237,907 | 104,096 | 43.8 | 84.8 |
| 2006 | 74.7 | 1.2 | 0.0 | 0.0 | 1.9 | 17.4 | 0.0 | 3.1 | 1.8 | 440,163 | 89,959 | 20.4 | 91.4 |
| 2007 | 68.5 | 5.3 | 0.0 | 0.0 | 3.2 | 18.1 | 0.0 | 3.8 | 1.0 | 455,089 | 99,592 | 21.9 | 87.2 |
| 2008 | 76.4 | 5.0 | 0.0 | 0.0 | 3.1 | 14.3 | 0.0 | 0.4 | 0.8 | 734,919 | 108,314 | 14.7 | 82.7 |
| 2009 | 76.4 | 3.5 | 0.0 | 0.0 | 3.8 | 15.2 | 0.0 | 0.7 | 0.4 | 517,344 | 82,117 | 15.9 | 80.6 |
| 2010 | 79.4 | 1.0 | 0.0 | 0.0 | 2.1 | 15.5 | 0.0 | 1.4 | 0.5 | 564,894 | 95,515 | 16.9 | 88.9 |
| 2011 | 72.1 | 1.8 | 0.0 | 0.0 | 2.2 | 23.2 | 0.0 | 0.2 | 0.4 | 611,918 | 143,577 | 23.5 | 91.3 |
| 2012 | 71.2 | 3.8 | 0.0 | 0.0 | 2.8 | 21.8 | 0.0 | 0.0 | 0.4 | 580,983 | 126,690 | 21.8 | 88.5 |
| 2013 | 67.5 | 4.3 | 0.0 | 0.0 | 4.4 | 23.5 | 0.0 | 0.0 | 0.3 | 661,872 | 155,931 | 23.6 | 84,4 |

Source: Eurostat-Comext (calculations were prepared by Dr. Łukasz Ambroziak, Institute for Market, Consumption and Business Cycles Research; The Institute of Agricultural and Food Economics - National Research Institute, Warsaw.

Moreover, positive trade-creating effects resulting from the elimination of non-tariff barriers (among them, technical and sanitary barriers) may only appear in the next several years.

## 5. Importance of the AA for Georgia

On the basis of the above analysis one might come to the conclusion that the AA is neither advantageous nor necessary for Georgia. However, such a conclusion is not justified. The AA offers a number of advantages for Georgia, although some of them are of an unquantifiable character and some will appear only in the longer term.

First of all, the implementation of the AA will stabilise the internal economic and legal systems in Georgia, making domestic laws more predictable and more difficult to reverse, thereby contributing positively to the long term development of the country. As stressed before, many changes in Georgia's legislation will be the a result of international contractual commitments and thus new laws will be difficult to withdraw or relax in the case of the change of government or under the pressure of domestic lobbies (international obligations are usually more binding than domestically-based reforms). To put it differently, an AA with a major partner such as the EU is a signal to investors both at home and abroad that economic reforms will not be reversed, as they are guaranteed by a legally binding international agreement. This will increase the attractiveness of Georgia as an economic partner for foreign investors.

Moreover, regular monitoring of the EU-adjusted laws (by association institutions which are provided for in the AA) will ensure a better implementation of business regulations, which so far have been characterised by poor implementation in Georgia (e.g. on competition policy). Economic operators will be able to prepare their strategies based on the agreed-upon calendar of regulatory approximation of Georgian laws with EU laws. Thus the AA – if properly implemented – should become a strong external anchor for the reform process of Georgia's economy. Such benefits, albeit of a general character, are very important, especially for the country which is not yet very attractive for FDI.

In the long term, better alignment with EU technical and sanitary standards and the improved competitiveness of Georgian products should result in broader exploitation of duty free access to the huge EU market, with over 500 million high income consumers, and lead to an increase of Georgia's exports to this market. The present lack of compatibility of Georgian agricultural products with the EU SPS system severely restricts the capabilities of the majority of Georgian food products to be exported to the EU market. Only such products as wine, hazelnuts and mineral water, which do not require official health certification or for which the exporting industries in Georgia could ensure that they meet EU food safety criteria, are currently exported to the EU. Most products of an animal origin require health certificates and their export into the EU is not possible at this time.

The involvement of foreign companies will be of crucial importance. Without their investments, the Georgian economy will not be able to upgrade and/or create many competitive products and services, to find money to finance new ideas and investments, etc. FDI is also required in order to create new specializations, including those in the food processing industry, which carries considerable potential. This cannot be done exclusively by domestic capital as the needs and challenges are so vast. Thus, promotion of and incentives for FDI inflow should become the priority of both the Georgian government as well as of the EU and its Member States. Foreign investors themselves may not "notice" that Georgia as a good place for establishment due to, *inter alia*: the small size of the domestic market; the relatively long distance from the EU for the most active companies investing abroad; a geopolitical position which includes unsettled conflicts with Russia; a limited number of highly skilled workers; an unstable (so far) legal environment; an unclear legal situation as regards purchase of land (both for agricultural and business use), etc. As already mentioned, the Association Agreement should help in this respect, making the legal environment both more stable and more business friendly. Also, Georgia has an advantage not often found in other countries – a substantial reduction of corruption and high degree of compliance with tax rules (even very small enterprises use cash registers to record their turnover and profits for tax purposes). Of course fraud has not been eliminated completely, but it has definitely been reduced in recent years.

Apart from the positive effects, there will also be costs for Georgia related to the implementation of the AA. Some of them will be borne by central authorities (translation of documents, new offices to monitor functioning of new laws, training of new staff etc.) and will be partly supported by EU financial aid. There will also be much higher costs borne by private operators connected with the implementation of new technologies of production which are compatible with EU laws. It should be kept in mind however that: (1) such adjustments are a part of transformation costs of any economy which is on the path to a market economy system and aims at improved competitiveness; (2) taking into account the very limited diversification of Georgian exports (in particular in the industrial sector), the costs of legal adjustments in many cases apply not so much to the existing domestic producers but to the new establishments to be started in the future; and (3) such adjustment costs are an inevitable way to increase exports to the huge EU market. Unless they meet EU technical and sanitary requirements, Georgian producers will not be able to enter the EU market. Given the present situation in Georgia it is probable that in the first period of association producers will bear adjustment costs rather than enjoy benefits. Some time has to elapse before most producers will be able to exploit the opportunities created by the AA. The experience of the CEECs with their transformations demonstrates that without painful adjustments an uncompetitive economy is not able to record rapid economic growth. This experience also shows that the hard economic constraints induced by EU competitive pressures have proved to be important pro-efficiency instruments, more important than any domestically-motivated policies.

In these circumstances, in order to fully use the opportunities created by the AA a lot of support is needed to improve the competitiveness of Georgian producers and, in many cases, assist them to start production of new products. The aforementioned support should involve public authorities and cover technical support, cheap credits, creation of a business friendly legal environment, and convenient and easy access to information, including detailed information on cooperation opportunities created by the AA.[9] This support should also be the focus of EU financial and technical assistance.

## 6. Quantitative estimates of trade changes

To the best of our knowledge, there is only one quantitative study on the likely impact of the DCFTA on Georgia's economy (ECORYS & CASE 2012).[10] The study projected Georgia's exports to the EU to increase by 9% and 12% in the short and long term, with imports going up by 4.4% and 7.5%, respectively. Georgia's GDP could increase by 4.3%, or 292 million euro, in the long term, provided that the DCFTA is implemented and its effects sustained (based on the CGE model, with a baseline scenario that assumes no DCFTA in place). Other main conclusions were the following: "... DCFTA is expected to improve the trade balance for Georgia in relative terms, although in absolute terms the trade deficit

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[9] For example, the list of provisions (and annexes to them) on commitments relating to establishment and trade in services is so long and complicated that probably no single person knows exactly all the privileges and reservations. From the business point of view, it would be desirable to prepare a detailed list of activities (and modes of their supply) where liberalisation has been offered.

[10] The study was commissioned by the EU prior to the conclusion of the negotiations. There is an earlier quantitative study, coordinated by CASE, but it is not relevant today as it was prepared in a period when the content of the AA was not known (in 2008) and projected scenarios were purely theoretical. See: Maliszewska 2008.

may still grow, given that exports expand from a much lower baseline than imports. The DCFTA-related effects on the EU trade are negligible. Average wages in Georgia are projected to increase 3.6% over the long run. Meanwhile, the overall consumer price index is expected to decrease by about 0.6 percent. This implies that – on average – purchasing power of Georgian citizens increases because of the DCFTA, especially in the long run. For the EU, changes in wages and prices are again *negligible*." (ECORYS & CASE 2012, p. A14). The study also mentioned the costs related to the implementation of the AA: "DCFTA will lead to approximately four percent of the Georgian labour force needing to change their sector of employment." The authors suggest that the costs could be higher for the less skilled workers. Thus, the ease of labour adjustments in practice will be crucial for actual gains from the DCFTA. Given Georgia's size and modest share in the EU's total trade with the world (0.1%) - the overall effects of the Agreement for the EU should be negligible.

In view of the earlier information on the low level of protection, these calculations seem to be overestimated in the short term. One explanation for these relatively optimistic estimates is that they were done a few years ago, when the level of tariff protection in Georgia was higher[11] (thus its elimination was assumed to result in the creation of bigger trade flows). In the long term, the export increase should be higher due to better adjustment of Georgian products to the EU technical and sanitary requirements. Georgian imports will depend mostly on the demand and purchasing power of Georgian society, which can improve due to expanded exports to the EU.

## 7. Review of non-quantitative opinions on DCFTA EU-Georgia[12]

The above formulated assessment of the AA and its comparison with the EAs can be compared to other non-quantitative opinions presented in the literature. There are two comprehensive studies available which reflect on the DCFTA from the point of view of the Georgian economy. Both are very critical and stress the high costs involved in DCFTA's implementation.

The older study was prepared by P. Messerlin et. al. (in 2011). The authors argue that the Commission's approach in the form of a DCFTA between EU and Georgia is bad from three perspectives. Firstly, it is deemed to be "bad

[11] The authors of the study assumed that the applied tariffs in Georgia were 12% for the majority of products (ECORYS & CASE 2012, Table 7.3).

[12] We skip here the Commissions' opinionsm which are "by definition" very positive and usually refer to the estimates of the above-mentioned study prepared by ECORYS and CASE.

*development* policy for Georgia. It requires Georgia to adopt and implement an enormous amount of imprecisely identified EU internal market regulations that go way beyond strictly trade-related matters, with no attempt to identify those that make sound economic sense for Georgia. (…) The burdensome regulatory changes imposed on Georgia are equivalent to taxing Georgian production–endangering its growth and the sustainability of its reforms" (Messerlin, Emerson, Jandieri, Vernoy 2011, p. I - iii). The authors calculated that the adoption of EU sanitary and phytosanitary (SPS) standards by Georgia could raise food prices by 90% (Messerlin, Emerson, Jandieri, Vernoy 2011, p. 72).

Secondly, they concluded that "the Commission's approach is also bad *commercial* policy for the EU since it would lead to an expansion of the trade between Georgia and non-EU countries, rather than between Georgia and the EU. Georgian consumers would be induced to import what Georgian producers could no longer sell because of EU norms; and their low incomes would induce them to turn to imports from non-EU sources that are less expensive than those from the EU. Meanwhile, in order to survive the vast majority of Georgian producers who would not be able to sell their products anymore on Georgian markets under EU norms would try to sell them to foreign markets not observing EU norms, thereby artificially boosting Georgia's exports to non-EU countries." (Messerlin, Emerson, Jandieri, Vernoy 2011, p. I - iii).

Thirdly, the authors argue that "the Commission's approach is bad *foreign* policy for the EU." The reason is that "preconditions are being imposed on a country that is granted no EU membership perspective (…) They would make EU DCFTA partners appear like EU member state clones, but i) without full access to the EU markets in agriculture and services, ii) without EU aid and iii) without a voice in the future EU decisions - clearly an unacceptable proposition." (Messerlin, Emerson, Jandieri, Vernoy 2011, p. ii).

A recent paper by I. Dreyer (2012) also contains a number of reservations with regard to the Georgian DCFTA. The author's assessment echoes Messerlin's critical arguments as she calls into question certain political conditionalities and the overestimation of the benefits in EU documents assessing the AA, and criticises the very demanding legal alignments expected from Georgia, in particular in the field of technical and sanitary standards. Furthermore, she contrasts the lack of a prospect of EU accession with the adjustment costs: "The EU continues to push for regulatory alignment. Yet this is problematic. The EU is dealing with economies that are much poorer than the EU's poorest member states. For them [those economies - EKW], integrating EU standards into their legislation, and in particular putting them into practice, will be costly and will probably fail." (Dreyer 2012).

One should probably agree with the argument contained in both studies about the demanding and costly nature of EU requirements regarding regulatory adjustments of Georgian products. However, such strong criticism does not seem justified. It is not clear why P. Messerlin et al, estimated that agricultural prices would go up by 90% (!) as a result of the adoption by Georgia of EU SPS measures. Of course, certain price increases will appear following the changes of methodologies of production and adoption of new standards (e.g. relating to the microbes content in milk or cheese). They will affect, however, only some – not all – groups of products. Even more importantly, the list of compulsory alignment of SPS standards (and the product groups affected) will be presented by the Georgian Government only after the entry of the Agreement into force (Article 55, point 4). Therefore, it is too early to make any reliable estimates as to the price increases. Next, meeting the EU standards for products is a *sine qua non* of exporting to this market. The more producers apply those standards, the more of them will be able to take advantage of the opportunities of the huge EU market. Last but not least, while some price increases will appear, perhaps the higher health standards will lead to lower costs of the health services, a smaller number of early deaths, etc. Modernisation involves costs, but it offers benefits as well.

With regard to the point on "bad foreign policy" of the EU – let us repeat that the CEECs at the very beginning of their negotiations concerning their EAs were not offered any prospect of EU membership. The Europe Agreements themselves did not guarantee it either (see more in subchapter 2).

## 8. Concluding remarks

Our analysis has revealed that the positive effects from the simple elimination of tariffs and other border-crossing barriers under the DCFTA will be limited. This assessment applies both to the liberalisation of Georgia's imports and EU imports from Georgia. The reason for this is that Georgia was a very open economy already before the AA entered into force and enjoyed preferential access to the EU market (under GSP plus). Therefore, the deeper DCFTA, providing for the elimination of numerous non-tariff barriers, reforms of the legal system and institutions, stabilisation of laws and increased credibility of the country for foreign investors, is more promising than any simple free trade agreement. Its benefits also include support for strengthening domestic institutions to help achieve the desired outcomes. Thus, the main benefits of the DCFTA will stem from making Georgia a better place to conduct business and invest in.

Modernisation of the economy is a pre-condition for improvement of competitiveness (with or without association), and this cannot be done without FDI. Therefore, increasing Georgia's credibility as a good place for locating FDI is of crucial importance, and the DCFTA is an instrument to help achieve this goal.

Taken as a whole, the AA is an instrument which has the potential to enhance Georgia's position as a country on the path to a full market economy, based on democratic values, strong and stable domestic institutions, and on EU-related legislation. In this way the Agreement should anchor Georgia into the western economic and political system.

It is equally true, however, that in order to reap the benefits offered by the DCFTA, deep domestic reforms are necessary. They include not only changes in the law, which are necessary, but also adjustments of the technical and sanitary standards of goods and related restructuring of the pattern of production. Clearly such adjustments will involve significant costs. Thus, additional funds are necessary to implement these reforms. Domestic funds are scarce, so greater financial involvement on the part of the EU is required. The EU should provide both expertise and financial assistance for the adoption of the provisions of the DCFTA and the entire Association Agreement. The DCFTA itself is not sufficient to achieve the expected benefits (Athukorala, Waglé 2013). The association process requires accompanying measures in order to mitigate the difficult transition. In this regard, the right domestic policies implementing the AA and supporting adjustments are of crucial importance. Also, the above-mentioned EU assistance and expertise to Georgian decision-makers would help greatly. In particular, assistance and expertise offered by EU Members from Central and Eastern Europe would be most useful, as these countries have gathered plenty of their own experiences with economic and political transformation.

The fears expressed that adjustment costs will be massive and will result in the bankruptcy of many Georgian producers seem to be exaggerated. Most of the DCFTA-related adjustments are necessary for Georgian producers themselves to have a level-playing field with competitors, both domestically and in the EU. In particular, if Georgian producers want to gain easier access to be competitive on the huge EU market (as well as the markets of other developed countries) they have no other choice than to meet partners' requirements. Without such adjustments, no substantial improvement of the competitiveness of the economy will be feasible.

Public support is necessary in order to speed up the appearance of economic benefits. Without them, "integration for its own sake or the adoption of the "EU model" will not necessarily be beneficial" (Hoekman 2007, p. 18). Formal implementation of the AA alone, not followed by a visible increase in exports of goods and of other types of economic cooperation, will be a failure. In such a case, the additional costs involved will not be compensated for by extra advantages. Even more dangerously, the present quite positive approach to EU integration may turn into a high scepticism which later will be difficult to reverse.

The first thing that should be done to address this challenge is to precede the implementation of the DCFTA in Georgia with a broad information campaign. As of now, very few "average" people know exactly what the AA is about. They usually think that the Agreement will be "good" for Georgia, but without knowledge of the details and not being prepared for tough adjustment burdens. Therefore, many Georgian officials and members of the political elite argue that offering Georgia a free visa regime would be a crucial step towards making the AA more people-friendly and assuring citizens that the EU actually supports Georgia's European aspirations. Such a decision has been taken recently (in April 2014) vis-à-vis Moldova. The Georgian people claim that their country meets all the formal EU requirements for a visa waiver to a greater extent than (or at least to the same extent as) Moldova, and they do not understand why the EU is still depriving them of a similar solution.

Also, greater EU support for education of young Georgians would be invaluable. Educated people are the greatest asset of every country. Wider access to the EU Erasmus higher education programmes and to academic staff exchanges would greatly improve the growth potential of the country. Thus, the main conclusion is that the DCFTA is a good starting point to make the country more business attractive and to stimulate structural changes in the economy.

At present, the economic, social, institutional and legal distance between Georgia and EU countries is vast, and EU membership seems unrealistic.[13] However, that may change over time. As D. S. Hamilton correctly maintains: "The Baltic states provide a tremendously positive example. They, too, were burdened by the legacy of being a "former Soviet Republic." They, too, were rebuffed initially for their "unrealistic" dreams of EU and NATO membership. Although they started two years later than the Visegrad countries and from a lower economic base, they launched such a determined and vigorous set of reforms that within just five years they had caught up with the leading membership candidates in Central and Eastern Europe." (Hamilton 2005, p. 31). Thus the evolution of the situation in the upcoming years depends greatly on Georgia itself, on broad public support and the right choices of the political elites.

[13] An additional barrier is the geographical location of Georgia, in that long border with Russia which is difficult to control (mostly along the crest of the Greater Caucasus mountains), and having no border with any of the EU Member States.

The next step might be deeper integration of Georgia into the four freedoms of the EU internal market. In this respect, the possibility of Georgia's membership in the European Economic Area might be considered.

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## Streszczenie

### UKŁAD STOWARZYSZENIOWY UE – GRUZJA: INSTRUMENT WSPARCIA ROZWOJU GRUZJI CZY DEKLARACJA BEZ POKRYCIA?

*1 września 2014 r. wszedł w życie (częściowo) układ stowarzyszeniowy między UE i Gruzją. Jego główną część stanowi „Umowa o pogłębionej i całościowej strefie wolnego handlu", która przewiduje pełną liberalizację handlu wyrobami przemysłowymi i znaczącą redukcję barier w handlu rolnym. Istotna część umowy jest poświęcona eliminacji regulacyjnych barier dla handlu (np. standardów technicznych). Umowa przewiduje też stopniową i częściową liberalizację handlu usługami, jak też szybką i głęboką eliminację barier w zakresie przepływów kapitałowych. Liberalizacja przepływu pracowników ma bardzo ograniczony zakres.*

*Postanowienia układu stowarzyszeniowego UE–Gruzja są podobne do Układów europejskich podpisanych wcześniej przez państwa Europy Środkowej i Wschodniej, jakkolwiek istotne są też różnice.*

*Oczekuje się, że układ stowarzyszeniowy przyniesie wiele korzyści Gruzji, w tym (a) stabilizację jej systemu ekonomicznego i prawnego, czyniąc go w efekcie bardziej przewidywalnym dla inwestorów oraz bardziej przyjaznym dla przedsiębiorców; (b) zbliżenie wielu przepisów do tych, które obowiązują w UE, co rozszerzy rynek dla gruzińskich towarów i usług; (c) lepsze wdrożenie przepisów ważnych dla biznesu. Krótkookresowe korzyści wynikające z liberalizacji handlu będą skromne dla Gruzji, częściowo z uwagi na otwarty dostęp do jej rynku już przed wejściem Układu w życie. Implementacja Układu będzie się też wiązać z kosztami dostosowawczymi, które są zazwyczaj nieuniknioną metodą wzrostu eksportu na wielki rynek UE.*


***Słowa kluczowe:*** *układ stowarzyszeniowy, Europejska Polityka Sąsiedztwa, strefa wolnego handlu, stosunki UE-Gruzja*

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ŁUKASZ PIĘTAK*

# Convergence Across Polish Regions, 2005–2011

## Abstract

*This article analyses the convergence across Polish regions between 2005–2011. Its theoretical and empirical character determined the choice of research methods. The theoretical part includes an analysis of the literature devoted to the convergence theory, and the empirical part is based on statistical surveys. Statistical data used in the article was taken from the following databases: for the United Kingdom – Office for National Statistics; for Finland – Statistic Finland; for Poland and the rest of the countries – Statistical Yearbook of the Regions – Poland from 2005 to 2013. The studies confirmed that in Poland a strong concentration of economic activity took place in analyzed period. The convergence of per capita GDP did not apply. Rich regions grew faster than poor ones. The convergence of labour productivity did not apply either. The divergence of the K/L relation determined the divergence of labour productivity in the analyzed period. In the last part of the article the author analyzed the convergence across regions in EU countries. In case of countries that gained the accession to the EU on 1 May 2004, convergence did not apply. On the other hand, rich countries of EU like Austria, Belgium or the Netherlands confirmed the phenomenon of convergence at the NUTS level in analyzed period.*

**Keywords:** *regional convergence, per capita income, factors productivity*

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## 1. Introduction

The concept of absolute convergence implies faster growth in poor countries (regions) than in rich ones. Economies with a lower level of per capita income should achieve a higher rate of growth. Hence, according to absolute convergence there is an inverse relation between the rate of capital growth and its initial level in the economy. In contrast to absolute convergence, conditional convergence does not imply unconditional equalization the level of economic development across countries/regions. The empirical studies carried out have often confirmed the convergence, but only across selected countries, i.e. a "club", characterized by similar values of structural variables [see Galor 1996; Quah 1993; Quah 1996]. In other cases, deepening disparities between countries have very often taken place.

The analysis of the convergence across Polish regions was tested at the regional level. Poland is divided into sixteen voivodships (NUTS 2). The data on Polish regions (voivodships) derives from the *Statistical Yearbook of the Regions – Poland* from the years 2005 to 2013.

**Map 1. Polish regions (NUTS 2)**

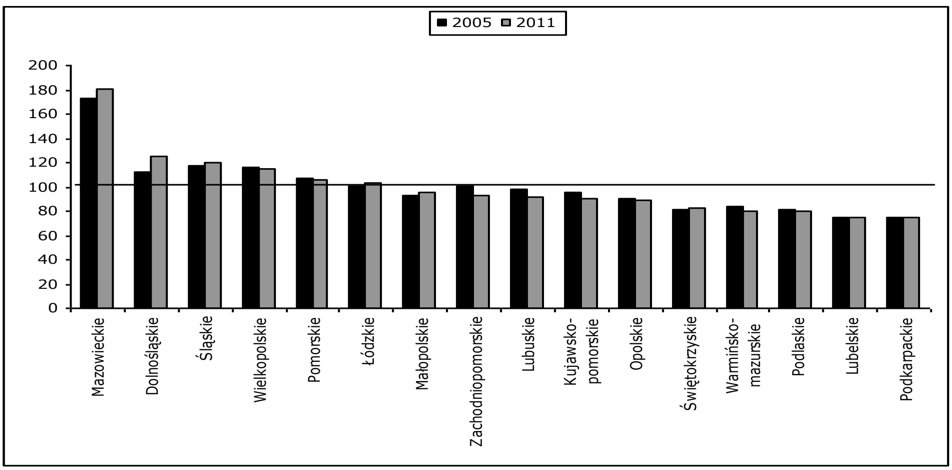

Source: own elaboration.

## 2. Concentration of economic activity in Polish regions, 2005–2011

The first point of this analysis is to examine the level of per capita GDP, which allows for distinguishing the rich and poor regions. Figure 1 shows the level of per capita GDP in each region in 2005 and 2011, relative to the national average. The regions were ordered by the highest level of per capita GDP in 2011. The richest region was Mazowieckie with per capita GDP of 172.4% in 2005 and 180.3% in 2011 of the national average. The regions which reached per capita GDP above the national average included: Dolnośląskie, Śląskie, Wielkopolskie, Pomorskie and Łódzkie. In the case of the region Zachodniopomorskie, in 2005 the per capita GDP was 101.2% of the national average and decreased in 2011 to 93.4%. In addition, three of the richest regions increased their level of per capita GDP relative to the national average during the six years analyzed: Mazowieckie from 172.41% to 180.37%; Dolnośląskie from 112.69% to 125.40%; and Śląskie from 117.75% to 119.58%. The second group of regions contained the poorest ones: Podkarpackie, Lubelskie, Podlaskie, Warmińsko-mazurskie and Świętokrzyskie. Both in 2005 and 2011 these regions were characterized by per capita GDP below the national average. In addition, the poorest regions in 2005 became poorer in 2011. For example, in the region Podkarpackie per capita GDP in 2005 was at 75.23% of the national average, and six years later that level was reduced to 74.74%. A similar situation took place in regions Podlaskie, Warmińsko-mazurskie and Opolskie. In 2005 the per capita GDP was 80.77%, 83.36% and 90.48% of the national average, respectively. In 2011 per capita GDP was reduced to 79.53%, 79.91% and 88.77% of the national average. Summing up, by comparing the year 2011 with the year 2005 it can be observed that the three Polish regions with the highest per capita GDP became richer. In turn, three of the poorest Polish regions - Podkarpackie, Podlaskie and Warmińsko–mazurskie – became relatively poorer. Only the region Lubelskie, which belonged to the poorer regions, had a different trajectory. In period 2005–2011 it improved its situation of relative per capita GDP from 74.50% to 75.20% of national average.

Map 2 consists of two maps. On the left hand map the five richest regions, which could be called the “poles” of the Polish economy, were selected: Mazowieckie, Dolnośląskie, Śląskie, Wielkopolskie and Pomorskie. On the right hand map regions with the lowest level of per capita GDP in 2011 were selected: Podkarpackie, Lubelskie, Podlaskie, Warmińsko-mazurskie and Świętokrzyskie. They often are called the “poor eastern wall”. In 2005 the five richest regions produced 57.6% of the national GDP. In addition, in these regions were inhabited by 48.0% of the Polish population and comprised 50.5% of the total national employment. With respect to both GDP and population, the richest regions increased their combined relative share in 2011 to 58.9% and 48.2%, respectively. Only their relative share of employed persons decreased very slightly, from 50.5% to 50.4%. It should be emphasized that the five richest regions in 2011 produced almost 60% of Polish GDP and comprised above 50% of total employment in the country. The poorest regions were in a totally different situation. In 2005 their share in GDP, population and employment in Poland was, respectively 15.4%, 18.4% and 20.6%. In 2011 their share in GDP decreased to 13.4% of the national GDP. In the case of population their share remained the same at 18.4%, while the share of employment in the poorest regions achieved a slight upward trend from 20.6% in 2005 to 20.8% in 2011.

**Figure 1. Per capita GDP in Polish regions 2005–2011, (2004 = 100)**




Source: own elaboration.

**Map 2. Rich regions versus poor regions in Poland, 2005–2011**


Source: own elaboration.

Table 1 shows the share of each region in GDP, population and employment in period 2005–2011. Regions which increased their shares in the national GDP were Dolnośląskie, Małopolskie and Mazowieckie (Dolnośląskie from 7.82% to 8.58%; Małopolskie from 7.30 to 7.46%; and Mazowieckie from 21.38 to 22.36%). In case of employment four regions improved their share in national employment: Dolnośląskie, Małopolskie, Podkarpackie and Pomorskie (Dolnośląskie from 7.05 to 7.27%; Małopolskie from 8.13 to 8.92%; Podkarpackie from 5.08 to 5.71%; and Pomorskie: from 5.30 to 5.35%). Regions which increased their share in the national population were Kujawsko–pomorskie, Małopolskie, Mazowieckie, Pomorskie, Warmińsko-mazurskie, Wielkopolskie and Zachodniopomorskie (Kujawsko-pomorskie from 5.42 to 5.44%; Małopolskie from 8.56 to 8.68%; Mazowieckie from 13.52 to 13.72%; Pomorskie from 5.76 to 5.93%; Warmińsko-mazurskie from 3.74% to 3.77%; Wielkopolskie from 8.8 to 8.9%; and Zachodniopomorskie from 4.44 to 4.47%).

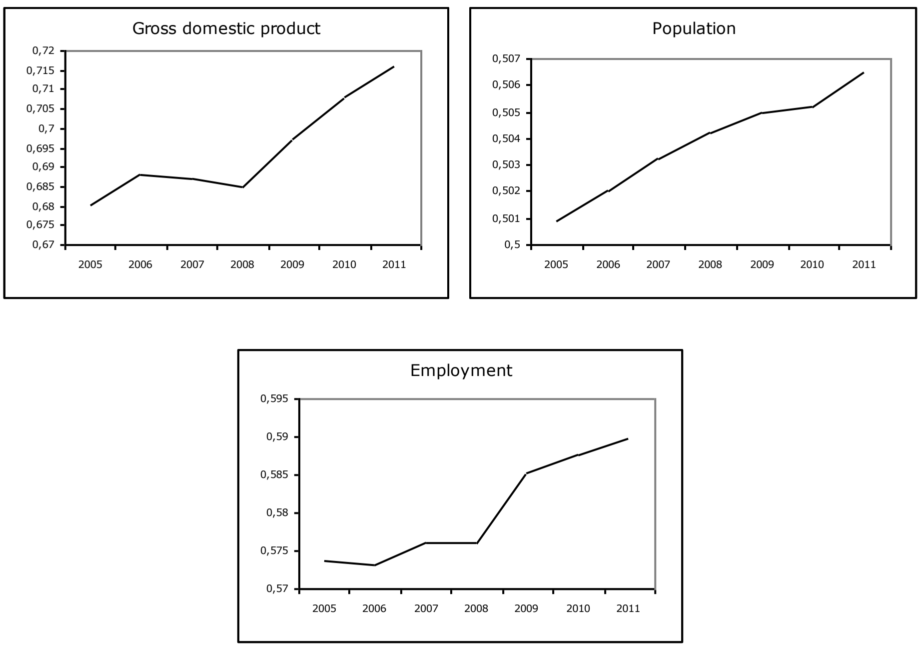
**Table 1. Share of regions in GDP, population and employment in Poland, 2005–2011**

| Regions | GDP | | Population | | Employment | |
|---|---|---|---|---|---|---|
| | **2005** | **2011** | **2005** | **2011** | **2005** | **2011** |
| Dolnośląskie | 7.82 | 8.58 | 7.57 | 7.57 | 7.05 | 7.27 |
| Kujawsko-pomorskie | 4.73 | 4.48 | 5.42 | 5.44 | 5.15 | 4.91 |
| Lubelskie | 3.90 | 3.83 | 5.71 | 5.64 | 5.80 | 5.78 |
| Lubuskie | 2.39 | 2.20 | 2.64 | 2.65 | 2.32 | 2.33 |
| Łódzkie | 6.21 | 6.10 | 6.75 | 6.57 | 7.15 | 6.71 |
| Małopolskie | 7.30 | 7.46 | 8.56 | 8.68 | 8.13 | 8.92 |
| Mazowieckie | 21.38 | 22.36 | 13.52 | 13.72 | 16.43 | 16.26 |
| Opolskie | 2.28 | 2.11 | 2.74 | 2.63 | 2.34 | 2.26 |
| Podkarpackie | 3.80 | 3.73 | 5.50 | 5.52 | 5.08 | 5.71 |
| Podlaskie | 2.33 | 2.24 | 3.14 | 3.12 | 3.08 | 2.90 |
| Pomorskie | 5.65 | 5.64 | 5.76 | 5.93 | 5.30 | 5.35 |
| Śląskie | 13.27 | 12.98 | 12.28 | 12.00 | 11.97 | 11.85 |
| Świętokrzyskie | 2.52 | 2.48 | 3.37 | 3.32 | 3.46 | 3.33 |
| Warmińsko-mazurskie | 2.86 | 2.72 | 3.74 | 3.77 | 3.16 | 3.04 |
| Wielkopolskie | 9.44 | 9.32 | 8.84 | 8.97 | 9.73 | 9.71 |
| Zachodniopomorskie | 4.12 | 3.78 | 4.44 | 4.47 | 3.85 | 3.68 |
| **Poland** | 100 | 100 | 100 | 100 | 100 | 100 |

Source: own elaboration.

In order to estimate the level of GDP, population and employment concentration in Polish regions, the dispersion formula was used. Figure 2 presents the dispersion of GDP, population and employment across Polish regions in 2005–2011. All analyzed indicators show an increasing value of the dispersion that stands for the strongest concentration of economic activity. In the case of GDP and employment, the increase in concentration started in 2008. On the other hand, the concentration of population showed an upward trend during the six years analyzed.

**Figure 2. Dispersion of GDP, population and employment across Polish regions, 2005–2011**




Source: own elaboration.

## 3. Convergence of per capita GDP across Polish regions, 2005–2011

The economic literature includes many concepts of convergence. This paper focuses on two kinds of convergence: $\sigma-$convergence and $\beta-$ convergence (Barro, Sala-i-Martin, 2004; Sala-i-Martin, 2000). The $\sigma-$convergence implies that the dispersion of per capita GDP between countries decreases over time. On the other hand, $\beta-$ convergence implies faster growth in poorer countries/regions than in rich ones. The formula used to test the $\sigma-$convergence is as follows:

$$\sigma_t = \sqrt{\sum_{t=1}^{n} (\ln Y_{it} - \ln Y_t)^2 / n} \quad , \tag{1}$$

where:

$\ln Y_{it}$ – per capita GDP of the region *i* in period *t*,

$\ln Y_t$ – average of per capita GDP in the group of analyzed countries (regions) in period *t*.

The decreasing value of dispersion signifies a reduction of dispersion around the average value.

The formula used to test the $\beta -$convergence is as follows:

$$\log(y_{it}) - \log(y_{i,t-1}) = a + b\log(y_{i,t-1}) + u_{it}, \tag{2}$$

where:

$i = 1,..., N -$ number of countries (regions) included in the analysis,

$\log(y_{it}) -$ logarithmic value of the income of country *i* in period *t*,

$\log(y_{i,t-1}) -$ logarithmic value of the income of country *i* in period $t-1$,

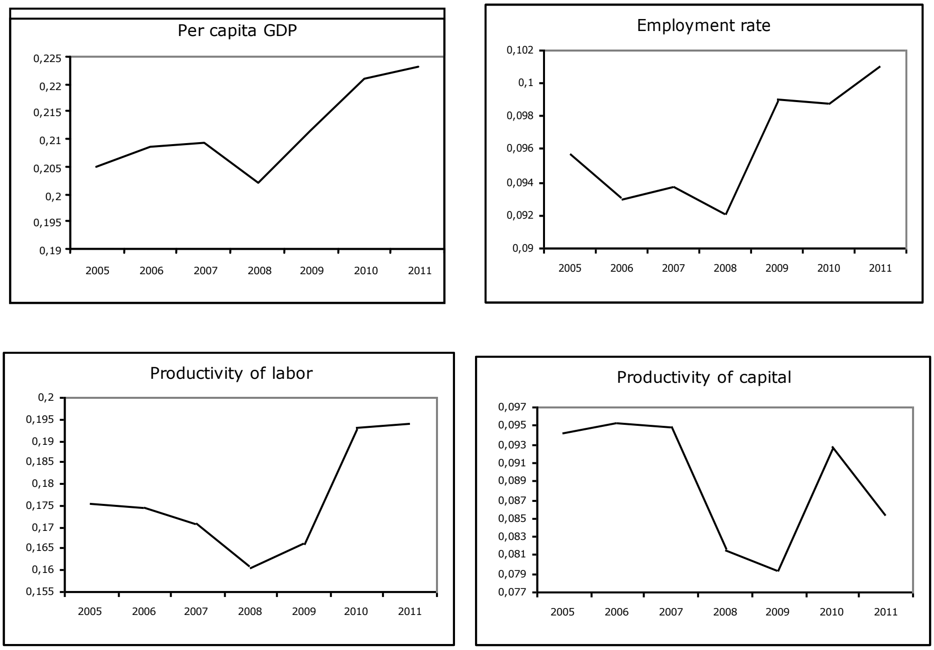
$b -$ parameter of regression, $0 < b < 1$,

$u_{it}$ – effect of the error term,

A negative value of the $b$ parameter indicates that the convergence process took place.

Figure 3 presents the dispersion of per capita GDP, employment rate, productivity of labour and productivity of capital across Polish regions in 2005–2011. In the case of per capita GDP, the dispersion began to increase in 2005 and from that time the $\sigma -$convergence did not apply. The divergence of the employment rate and productivity of labour started in 2008. As to the productivity of capital, from 2007 to 2009 convergence took place, but the situation changed in 2009 and the dispersion of productivity of capital began to increase.

**Figure 3. Dispersion of per capita GDP, employment rate, productivity of labour and productivity of capital across Polish regions, 2005–2011**

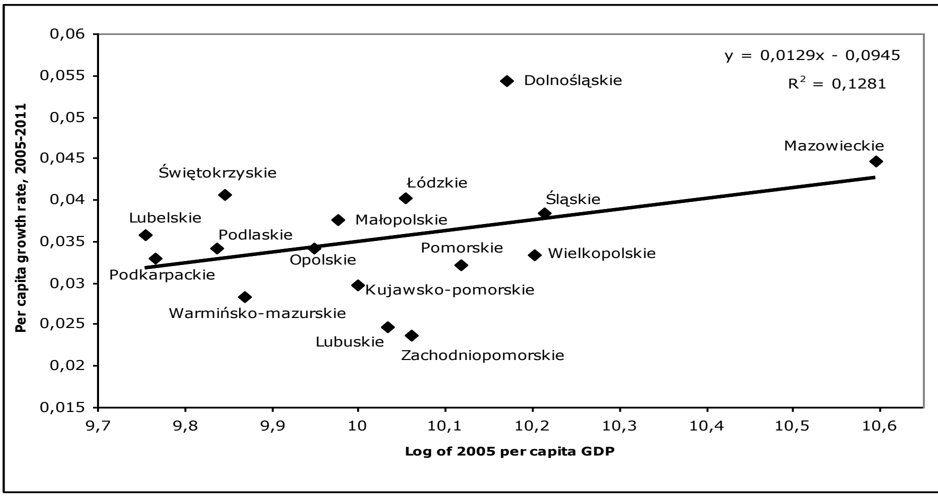



Source: own elaboration.

Figure 4 presents $\beta -$ convergence of per capita GDP. On the horizontal axis is the logarithmic value of the initial level of per capita GDP. On the vertical axis is the annual growth rate of per capita GDP in 2005–2011. The relation between per capita GDP growth and its initial value was positive. Hence, $\beta -$ convergence did not apply. Also, Figure 4 allows for distinguishing between the regions that had a positive and negative impact on divergence. The regions like Mazowieckie, Dolnośląskie or Łódzkie, in spite of the high level of per capita GDP in 2005, achieved high growth rates during the six years analyzed. In their case the divergence had a positive aspect. On the other hand, the opposite group of regions included Warmińsko-mazurskie, Lubelskie and Zachodnio-pomorskie. These regions represented a low level of per capita GDP in 2005 and during the six years analyzed they could not reach a rate of economic growth that would have allowed them to catch up with the richest regions. The regions of Śląskie, Opolskie and Podkarpackie confirmed the existence of $\beta -$ convergence in 2005–2011.

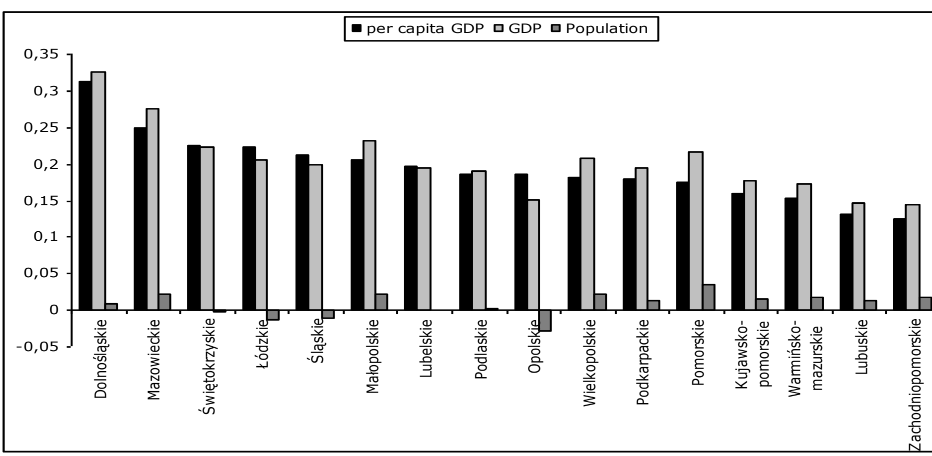
The per capita GDP is a ratio of GDP and population. Hence, the per capita GDP growth rate can be expressed as the difference between two components: GDP and population growth rates. Figure 5 presents the results of the decomposition of per capita GDP for GDP and population growth rates. Regions are ordered from highest to lowest in terms of per capita GDP growth rate. In all regions the decisive factor of per capita GDP growth rate was an increase in GDP, while the population growth had little significance. Moreover, in three regions - Łódzkie, Śląskie and Opolskie–the growth of per capita GDP was conditioned by the loss of population.

**Figure 4.** $\beta$ **– convergence of per capita GDP across Polish regions, 2005–2011**




Source: own elaboration.

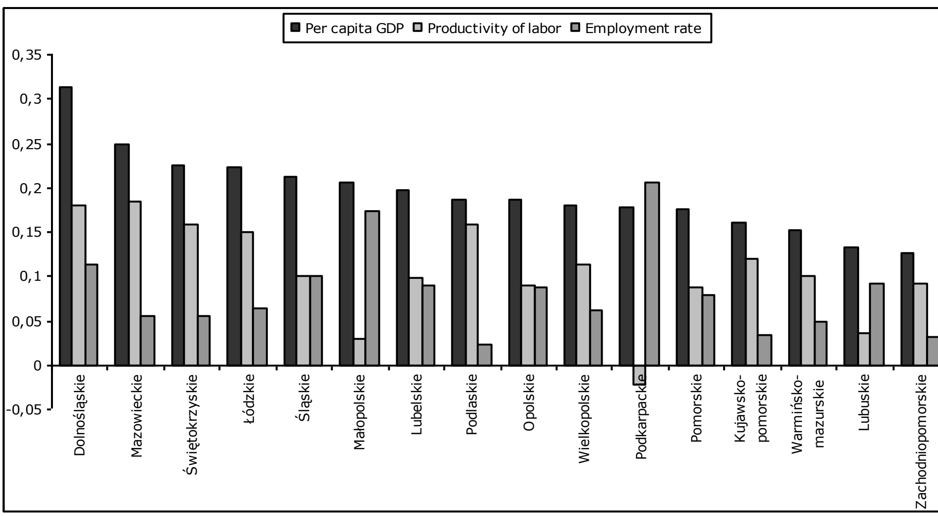
**Figure 5. Decomposition of per capita GDP growth rate for GDP and population growth rates**




Source: own elaboration.

Another way to decompose the per capita GDP growth rate is its representation as a product of labour productivity and employment growth rates (see Dębniewski, Gryciuk, 2002; Woźniak, 2008). In regions with the highest per capita GDP growth rate - Dolnośląskie, Mazowieckie and Świętokrzyskie– its growth rate was mainly based on labour productivity growth. In turn, in the regions like Podkarpackie, Małopolskie and Lubuskie the labour productivity growth rate had a low share in the per capita GDP growth. The deciding role was played by the employment growth rate. In the case of the Podkarpackie region, the labour productivity growth rate was negative, and the growth of per capita GDP was reached by the increasing level of the employment rate.

**Figure 6. Decomposition of per capita GDP growth rate for labour productivity and employment growth rates, 2005–2011**




Source: own elaboration.

Previous analysis showed that the GDP growth rate had a decisive role in per capita GDP growth, while the population growth rate had little significance. The application of formula [3] allowed for determining the contribution of each sector in obtained Gross value added:

$$\frac{Y_t}{Y_0} = \sum_{i=1}^{n} S_{j0} \cdot \frac{Y_{jt}}{Y_{j0}}, \tag{3}$$

where $j$ and $S_{j0}$ are the succeeding sector and share of $j$ sector in Gross value added, respectively.

**Table 2. Share of each sector in Gross value added in 2005–2011**

| | | Agriculture | Industry | Services |
|---|---|---|---|---|
| Dolnośląskie | Share 2005–2011 | 1.9 | 43.0 | 55.2 |
| | Gross value added (%) | 2.6 | 35.4 | 62.0 |
| Kujawsko-pomorskie | Share 2005–2011 | 5.5 | 33.8 | 60.7 |
| | Gross value added (%) | 6.8 | 29.5 | 63.8 |
| Lubelskie | Share 2005–2011 | 7.4 | 26.7 | 66.0 |
| | Gross value added (%) | 7.4 | 24.4 | 68.3 |
| Lubuskie | Share 2005–2011 | 4.3 | 37.5 | 58.2 |
| | Gross value added (%) | 4.6 | 33.3 | 62.0 |
| Łódzkie | Share 2005–2011 | 4.8 | 35.6 | 59.6 |
| | Gross value added (%) | 5.9 | 31.6 | 62.5 |
| Małopolskie | Share 2005–2011 | 2.0 | 32.7 | 65.3 |
| | Gross value added (%) | 2.9 | 29.1 | 67.9 |
| Mazowieckie | Share 2005–2011 | 3.3 | 22.0 | 74.7 |
| | Gross value added (%) | 3.7 | 21.2 | 75.1 |
| Opolskie | Share 2005–2011 | 5.0 | 37.4 | 57.7 |
| | Gross value added (%) | 5.5 | 35.0 | 59.5 |
| Podkarpackie | Share 2005–2011 | 2.3 | 35.3 | 62.4 |
| | Gross value added (%) | 3.3 | 33.1 | 63.6 |
| Podlaskie | Share 2005–2011 | 10.4 | 27.3 | 62.3 |
| | Gross value added (%) | 11.8 | 23.8 | 64.4 |
| Pomorskie | Share 2005–2011 | 2.9 | 33.2 | 63.9 |
| | Gross value added (%) | 2.8 | 28.9 | 68.4 |
| Śląskie | Share 2005–2011 | 0.9 | 41.7 | 57.4 |
| | Gross value added (%) | 1.3 | 39.1 | 59.6 |
| Świętokrzyskie | Share 2005–2011 | 5.1 | 35.8 | 59.1 |
| | Gross value added (%) | 6.3 | 29.2 | 64.4 |
| Warmińsko-mazurskie | Share 2005–2011 | 8.2 | 32.0 | 59.8 |
| | Gross value added (%) | 8.5 | 27.3 | 64.2 |
| Wielkopolskie | Share 2005–2011 | 5.5 | 35.7 | 58.8 |
| | Gross value added (%) | 7.8 | 32.6 | 59.6 |
| Zachodniopomorskie | Share 2005–2011 | 4.1 | 28.1 | 67.9 |
| | Gross value added (%) | 4.5 | 24.2 | 71.3 |
| **Poland** | Share 2005–2011 | 3.7 | 32.7 | 63.6 |
| | Gross value added (%) | 4.5 | 29.5 | 66.0 |

Source: own elaboration.

Table 2 contains data concerning the share of each sector in Gross value added in Polish regions in 2005–2011. Each region is assigned two rows. The first row called "share 2005–2011" indicates the share of each sector in obtained

Gross value added in 2005–2011. The second row "Gross value added (%)" indicates the contribution of each sector in Gross value added in 2005. For example, in Poland the share of agriculture, industry and services in Gross value added during the six years analyzed was 3.7%, 32.7% and 63.6%, respectively. The regions with a low level of per capita GDP - Lubelskie, Podlaskie or Warmińsko-mazurskie - were characterized by a high share of agriculture in the Gross value added, equal to 7.4%, 10.4% and 8.2%, respectively. On the other hand, in case of the regions with high level of per capita GDP the rule was a low share of agriculture in the Gross value added. For example, in regions like Dolnośląskie and Mazowieckie the share of agriculture in Gross value added was 1.9% and 3.3%, respectively. Also, in the Śląskie region this share was even less than one per cent, more precisely 0.9%. The example of the richest region (Mazowieckie) should also be noted. In its case, 74.7% of Gross value added was obtained in services sector.

Another tool used to examine the development of Polish regions was the “shift–share” analysis. This formula is based on the assumption that an increase of the variable at the regional level can be explained by the combined effect of the three variables: national share, industry mix and regional shift (Houston 1967; Stevens, Moore 1980; Blair 1995). The formula of shift share is as follows:

$$SS = NS + IM + RS\ , \tag{4}$$

where:

$SS -$ Shift-Share,

$NS -$ National Share,

$IM -$ Industry Mix,

$RG -$ Regional Mix.

The equations describing the successive components of SS are as follows:

$NS = regional_i^{t-1} \cdot national^{t} / national^{t-1}$.

$IM = (region_i^{t-1} \cdot national_i^{t} / national_i^{t-1}) - NS$ .

$RG = regional_i^{t-1} \cdot (regional_i^{t} / regional_i^{t-1} - national_i^{t} / national_i^{t})$,

where:

$regional_i^{t-1} -$ region’s income in the sector $i$ in the period $t-1$,

$regional_i^{t} -$ region’s income in the sector $i$ in the period $t$ ,

$national^{t-1} -$ national income in the period $t-1$,

$national_i^{t-1} -$ national income in the sector $i$ in the period $t-1$,

$national_i^{t} -$ national income in the sector $i$ in the period $t$ .

In the shift–share analysis the National Share implies that the increase of regional income is a result of growth at the national level. Hence, if the national economy increases by 5%, that should correspond to a 5% increase in regions. In turn, according to assumption of Industry Mix an income increase in a given sector at the national level should be reflected in the growth of this sector at the regional level. But the most important component of "shift–share" analysis is the Regional Mix, which describes the competitiveness of each sector. If the growth rate of the sector in the region is higher than the national growth rate, the sector is considered to be competitive. Otherwise, the sector belongs to the declining sectors.

Table 3 contains the components of the Shift Share, while Table 4 shows the decomposition of the Regional Mix for three sectors: agriculture and forestry, industry and services. In rich regions like Dolnośląskie, Mazowieckie, Wielkopolskie or Łódzkie, the competitive sector was services. On the other hand, in poor regions like Lubelskie, Warmińsko-mazurskie or Podlaskie, competitive sector was agriculture. In the case of the richest region (Mazowieckie), the development of the services sector was accompanied by the development of the agriculture sector.

**Table 3. Shift-Share analysis in Polish regions, 2005–2011**

| Regions | NS | IM | RS |
|---|---|---|---|
| Dolnośląskie | 84235.1 | 926.5 | 6119.7 |
| Kujawsko-pomorskie | 50872.8 | –162.7 | –1787.7 |
| Lubelskie | 42026.8 | –478.9 | –480.6 |
| Lubuskie | 25676.8 | 133.8 | –1733.0 |
| Łódzkie | 66901.0 | 61.9 | –1028.4 |
| Małopolskie | 78546.5 | 116.2 | 436.6 |
| Mazowieckie | 230141.1 | –2528.2 | 12389.7 |
| Opolskie | 24528.7 | 157.6 | –1600.0 |
| Podkarpackie | 40855.1 | 276.8 | –1226.7 |
| Podlaskie | 25080.4 | –459.9 | –233.9 |
| Pomorskie | 60870.7 | 80.5 | –478.4 |
| Śląskie | 142803.2 | 2585.8 | –5534.8 |
| Świętokrzyskie | 27144.3 | –82.0 | 51.6 |
| Warmińsko-mazurskie | 30821.2 | –270.6 | –1012.1 |
| Wielkopolskie | 101610.2 | –14.2 | –1373.4 |
| Zachodniopomorskie | 44375.3 | –342.2 | –2505.9 |

Source: own elaboration.

**Table 4. Decomposition of the Regional Shift in Polish regions, 2005–2011**

| **Regions** | Agriculture | Industry | Services |
|---|---|---|---|
| Dolnośląskie | –101.8 | 6193.5 | 27.9 |
| Kujawsko-pomorskie | –149.9 | –70.2 | –1567.6 |
| Lubelskie | 465.3 | –390.9 | –555.0 |
| Lubuskie | 50.4 | –455.6 | –1327.8 |
| Łódzkie | –97.9 | 95.3 | –1025.8 |
| Małopolskie | –298.3 | 478.7 | 256.2 |
| Mazowieckie | 888.6 | –1179.9 | 12681.0 |
| Opolskie | 33.1 | –884.5 | –748.5 |
| Podkarpackie | –200.5 | –904.4 | –121.9 |
| Podlaskie | 88.2 | 43.5 | –365.7 |
| Pomorskie | 353.9 | 633.5 | –1465.8 |
| Śląskie | –242.1 | –3510.7 | –1782.0 |
| Świętokrzyskie | –42.4 | 933.9 | –839.9 |
| Warmińsko-mazurskie | 249.2 | 130.3 | –1391.6 |
| Wielkopolskie | –1036.7 | –866.4 | 529.7 |
| Zachodniopomorskie | 40.8 | –244.3 | –2302.4 |

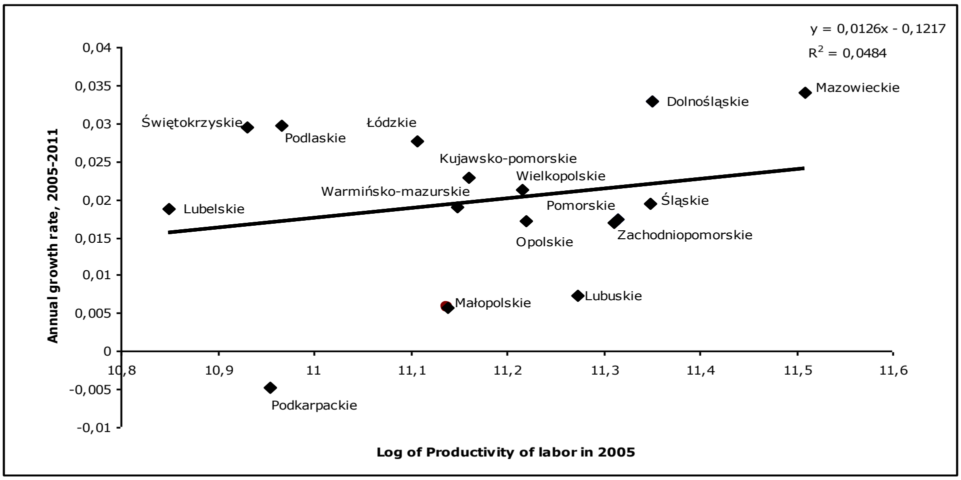
Source: own elaboration.

## 4. The convergence of labour productivity

In order to examine the convergence of labour productivity across Polish regions the formula of sigma and beta convergence was used. Figure 7 shows the beta convergence of labour productivity. In the analyzed period divergence took place. Regions like Mazowieckie and Dolnośląskie, despite a high level of labour productivity in 2005, achieved high growth rates during the six years analyzed. On the other hand, the regions like Świętokrzyskie, Podlaskie and Łódzkie confirmed the phenomenon of convergence in labour productivity. The low level of labour productivity in 2005 corresponded to its growth rate above the national average. A negative aspect of divergence was reflected in the situation of the regions like Podkarpackie, Małopolskie, Lubuskie, and Opolskie. The low level of labour productivity in 2005 corresponded to its low growth rate in the analyzed period.

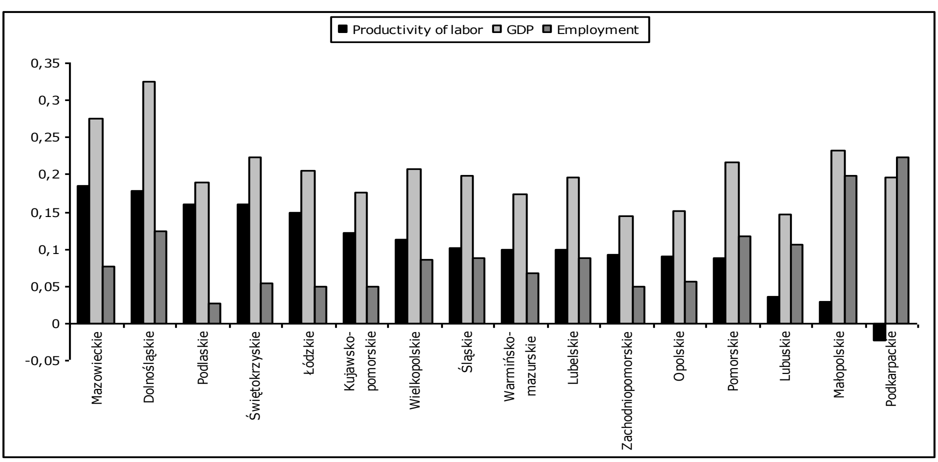
Figure 8 presents the decomposition of labour productivity growth rate for two components: GDP growth rate and employment growth rate. The regions are ordered from the largest to the smallest labour productivity growth rate. According to the Figure 8, the regions with highest growth rate of labour productivity were characterized by a lower employment growth rate. In addition, there was a negative correlation (–0.70) between the growth rate of labour productivity and the employment growth rate.

**Figure 7. Beta convergence of labour productivity across Polish regions, 2005–2011**




Source: own elaboration.

**Figure 8. Decomposition of labour productivity growth rate for GDP and employment growth rates**



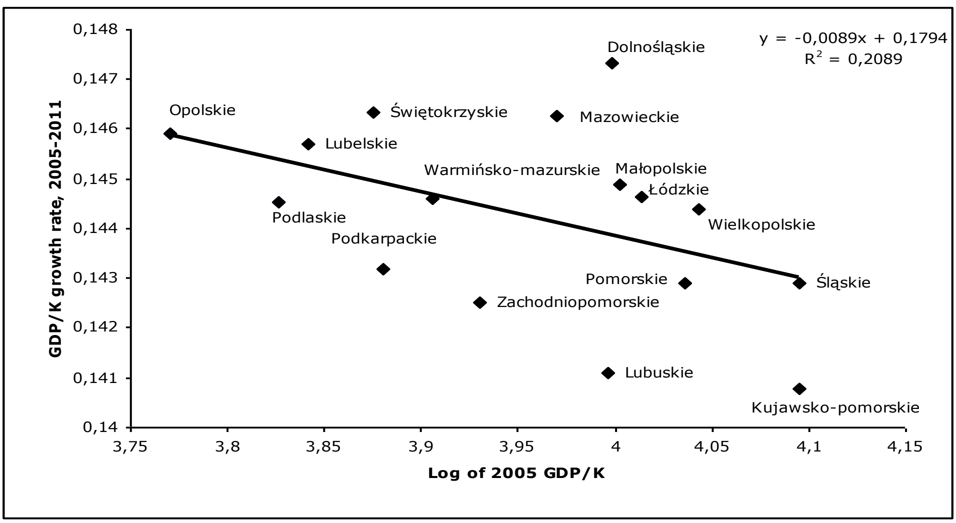

Source: own elaboration.

Another way to explain the existing differences in labour productivity is an application of the formula:

$$\frac{GDP}{L} = \frac{GDP}{K} \cdot \frac{K}{L}, \qquad (5)$$

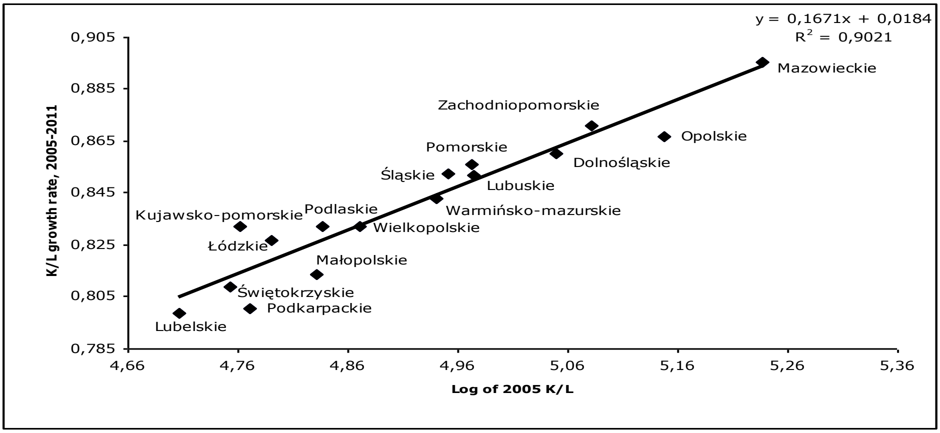
where $K$ is the stock of capital, $L$ employment, GDP/K capital productivity and K/L the level of employment capitalization. Figures 9 and 10 present the beta convergence of following elements of formula [5]. The relation of GDP/K confirmed a convergence. On the other hand, in case of the ratio K/L divergence took place. The convergence of labour productivity did not apply. The divergence of relation K/L determined the divergence of labour productivity in analyzed period.

**Figure 9. Beta convergence of GDP/K and K/L**




Source: own elaboration.

**Figure 10. Beta convergence of K/L**




Source: own elaboration.

## 5. Convergence across regions in EU countries

Another component of our research was devoted to the analysis of convergence in the EU countries at NUTS level (Nomenclature of Territorial Units for Statistic). The data used in the analysis came from the following databases: for the United Kingdom – Office for National Statistics; for Finland – Statistic Finland; for Poland and the rest of the countries – Statistical Yearbook of the Regions – Poland from 2005 to 2013. Table 5 contains regression results for the growth rate of per capita GDP in regions of the selected group of countries. The first column answers the question whether the convergence process took place in the period analyzed. The second column contains the estimate of *b* parameter of regression and the standard error of this estimate (in parentheses). The third column contains the value of the speed of convergence $\beta$ (%), which was calculated as: $\beta = -\ln(1+b)/T$. The fourth column contains $R^2$ of the regression and the standard error of the equation (in brackets). The selected countries can be divided in two groups. The first group includes countries like: Spain, Romania, Slovakia Hungary, Italy etc. Their cases did not confirm the phenomenon of convergence. The rich regions have grown more rapidly than the poor ones. Poland belonged to this group too. In all the analyzed countries that acceded to the EU on 1 May 2004, divergence took place. The second group includes both rich countries like Belgium and the Netherlands and poorer countries like Greece and Portugal, strongly affected by the crisis 2008–2013.

**Table 5. Convergence across regions in selected countries of EU, 2005–2011**

| | Convergence | b | Speed of convergence $\beta$ (%) | $R^2$ |
|---|---|---|---|---|
| Austria | Yes | –0.0541 | 0.93 | 0.0796 |
| | | (0.0696) | | [0.0401] |
| Belgium | Yes | –0.0715 | 1.24 | 0.5531 |
| | | (0.0214) | | [0.0217] |
| Denmark | No | 0.0240 | –0.39 | 0.0524 |
| | | (0.0588) | | [0.0225] |
| Finland | Yes | –0.2406 | 4.59 | 0.3274 |
| | | (0.0813) | | [0.0646] |
| France | Yes | –0.1087 | 1.92 | 0.1388 |
| | | (0.0553) | | [0.0601] |
| Greece | Yes | –0.2449 | 4.68 | 0.1786 |
| | | (0.1584) | | [0.1177] |
| Spain | No | 0.0379 | –0.62 | 0.0151 |
| | | (0.0744) | | [0.0572] |
| Netherlands | Yes | –0.0052 | –0.01 | 0.0001 |
| | | (0.1725) | | [0.0965] |
| Germany | Yes | –0.0686 | 1.19 | 0.1505 |
| | | (0.0272) | | [0.0361] |
| Portugal | Yes | –0.0187 | 0.31 | 0.0147 |
| | | (0.0684) | | [0.0359] |
| Czech Republic | No | 0.0075 | –0.13 | 0.0063 |
| | | (0.0388) | | [0.0330] |
| Romania | No | 0.2486 | –3.70 | 0.7482 |
| | | (0.0589) | | [0.0536] |
| Slovakia | No | 0.0200 | –0.33 | 0.1535 |
| | | (0.0333) | | [0.0328] |
| Sweden | Yes | –0.0246 | 0.42 | 0.0104 |
| | | (0.0983) | | [0.0419] |
| Hungary | No | 0.0543 | –0.88 | 0.1746 |
| | | (0.0528) | | [0.0442] |
| United Kingdom | No | (0.0686) | –1.11 | 0.1130 |
| | | 0.0325 | | [0.0498] |
| Italy | No | (0.0392) | –0.64 | 0.0642 |
| | | 0.0343 | | [0.0400] |

Source: own elaboration.

## 6. Conclusions

1. In the first part of this article the author studied the concentration of economic activity in Polish regions from 2005 to 2011. The results of the analysis indicate an increasing value of dispersion of GDP, population and employment. Hence, in Poland there was a strong concentration of economic activity in the analyzed period.
2. In the second part of the article the author tested the convergence of per capita GDP across Polish regions. Since the value of parameters $\sigma$ – convergence and $\beta$ – convergence are positive, absolute convergence did not apply. Rich regions grew faster than poor ones.
3. In the third part of the article the author analyzed the convergence of labour productivity. As in a case of per capita GDP, the convergence of labour productivity did not apply. The divergence of relation K/L determined the divergence of labour productivity in the analyzed period.
4. In the fourth part of the article the author analyzed the convergence across regions in EU countries. In case of countries that gained the accession to the EU on 1 May 2004, convergence did not apply. On the other hand, rich countries like Austria, Belgium or the Netherlands confirmed the phenomenon of convergence at the NUTS level in analyzed period.

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## Streszczenie

## KONWERGENCJA POMIĘDZY REGIONAMI POLSKI, 2005–2011

*Celem artykułu jest zbadanie zjawiska konwergencji pomiędzy regionami Polski w latach 2005–2011. Teoretyczno-empiryczny charakter artykułu zdeterminował wybór metod badawczych Część teoretyczna obejmuje analizę literatury poświęconej zagadnieniom konwergencji regionalnej. Z kolei, część empiryczna artykułu bazuje na badaniach statystycznych. Materiał statystyczny wykorzystany w artykule został zaczerpnięty z Roczników Statystycznych Województw Polski od 2005 r. do 2013 r. oraz baz danych urzędów statystycznych Wielkiej Brytanii i Finlandii. Przeprowadzone badania zmierzają do następujących przypuszczeń: W Polsce w latach 2005–2011 miał miejsce wzrost koncentracji aktywności ekonomicznej. Ponadto pomiędzy województwami nie zachodził proces konwergencji. Regiony bogate rozwijał się szybciej niż regiony biedne. Dywergencja miała miejsce także przypadku produktywności pracy. Dywergencja relacji K/L zdecydowała o dywergencji produktywności pracy w analizowanym okresie. W przypadku krajów UE, to przeprowadzone badania dowiodły, że kraje które uzyskały akcesję z UE w dniu 1 maja 2014, podobnie jak Polska, doświadczyły dywergencji regionalnej. Z kolei, państwa zamożne jak Austria, Belgia czy Holandia potwierdzały konwergencję regionalną na poziomie NUTS 2.*

***Słowa kluczowe***: *konwergencja regionalna, dochód per capita, produktywność czynników produkcji.*

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# The JESSICA Initiative: An Instrument For Urban Sustainable Development. Examples Of Urban Regeneration In Silesia (Poland) And Central Moravia (Czech Republic)

**Abstract**

*This article presents the practical possibilities associated with implementation of the JESSICA initiative in selected regions of Poland and the Czech Republic. i.e. in Silesia (Poland) and Central Moravia (Czech Republic). The post-socialist nature of these regions was determinative of their backwardness in terms of socio-economic development, as well as available infrastructure. Nonetheless these regions are different to a large extent, because Silesia is a typical post-industrial area, where the mining industry has been in operation for many years. After significant limitation of the scale of its economic operations, many areas and objects remain unused. They can be revitalized and then used to contribute to more sustainable socio-economic development of the region. In turn, Central Moravia represents a geographical area which has been adversely affected by the effects of the ongoing economic crisis. To some extent, Silesia suffers from similar problems as Central Moravia, but it also encounters some specific difficulties arising from its post-industrial character. For this reason, there was a necessity to properly identify opportunities to support projects financed from the JESSICA initiative in the analyzed regions, as well as to adapt the scope of these projects to the specific socio-economic conditions in the regions under investigation.*

***Keywords:*** *urban sustainable development, urban revitalisation and regeneration, JESSICA initiative, post-socialist countries, regions and cities*

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## 1. Introduction

Already 80% of the EU population lives in urban areas, meaning that cities have become the crucial places concerning the economy and quality of life. Hence European cities have become basic targets of sustainable development measures. There are two tendencies related to the evolution and development of European cities. On the one hand cities are the places of a vivid growth in terms of technology, science and education, but on the other hand they cope with serious problems like degradation of the environment and urban decay. In order to address these problems the necessary capacity and resources must be mobilized. Capacity issues are related to, among others, multi-level actions and the mobilization of a broad range of actors, while resources should be secured by long-term investment programmes financed by both the public and private sectors.

At the EU level the cohesion policy has been used to support urban projects implementing the concept of sustainable development, including regeneration issues. The cohesion policy is very closely related to the concept of multilevel governance. This term goes back to the 1990s and puts emphasis on the presence and influence of many different actors, at different levels of European governance, on the development of EU policy. Multilevel governance became a central feature of the EU cohesion policy after 1998 when the subsidiarity principle was introduced. Decision-making competencies began to be shared between the EU, national and sub-national actors, and regionalization processes accelerated. Such tendencies contributed to an increase in the efficiency and legitimacy of policy-making as well as the practical realization of partnership principle of the EU cohesion policy (European Parliament 2014, pp. 9-10).

Involvement of private actors in the implementation of regional policy is becoming increasingly important. This is especially valid for the JESSICA (Joint European Support for Sustainable Investment in City Areas) initiative, which is an innovative financial instrument giving an opportunity to ensure the sustainable economic development of European cities. The initiative encourages the involvement of financial institutions and promotes public-private co-operation in the realization of its projects (Dąbrowski 2013). Moreover, revitalization projects implemented under JESSICA require, due to their multidimensional and multiannual nature, co-operation between different partners.

The post-socialist regions in the EU face unique problems because they have been subjects of transformation processes, which revealed and even exacerbated some adverse tendencies like the lack of urban investment and degradation of the urban environment and infrastructure. Silesia is a goodexample of such a region, because in the socialist period it was one of the most industrialized spaces in Europe, and after the collapse of the socialist system it experienced a very deep transformation which is still not complete.

The aim of this work is to present early attempts to use the JESSICA initiative for revitalization purposes in a post-socialist region. The paper is composed of three parts. The first part introduces the idea of urban sustainable development; the second is devoted to evolution and revitalization processes in Silesia and Central Moravia. The third part is focused on features of revitalization projects implemented in Silesia and Central Moravia which are co-financed from the JESSICA initiative.

## 2. Idea of urban sustainable economic development and its link with revitalization

Between 2011 and 2050, the world population is expected to increase by 2.3 billion, from 7.0 billion to 9.3 billion (UN-DESA 2011). At the same time, the population living in urban areas is projected to increase by 2.6 billion, from 3.6 billion in 2011 to 6.3 billion 2050 (UN-DESA 2011). Thus urban areas of the world are expected to absorb all the population growth projected over the next four decades, while at the same time drawing in some of the rural population.

According to Revi and Rosenzweig (2013), cities have a very high potential for sustainable transformational change due to their:

- concentration of economic activity;
- potential for social transformation;
- high levels of annual investment in infrastructure and buildings;
- high degree of innovation;
- nimble local governments;
- connection to surrounding rural and natural environments;
- ability to reduce eco-footprints by densification;
- suitability for systems-based solutions.

Urban sustainable development can be defined as the extent of all the practices and activities which (Pisano, Lepuschitz and Berger 2014, p. 7):

- relate to sustainable development within cities (e.g. promotion of organic farmers markets, access to sustainable mobility, reduction of electricity consumption in buildings, recycling and waste prevention, etc.);
- take into consideration the processes of urbanisation of cities in the light of sustainable development (e.g. reduction of urban sprawl, construction of bike lanes, promotion of pedestrian areas, etc.);
- reflect on the throughput of cities with a sustainable development perspective (e.g. prevention of landfills, attention to water consumption, etc).

Williams (2010, pp. 128-132), and some other authors (Pisano, Lepuschitz, Berger 2014, p. 6) stress that an 'integrated approach' is necessary if we wish to tackle the 'huge urban challenges' ahead. They also argue that effective integration needs to take into consideration all the diverse dimensions that characterize urban challenges and potentials under the guidance and steering of urban sustainable development.

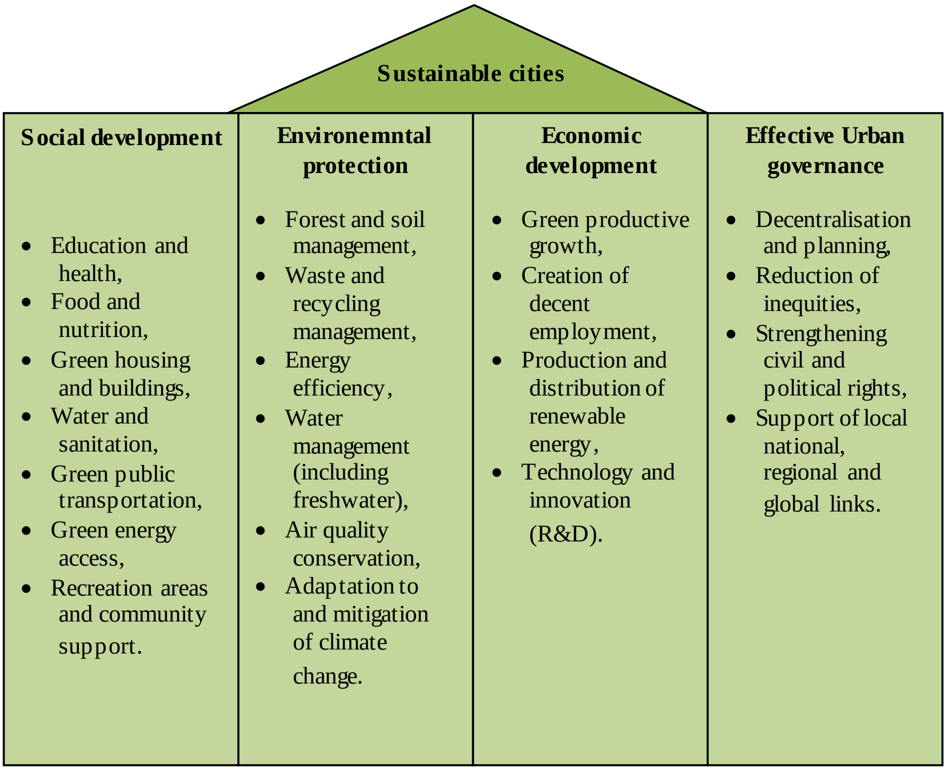
The processes leading to more sustainable development that take place at the urban level will have effects not only on the city itself, but also 'outside' the city, and hence have a more widespread effect – locally, regionally, nationally, and globally – thus requiring a multi-level governance approach. Moreover, according to Bulkeley and Betsill, "problems of translating the policy rhetoric of urban sustainability into practice cannot be explained by factors confined to a local arena of governance, or by struggles between the central and local state, but reflect argumentative struggles occurring in multiple sites and spaces to define and defend particular notions of what urban development ought to be" (Bulkeley, M. Betsill 2005, p. 51).

Figure 1 shows the four pillars of the sustainability of cities: i) Social development, ii) Environmental protection, iii) Economic development, and iv) Effective urban governance, and includes various examples for each pillar.

The following six blocks of issues assist in describing urban sustainable development (Pisano, Lepuschitz, Berger 2014, p. 8):

1. The social perspective,
2. Economic development,
3. Environmental aspects,
4. Access to utilities and infrastructure,
5. Connections derived from the urban form and spatial development,
6. The inclusion of multi-level governance and institutional development.

**Figure 1. Pillars of sustainable cities**




Source: Pisano, Lepuschitz, Berger 2014, p. 8.

The major fields of action in response to urban challenges, from the perspective of sustainable development, comprise urban regeneration, restoring cultural, religious and historic urban heritage, improving housing stock, investing in the fields of social inclusion, education and training, as well as modern Information and Communication Technologies (Kolivas, 2007, pp. 564-555). All these activities are very closely linked to the urban sustainable development building blocks and to urban policy with reference to policies that promote urban development, urban regeneration (or urban renewal) and urban revitalization at various levels (EC 2009, p. 55). According to the European Commission's approach (EC 2009, p. 55), revitalization is carried out in order to restore the capacity for independent and sustainable development of these parts and areas of a city which, for various reasons, are in crisis. Urban regeneration (revitalization) is defined as a coordinated process managed by a local government, the local community and other stakeholders, being the subject of a development policy which aims at: correction of urban space degradation and crises, supporting development and qualitative changes; improvement of dwelling environments; protection of national heritage with respect to sustainable development (Jarczewski, Ziobrowski 2010, p. 13). Therefore revitalization is based on the concept of governance which takes into account a wide range of social needs, especially of local communities, and in particular those related to the creation of suitable living conditions in the following aspects: economic (increase in the socio-economic welfare of residents), ecological (environmental quality), social (inclusion of marginalized groups), political (the quality of representative and direct democracy), aesthetic (quality of urban infrastructure). This is manifested in specific regeneration projects in deprived areas. Revitalization is also based largely on a quest to satisfy the needs and preferences expressed by the people living there via a process of participation, implemented by surveys, referendums, public debates, panel discussions, focused interviews, etc. An important role in this regard is played by public-private partnerships and the involvement of private entities, associations, and pressure groups. It is important to ensure cooperation between the institutions of the public administration and society. Society's variety of needs should be taken into account by the public institutions when making decisions on the subject and scale of the revitalization processes. The revitalization processes which have taken place in Europe, especially in the Central and Eastern European countries (CEECs), are based largely on the implementation of the paradigm of "democratic co-governing" (governance), which was the result of the evolution of public management. Their appearance in the 1980s and 1990s was caused by a crisis of governance. Although many scholars claim that the economic transformation of the CEECs has already been completed, revitalization still remains one of the crucial problems in post-socialist regions.

## 3. Specific features of revitalization processes in post-socialist countries, regions and cities

Certainly the post-socialist countries, regions and cities have experienced significant transformation in the recent decades. During socialism the inner and central parts of cities declined in economic, social and physical terms. The new political, economic and social circumstances created opportunities for revitalization of neglected urban and suburban areas, especially those which had/have potential for development. Various revitalization processes have been taking place in the post-socialist urban zones, with significant consequences for the economic, social, physical and natural environment. Obviously, the different circumstances at the national, regional and local levels influence the dynamics of revitalization. This is our motivation for our examination of the revitalization outcomes of post-socialist cities, and the discussion below.

The possibilities to implement urban revitalization projects in the cities located in the CEECs appeared only at the beginning of 1990s, following the collapse of the socialist system. According to J. Temelová (2009, p. 16), in Western Europe (as well as in North America) 'urban revitalization usually relies on strong involvement of the public sector, entrepreneurial urban governance, targeted urban policies and public-private partnership'. The form and the course of revitalization in Central-East European cities has varied from the experiences of cities located in the Western part of Europe. The post-socialist areas and communities are much more influenced by economic mechanisms and the role of state is diminished. The real power of public authorities in guiding revitalization processes is much weaker in post-socialist cities, often because of budget restrictions, limitations imposed by private land ownership, protracted bargaining processes, and the lack of experience and expertise (Keivani, Parsa, McGreal 2001, pp. 245-247; Badyina, Golubchikov 2005, pp. 113-129; Sailer-Fliege 1999, pp. 7-16).

The features of socio-economic processes vary within the post-socialist cities, as a consequence of differentiated transformation policies, historical legacies, and the level of socio-economic development of particular countries (Kovács 1999, pp. 1-6).

According to J. Kunc et al.(2014, p. 66) 'transformation of the economy and society, which had begun in the Eastern and Central European countries in the 1990s, have also occasioned a profound change of the urban environment. Extensive de-industrialization led not only to the rise of neglected and abandoned objects and industrial estates, but also to an increase of technical, environmental, and above all social deprivations and risks'. The changes which occurred in Central and Eastern European countries, regions and cities were associated with both economical and societal transformation, intensive deindustrialization and demilitarization, as well as with the dynamic construction of residential, business or administrative complexes (Sýkora 2008, pp. 113-140; Krzysztofik, Runge, Kantor-Pietraga 2012, pp. 201-224). This was connected mainly with the impact of economic transformation, which caused the abandonment of many industrial, military and transportation objects or former community culture and sport facilities, often located adjacent to the city centre. This situation has been documented in many studies from the Czech Republic (Vojvodíková 2005, pp. 49-56; Hercik, Šerý, Toušek 2011, pp. 107-119), Poland (Krzysztofik, Kantor-Pietraga, Spórna 2013, pp. 20-35), Hungary (Barta, Beluszky, Czirfusz, Györi, Kukely 2006), and Romania (Filip, Cocean 2012, pp. 155-164). Revitalization of the above-mentioned areas requires very high financial inputs, which has caused the postponement of projects aimed at their realization. Cities do not have the means to realize all brownfield revitalization projects, which is why they often leave historical centres and their vicinities depreciated and underused (Cabernet 2005). Brownfields are a very significant problem, especially for industrial cities whose development was significantly affected by the expansion of industry and railway transportation (Rae2003), which was connected with the mining of raw materials (especially black coal) for energy production and the associated steel production, which dominated their economies (Birch, MacKinnon, Cumbers 2010, pp. 35-53; Hutton 2010).

## 4. Problem of revitalization in the Silesian Voivodeship

The Silesian Voivodeship (province) is an excellent example of a region dominated by large post-communist cities. The reorganization of urban landscapes in these post-communist cities, which began with the institutional reforms of the 1990s, is far from completed, especially in terms of revitalization or regeneration (Sýkora, Bouzarovski 2011, p. 3). The economic development of post-communist cities was characterized by both development and decline. The latter was related to the closure of many industrial enterprises. This deindustrialization influenced the urban landscapes, leaving extensive brownfields which posed both a potential for redevelopment as well as a threat of further decay (Sýkora, Bouzarovski 2011, p. 7).

The Silesian Voivodeship is one of the most affected regions with respect to structural changes and degradation, understood as a lack of appropriate municipal structures and deterioration of the state of economy (Urząd Marszałkowski Województwa Śląskiego 2011, pp. 13-14). There are four dimensions of such degradation:

- material (deprivation of technical features),
- functional (unfavourable usage),
- moral (unfavourable perception and lack of social acceptance),
- spatial (inharmonious co-existence of objects in a space).

The revitalization processes in Poland, including the Silesian Voivodeship, can be divided into three stages (Urząd Marszałkowski Województwa Śląskiego 2011, pp. 14-15). The first stage includes the period 1989–2000, when revitalization was not included in planning documents at the national level due to a lack of financial resources and legal solutions. The situation changed with the perspective of the EU accession, when revitalization became a part of the National Strategy of Regional Development 2001–2006. Projects related to revitalization were incorporated in the Integrated Regional Operational Programme, which provided financial support for infrastructural projects. Social goals were not included and could only be implemented using a beneficiary's own financial resources or within the framework of other structural funds' actions. The third stage of the revitalization process comprises the period 2007 – 2013, when urban regeneration policy became more ordered, revitalization projects were better prepared, and new mechanisms emerged enabling an increase in the efficiency of revitalization activities. An ideal revitalization project should combine the solution of societal problems, environmental and cultural heritage protection, sustainable development, and building of a sense of identity and identification with a living space.

In the period 2007 – 2013 revitalization activities in the Silesian Voivodeship were supported from the European Regional Development Fund within the framework of the Regional Operational Programme for the Silesian Voivodeship 2007-2013 (ROP WSL), Priority 6: *Sustainable urban development aiming at an increase of competitiveness of urban space of the Voivodeship*. Urban regeneration is a subject of measure 6.2, which comprises three sub-measures: 6.2.1 *Revitalization of "big cities"*, 6.2.2 *Revitalization of "small cities"* and 6.2.3 *Revitalization – JESSICA*. Support could be granted for the following types of projects:

- reconstruction and repair of industrial facilities, former military facilities or former state farms, including adaptation objectives contributing to the elimination of significant economic or social problems in the revitalized area;
- the disposal of urban areas, including the construction, reconstruction and repair of buildings in the revitalized area, contributing to the elimination of significant economic or social problems in the revitalized area;
- completion and renovation of existing buildings, including buildings seals, repair and use of undeveloped buildings, contributing to the elimination of significant economic or social problems in the revitalized area;
- comprehensive preparation of areas designated for economic activity;
- creation and development of monitoring systems in order to improve safety in public areas;
- replacement of asbestos elements of residential buildings with materials less harmful to human health.

A basic operational document at the local level is a Local Revitalization Programme (LRP), which outlines the revitalization area, scope and goals. Unfortunately in the Silesian Voivodeship these documents are not complete. They are missing data and there is a lack of information on the ownership structure, surface, allocation and other features of the space under revitalization (Urząd Marszałkowski Województwa Śląskiego 2011, p. 7). On one hand the LRPs are treated as a means of planning and monitoring of revitalization activities in the long-term, while on the other hand they are often regarded as just documents necessary to obtain funds from the Regional Operational Programme for specific projects.

The market of revitalization projects in Silesia was shaped mainly by the Integrated Regional Operational Programme, then the Regional Operational Programme, while Local Revitalization Programmes were adapted to their guidelines. As a result, especially during the period 2004 – 2006, most projects were unprofitable and were limited to the visual and functional revitalization of the city centres. and rarely were buildings or former industrial areas at the core of regeneration activities. Under the Regional Operational Programme the situation has been ameliorated somewhat due to more liberal guidelines and the fact that most of the projects are eligible for financing (City Consulting Institute Sp. z o.o. 2009, p. 11).

Big cities are the most active in acquiring revitalization funds from the Regional Operational Programme. They include those cities which populations of 50,000 or more, like Bielsko-Biała, Chorzów, Zabrze, Częstochowa, Katowice, Bytom and Rybnik.

The main financial sources for revitalization projects in the Silesian Voivodeship come from (City Consulting Institute Sp. z o.o., p. 73):

- own local government unit resources,
- EU funds,
- European Investment Bank (credits),
- commercial banks (credits),
- private capital.

Opportunities related to financial resources are crucial to enable local governments to undertake revitalization projects and define their scale. Most of the revitalization projects during the 2004 – 2006 programming period were completed with support of the Integrated Regional Operational Programme, which means that the Silesian Voivodeship had not elaborated financial mechanisms other than the use of grants (City Consulting Institute Sp. z o.o., p. 19). According to survey, financial support in the form of grants remains the most attractive for Silesian local governments, and public-private partnerships are not considered by them to be a good option (Urząd Marszałkowski Województwa Śląskiego 2011, p. 8). Most local governments claim that they are too poor to carry out complex projects without grant support.

## 5. Implementation of JESSICA in Silesia

The Silesian Voivodeship has allocated JESSICA funds exclusively to revitalization projects. This decision results from, *inter alia*, the outcomes of SWOT analyses, as presented in Figure 1.

In general, revolving financial resources are welcomed by the market in Silesia, although the market for profitable projects is still very narrow. On one hand revitalization projects carried out by local governments are financed in the first instance from grant schemes, and only if such grants are not available are other possibilities like JESSICA considered. On the other hand, the market looks forward to mechanisms which will be sustainable in the long-term. There is also a necessity to implement profitable projects which are logically and economically related to other activities in the region.

Implementation of JESSICA in Silesia has specific characteristics. Only one Urban Development Fund (UDF) was selected – Bank Ochrony Środowiska S.A. and there is an exclusive partner supporting project acquisition and preliminary evaluation of project proposals – Centrum Projektów Rewitalizacji S.A. The European Investment Bank (EBI) plays the role of a holding fund. This solution is favourable as the EBI has vast experience in JESSICA's implementation. Agreements can be based on an internal EBI regulation, without the necessity to resort to public procurement procedures.

So far 16 agreements under JESSICA have been signed relating to revitalization projects. It is worth noting that the JESSICA initiative in Silesia started to be operational relatively late, as the first agreement was signed only in April 2012. Two types of investments were the most popular: revitalization of housing stock and buildings, and revitalization of playgrounds. Five out of sixteen projects were carried out by housing associations, but at the same time their value was the lowest (a project value usually did not exceed EUR one million). Improving old housing stock and buildings always relates to the realization of important social goals like social inclusion, especially concerning youth, long-term unemployed and pathologic families, safety improvement and improvement of urban infrastructure (free Wi-Fi access). Revitalization of playgrounds was financed by JESSICA to a large degree (even up to 75% of costs) due to its contribution to the fulfilment of social goals like increasing community ties and expanding the culture of spending free time through the creation of attractive, safe recreational spaces and the construction of absent parking lots. Some of these projects are at least partially addressed to children, elderly and sick people, improving access to health services and care. The renovation of old buildings into shopping malls creates spaces for cultural and entertainment activities.

**Table 1. SWOT analysis for possibilities of financing revitalization projects from JESSICA in the Silesian Voivodeship**

| Strengths | Weaknesses |
|---|---|
| • significant number of prepared and implemented projects; continuity in financing revitalization ventures<br>• increased influence over the project through the implementation of integrated projects of greater scope and value, including commercial ones generating a substantial revenue<br>• private sector participation in financing projects<br>• quick payment, availability of funds and the possibility of accelerated use of resources<br>• a wide range of financial products (loans, loans, capital injections, guarantees)<br>• possibility of implementing a renewable facility, where sources can be used in the long-term perspective | • relatively small amount of funds for co-financing projects<br>• necessity to seek additional sources of financing mechanisms for its development<br>• lack of experience with financial instruments for urban development<br>• low awareness among potential beneficiaries regarding the JESSICA initiative<br>• lack of Integrated Urban Development Plans, Local Revitalization Programmes include activities that are not linked systematically<br>• lack of proper preparation of local governments to enter into PPP contracts |
| **Opportunities** | **Threats** |
| • possibility of implementing renewable competing financial instruments<br>• increased allocation of funds by the opportunity to participate of many institutions and venture financing partners in the framework of the JESSICA<br>• decrease of interest rates<br>• loose monetary policy<br>• willingness of local governments, financing institutions to finance revitalization projects<br>• implementation of PPP* projects financed by private funds | • increase in interest rates on credits and loans<br>• restrictive monetary policy<br>• other competing mechanisms for financing projects<br>• difficult situation on the credit market and stringent requirements of banks<br>• involvement of local governments in investments that do not relate to the processes of revitalization<br>• high levels of debt and debt service of local government units<br>• passive attitude of public entities to engage in projects financed and implemented with private partners in PPP* |

* private-public partnership

Source: Urząd Marszałkowski Województwa Śląskiego 2011, p. 71.

According to the representatives of the Marshall's Office in Katowice JESSICA has the following advantages: it is an innovative way for using EU funds; project proposals under the JESSICA scheme are better prepared in comparison to grant project proposals; and investors have the opportunity to carry out bigger investments in comparison to a grant scheme. There are also some problems related to the implementation of JESSICA in Silesia, which refer especially to small and medium-sized enterprises. These include: the requirement for collateral for the loan (120% of loan value); assurance of a minimum profitability of the project; and lack of collaboration between public and private entities in the form of PPP. There are also difficulties concerning the issue of ownership and interpretation of legislation due to the lack of appropriate guidelines in this respect.

## 6. Revitalization in Central Moravia

From the point of view of habitation, the Olomoucký and Zlínský regions are urbanized to a medium degree. Thus they do not belong to those regions which are heavily urbanized, such as, for example, the Moravskoslezský, Liberecký or the Ústecký regions. The number of towns in these regions is below average. The degree of urbanization, at least according to the percentage of municipal population, is around 60% (for comparison - the Liberecký region is at a level of 79%, and the Ústecký region 80%). Only the Vysočina and the Středočeský regions have a lower municipal population density. Thanks to this concentration and the absolute sizes of the settlements, it may be said that these two regions represent an important growth potential in the framework of the Czech Republic or the Central European region (EIB 2011, p. 11).

On the basis of analysis of key indicators of Central Moravia's urban development, it is possible to formulate the following findings (EIB 2011, pp. 11-14):

- population growth in the Central Moravian Region (CMR) is below average; towns are losing their inhabitants;
- CMR is not, in the context of the entire Czech Republic, the most economically attractive region. Moreover it is hardest hit by the economic crisis;
- CMR has a relatively high environmental level;
- CMR is relatively attractive for visitors and tourists.

The Central Moravia Cohesion Region (CMCR) is characterized by a weak economy and low investment activity. Other factors such as, for example, human and natural resources are of relatively good quality or do not show any marked deviation. The strong trait of the region is its attractiveness for visitors.

The Integrated Urban Development Plan (IUDP) is a document which enables a set of interventions, financed by Structural Funds (SF), notably from the Regional Operational Programme and the Integrated Operational Programme (other OPs can be involved as well). IUDPs are put in place if the number of inhabitants at least 50,000 (this is the case of the cities of Olomouc and Zlín). The plan can be thematically or territorially focused and provides development goals and measures. An Integrated Area Development Plan (IADP) is analogical to the IUDP, but covers not only one city but rather a functional area.

JESSICA's implementation in the present ROP, CMR, and OP Environment especially supports the following areas (EIB 2011, p. 21): *ROP CMCR 2.1 Development of regional centres; ROP CMCR 2.2 Development of towns; ROP CMCR 2.4 Support for enterprise; ROP CMCR 3.1 Integrated development of tourism; ROP CMCR 3.2 Public infrastructure and services; ROP CMCR 3.3 Business infrastructure and services; OP Environment 3.2 Implementation of energy savings and using waste gas heat in the public sector; partially also: ROP CMCR 1.1 Regional transport infrastructure* and *ROP CMCR 1.2 Public transport*.

Pilot projects within PPP and JESSICA financing are included in ROP CMCR as one of the 2.1 and 2.2 Areas of support activities. This is approved in the ROP implementation document, and there is no need to change the ROP. Concrete conditions of usage should be eventually specified in a call for Expression of Interest for the selection of an Urban Development Fund (UDF). At the present time there are no financial resources allocated specifically for the partial activity "Pilot actions". There is only an indicative allocation for the total areas of support 2.1 and 2.2.

All the above-mentioned areas of support, especially investments in leisure activities, social and transport infrastructure, increase the availability and quality of services and consequently attract people to live in urban areas. Regeneration of brownfield locations and the modernization and building of transport and technical infrastructure in industrial zones increase the attractiveness of urban areas for small and medium-sized entrepreneurs interested in investments, including possible foreign investments. In addition the development of a tourism infrastructure, coordination of activities, and linking of "commercial" and "public" attractions could become an important sector of the regional economy, a source of new job creation and motivation for living in urban areas. The inability to solve these problems is largely the result of market failure, i.e. its unwillingness and inability to solve these weaknesses in the long term. Prospective projects in these areas of support could generate sufficient incomes for JESSICA financing (EIB 2011, p. 21).

JESSICA was therefore launched with a view to providing new opportunities to the Managing Authority (MA) responsible for the cohesion policy programmes in the programming period 2007-2013, by (EIB 2011, p. 6):

- ensuring long-term sustainability through the revolving character of the Structural Fund's contribution of funds specializing in investing in urban development;
- creating stronger incentives for successful implementation by beneficiaries by combining grants with loans and other financial tools;
- leveraging additional loan resources for public and private partnerships (PPPs) and other projects for urban development in all the regions of the EU; and
- contributing financial and managerial expertise from specialist institutions such as the European Investment Bank (EIB), the Central European Bank (CEB) and other financial institutions.

## 7. Implementation of JESSICA in Central Moravia

The long list of projects which have been submitted were assessed with respect to their applicability for JESSICA on the following criteria (EIB, 2011, p. 30):

- They should address a problem identified in the analysis of financing needs and market failure in the region;
- They should address the needs of town/city development and are in accordance with its development strategy;
- They are not in the stage of implementation yet and will not be launched before applying for JESSICA support with regard to state aid and cost eligibility (Council Regulation (EC) 800/2008);
- They have not currently secured another public intervention, allocated grant within the IUDP, or operational programme;
- They should generate financial revenue of a considerable amount in the operational phase, or have other financial effects (expenditure savings in accordance with efficiency of operation, or other indirect fiscal effects directly resulting from project holders);
- They should generate sufficient socio-economic benefits, measured by a Cost & Benefit Analysis (CBA);
- The MA should specify a requested rate of return (% of ERR) on investments;
- They are significant in investment volume (at least CZK 20 million), due to the nature and financial potential of JESSICA.

Table 2 shows a SWOT analysis illustrating possibilities of JESSICA's application in the Central Moravia Cohesion Region.

**Table 2. SWOT analysis of JESSICA in the Central Moravia Cohesion Region (CMCR)**

| Strengths | Weaknesses |
|---|---|
| • unspent allocation of ROP CM* for pilot implementation,<br>• possible leveraging of structural funds (SF) from the private sector,<br>• ex-ante investment sources,<br>• existence and identification of "JESSICAble" projects in the region,<br>• gaining of experience with financial engineering instruments by regional bodies and municipalities,<br>• rather positive attitude of regional stakeholders,<br>• recycling of funds for further urban projects | • lack of experience and knowledge (regional, national level),<br>• implementation of grants and JESSICA at the same time,<br>• no or weak cooperation with the private sector,<br>• most potential projects are not mature enough (e.g. financial forecasts are missing),<br>• few resources available within ROP CM, low efficiency and impact,<br>• lack of methods for addressing and engaging JESSICA projects into municipal strategies,<br>• low level of investment funds for co-financing |
| **Opportunities** | **Threats** |
| • addressing projects which identified market failure,<br>• additional sources from other Operational Programmes (re-allocation),<br>• development of cooperation with private sector,<br>• transfer of know-how and best practices from Moravian-Silesian Region,<br>• available support from EIB,<br>• gathering of know-how for next programming period of 2014-2020 | • investment potential in region (market) seems limited, higher risk at the project level,<br>• willingness of the implementation system,<br>• not all regulations on project investments are clear (e.g. State Aid),<br>• low level of public investment funds,<br>• actual low available allocation, lower added value of JESSICA financing |

Source: EIB 2011, p. 51.

## 8. Conclusions

Ensuring sustainable socio-economic development of regions and cities is one of the main objectives of current economic policy. This is particularly important for the post-socialist regions of Central and Eastern Europe, with an obsolete infrastructure and in many cases strongly affected by the ongoing economic crisis. Silesia and Central Moravia are good examples of such regions.

The revitalization of urban areas, aimed at modernization and adaptation to the needs of local communities, is one of the ways to ensure sustainable development. In view of the economic and financial crisis, the issue of securing an appropriate source of financing for revitalization projects becomes even more important. Previous analyses reveal that JESSICA is an effective tool for the implementation of a sustainable development strategy, allowing to raise funds on more favourable terms in comparison to alternative methods of financing, primarily in the form of loans or grants. Projects funded through JESSICA should encompass the specificities of the analyzed regions and fit in with the objectives set out in their development strategies. Only such an approach can ensure efficiency and thus increase the level of socio-economic sustainability of regions under investigation. Based on the analysis of JESSICA's performance in the regions, it can be stated that the direction of activities is appropriate and that the JESSICA projects contribute to socio-economic activation of the area. In the future, efforts should be made to increase the scope and effectiveness of the use of funds allocated for the revitalization of post-industrial regions. This will enable transformation of these regions into socio-economically developed areas. The acceptance of projects funded through the JESSICA fund should be based on the priorities of local communities, which can be identified with the aid of public opinion surveys (e.g. questionnaires, surveys, community interviews, etc.).

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## Streszczenie

## INICJATYWA JESSICA JAKO INSTRUMENT WSPIERANIA ZRÓWNOWAŻONEGO ROZWOJU MIAST. PRZYKŁADY REWITALIZACJI OBSZARÓW MIEJSKICH NA ŚLĄSKU I W ŚRODKOWYCH MORAWACH

*W artykule przedstawiono ocenę możliwości implementacji narzędzi finansowych funkcjonujących w ramach inicjatywy JESSICA w wybranych dwóch specyficznych, przede wszystkim na ich post-industrialny charakter, ale także z powodu ich odmiennej charakterystyki społeczno-ekonomicznej, regionach Europy Środkowej: na Śląsku i w Środkowych Morawach. Problematyka ta prezentowana jest w kontekście możliwości wspierania zrównoważonego rozwoju obszarów miejskich położonych w tych regionach poprzez działania mające na celu ich rewitalizację. Na początku zostały zaprezentowane ogólne ramy teoretyczne dla* *prowadzonych rozważań, oparte na dokonanym przez autorów przeglądzie literatury, kładącej szczególny nacisk na możliwości wykorzystania środków finansowych pochodzących z funduszy spójności Unii Europejskiej, a zwłaszcza instrumentów funkcjonujących w ramach inicjatywy JESSICA, w kierunku rewitalizacji regionów post-socjalistycznych. W rozdziale pierwszym omówiono koncepcję zrównoważonego rozwoju gospodarczego w aspekcie możliwości dokonywania działań w zakresie rewitalizacji ww. regionów, a zwłaszcza na ich ogromny potencjał rozwojowy w tym zakresie oraz na dziedziny i możliwe poziomy implementacji tego rodzaju przedsięwzięć i ich korzystne efekty. W rozdziale drugim zaprezentowano specyficzne cechy procesu rewitalizacji w krajach, regionach i miastach post-socjalistycznych. Rozdział trzeci zawiera skrótowy opis dotychczasowego przebiegu procesów rewitalizacji oraz analizę szczegółowych dziedzin i ram prawnych regulujących możliwości implementacji narzędzi finansowych w ramach inicjatywy JESSICA. Wyszczególniono także najistotniejsze aspekty degradacji rozpatrywanego obszaru, które determinują rodzaj i charakter realizowanych procesów rewitalizacji. W rozdziale czwartym zaprezentowano dotychczasowy przebieg tych procesów oraz zasadnicze problemy związane z ich implementacją (w oparciu o analizę SWOT). Zwrócono także uwagę na korzyści dla województwa płynące z realizacji projektów finansowanych w ramach inicjatywy JESSICA na obszarze Województwa Śląskiego. Rozdział piąty zawiera omówienie nowych możliwości wykorzystania funduszy pomocowych UE w regionie Środkowych Moraw w okresie programowania 2007-2013 oraz dotychczasowe obszary wsparcia w ramach priorytetów ustalonych przez Unię Europejską. W rozdziale szóstym przedstawiono z kolei kryteria, w oparciu o które dokonywany jest wybór projektów do finansowania w ramach inicjatywy JESSICA oraz zaprezentowano analizę SWOT dotyczącą możliwości wykorzystywania tego rodzaju środków finansowych przy realizacji projektów rewitalizacyjnych na obszarze regionu Środkowych Moraw. Podsumowanie zawiera wnioski dotyczące dotychczasowego i przyszłego charakteru procesów rewitalizacyjnych finansowanych przy pomocy środków finansowych w ramach inicjatywy JESSICA w rozpatrywanych regionach.*

***Słowa kluczowe****: zrównoważony rozwój miast, rewitalizacja i regeneracja obszarów miejskich, inicjatywa JESSICA, kraje, regiony i miasta postsocjalistyczne*

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JACEK GAD[*]

# The Relationship Between Supervisory Board And Management And Their Communication Processes In Publicly Listed Companies In Poland

## Abstract

*The focal point of this study is to present the results of empirical research concerning operation of supervisory boards in the practice of companies listed on the Warsaw Stock Exchange (WSE).*

*The main subject of interest concerns two research areas: the character of the relationship between as well as the methods and tools employed in communications between a supervisory board and management. The research paper consists of theoretical concepts regarding the supervisory boards' tasks and the relationship between a supervisory board and a management board. Moreover, another area of interests concerns legislative changes that, according to the author, have had a great influence on functioning of supervisory boards in the practice of WSE-listed companies.*

*The conclusions presented in the paper have been formulated on the basis of a review of the literature, analysis of pertinent regulations, and a questionnaire survey of members of supervisory boards which was conducted in September, October and November 2011 (the data was obtained by means of postal surveys).*

***Keywords:*** *supervisory board, management, corporate governance, communication*

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## 1. Introduction

Corporate governance plays an important role in the modern free-market economy. What's more, it needs to be kept in mind that corporate governance, together with an appropriate level of financial disclosure and high standards of financial reporting, is one of the engines of modern capital markets' development. According to C. Mallin (2002, pp. 254-255), if a given country is not perceived as one in which good corporate governance practices are followed, capital will flow to other countries instead. If investors believe that the disclosure level or when a certain country has low accounting and reporting standards, capital also flows to other countries. All companies in a given country – no matter how professional is the practice of individual companies – suffer the consequences of such a situation. In Poland, the development of corporate governance structures has run parallel with the growth of the young capital market.

A significant link in corporate governance, especially in the two-tier model, is the supervisory board. It plays the role of an internal and independent guardian of a company's interests. What's more, due to the financial scandals of the early 21$^{st}$ century and the economic crisis, business and national legislators, as well as international organizations, impose requirements related to the operation of supervisory boards and to some extent they transfer responsibility for the security of business transactions onto supervisory bodies. This process is reflected in, among other things, the imposition of responsibility for the accuracy and reliability of financial statements onto supervisory boards.

At the same time it should be stressed that in the young Polish free-market system, where a two-tier governance model is used, the role of the supervisory board is not precisely specified. As J. Jeżak (2010, p. 53) notes '(...) there is a need in Poland to elaborate a new model of corporate governance, comprising revaluation of supervisory bodies' functions and fundamental modification of their methods and style of work'. This problem also exists in other countries where the two-tier model is in operation (Hopt and Leyens 2004, p. 141). Hence empirical research into the activities of supervisory boards seems very timely and necessary. It should be emphasised that there is a vast body of scientific research concerning some aspects of the functioning of supervisory boards. Studies in this area have been conducted both in Polish and foreign research units (IFAC 2009; Levrau and van den Berghe 2007; Urbanek 2008; Opalski 2006a; Opalski 2006b; Jeżak 2005; Hilb 2005; Jeżak 2004; Zalega 2003; Millstein 1995; Zahra 1990; Pfeffer and Salancik 1978).

The purpose of this present study is to present the results of empirical research concerning operation of supervisory boards in the practice of companies listed on the Warsaw Stock Exchange, with particular focus on the character of the relationship between the supervisory board and the management of a company, as well as the methods and tools employed in communication between them.

This paper presents theoretical concepts regarding the supervisory board's role in the functioning of a company and discusses selected legislative changes relevant to the practices employed in publicly listed companies.

The conclusions presented in the paper have been formulated on the basis of a review of the literature, analysis of pertinent regulations, and a questionnaire survey of members of supervisory boards that was conducted in September, October and November 2011 (the data was obtained by means of postal surveys).

## 2. The relationship between the supervisory board and the management board in a two-tier governance model – review of the literature

Two governance models, i.e. a one-tier (unitary) and two-tier (board) system, are presented in the literature on this topic. In both models supervisory and management functions are present. In a unitary model, the supervision function is devolved upon the board of directors, whereas in a two-tier system it is performed by the supervisory board. The board of directors (in a unitary system) as well as the supervisory board (in the two-tier system) are both called into being by the shareholders. In both models these bodies are responsible for the establishment, repeal and determination of managers' remuneration, as well as ensuring the integrity of financial reports and control systems (European Commission 2002). However, the involvement of the board of directors in the functioning of a company in the one-tier system is far greater than that of the supervisory board in the two-tier model.

In a two-tier system, which is of particular interest in this article, problems arise regarding the distribution of tasks between the supervisory board and the management board. As K. J. Hopt and P. C. Leyens (2004, p. 141) observed, 'while the clear responsibility of the management board is the running of the business, the role of the supervisory board is not easy to describe.' The problem boils down mainly to the fact that in practice the process of supervision over a company quite frequently contains an unidentified list of tasks. In the literature on the subject attempts have been made to systematise and group the supervisory boards' tasks. Researchers dealing with corporate governance divide those obligations/functions into control, personnel, motivational and advisory, as well as strategic tasks (see Haus 1999, p. 21; Opalski 2006a, p. 333). The latter category particularly concerns activities that influence the operation of a company in the long-run.

The difficulties in precisely defining of supervisory boards' list of tasks result from, *inter alia*, the various expectations of the capital market with respect to supervisory bodies in public companies. It is hard to clearly determine whether, and if so to what extent, the supervisory board, together with management, should be involved in the development of a company's strategy.

Three basic approaches can be traced in the literature of the subject, i.e. a traditional approach, an approach of increased (in contrast to the traditional one) board activity, and the last one assuming a key role of a board in establishing the strategy of a company (see Gad 2011, pp. 44-48; Urbanek 2008, pp. 178-183; Millstein 1995, pp. 1427-1443; Zahra 1990, pp. 109-117; Fama and Jensen 1983, pp. 301-325; Fama 1980, pp. 288-307; Pfeffer and Salancik 1978). The first approach is connected with the principles of agency theory, the latter in turn is consistent with the principles of stewardship theory.

The traditional approach is associated with the lowest level of supervisory board engagement in the process of the company's strategy formulation. According to this concept the supervisory board is the leader of a company and does not engage either in its current affairs or in its strategy. The adherents of such modus operandi define the role of a board as activities aimed at the representation of the stakeholders (ancillary role) and control targeted at securing their business by monitoring managers' decisions (control role) (Fama 1980, pp. 288-307; Fama and Jensen 1983, pp. 301-325; Urbanek 2008, pp. 178-183).

In accordance with the second approach, the supervisory board should display increased activity in evaluation of the company's strategy. Members of the board do not shape a new strategy but they participate in the process by means of: suggesting improvements in strategic plans, verifying findings concerning the company and its surrounding accepted by managers, and controlling the process of strategy implementation (Pfeffer and Salancik 1978).

The last approach advises partner cooperation between the management and the supervisory board in preparation of strategic directions that a company should follow. The supervising body is not restricted exclusively to approving decisions made by managers, but it can initiate and develop the existing modifications in the strategy (Millstein 1995, pp. 1427-1443; Zahra 1990, pp. 109-117). As was observed by A. Opalski (2006b, pp. 353-354), 'the supervisory board should support managers in establishing goals of the company and defining ways to their realisation, so it should play the role of an institutional advisor and the management's partner. Counselling is a specific form of supervision, which allows strengthening its effectiveness'.

As regards the supervisory board's involvement in the operation of their company, including its strategy construction, it should be remembered that certain proportions need to be maintained. In the two-tier model the body that is responsible for management of a company is the management board, therefore the supervisory board participation in strategy development may cause competence conflict. As is noticed in the literature, the conflict can be levelled when the supervisory board conceives of their role as an agency assessing the rationality of actions performed by the management in a limited way; the board should counsel the management rather than extort particular actions (Opalski 2006a, p. 512). At the same time the supervisory board should control if the management follows the law and provisions of the articles of association, and the implemented strategy.

The effectiveness of any supervisory board action is determined by the attitude of the managers and specificity of the company operations, as well as the level of preparation and experience of board members. Only a competent supervisory board can take proper care of a company's business affairs and also may provide support for the management board. The relationship between the chief executive and the chairman of the supervisory board is of considerable significance. As various authors note, 'the two-tier boards are, however, only effective where there is an effective relationship between the chief executive, heading the management board, and the chairman, heading the supervisory board' (Solomon 2007, p. 79).

## 3. The change in supervisory board's role caused by new regulations incorporated into Polish law

As it is noted in the literature, currently, in the co-called post-Enron age we have to deal with the process of global convergence of various concepts of corporate governance. Additionally, increasingly important become solutions derived from the Anglo-Saxon system which is also characterized by the one-tier model of governance. Increasingly, we are dealing with the implementation of the solutions derived from the Anglo-Saxon system into legal systems of continental Europe (e.g., into Germany, Austria, France, and Poland) (Jeżak 2014, p. 377).

The legislative changes concerning corporate governance undertaken at the beginning of the 21st century in the USA[1] became an inspiration to develop a comprehensive legislative initiative in the European Union (European Commission 2003). The provisions of the EU directives in regard to various aspects of corporate governance have been introduced into the Polish legal system (Gad 2010, pp. 23-41). The author believes that particularly significant changes refer to:

[1] For instance Sarbanes-Oxley Act.

- extended responsibility of supervisory board members for the content of financial statements and activity reports (Article 4a of the Polish Accounting Act),
- obligation to create audit committees in public interest entities (Article 86 of the Polish Act on Statutory Auditors, Their Self-Governing Organisation, Entities Authorised to Audit Financial Statements and on Public Oversight),
- compulsory additional disclosures included in activity reports (§ 91. 5 point 4 of the Polish Ordinance of the Minister of Finance on current and periodic information provided by issuers of securities and conditions for recognizing as equivalent information required by the law of a non-member state),
- restrictions regarding regulations imposed on the electoral process and contract termination of a statutory auditor (Article 66 of the Polish Accounting Act).

The most significant legislative change, drawn from the solutions adopted in the one-tier model, is the extension of the responsibility of supervisory board members for the content of financial statements and activity reports. According to the Accounting Act, supervisory board members are liable to assuring that financial statements and activity reports are consistent with provisions of the aforementioned Act. The extended supervisory boards' responsibilities are associated with a range of new actions that the body needs to take, as well as with increased involvement in the running of the accounting system (Gad 2009, pp. 213–226).

The Act on Statutory Auditors, Their Self-Governing Organisation, Entities Authorised to Audit Financial Statements and on Public Oversight places public interest entities (e.g. issuers of security) under the obligation to establish so called task force units, i.e. audit committees within the structure of a supervisory board. The main aim of this unit is to monitor the financial reporting process and the effectiveness of internal control systems, internal audit system and risk management. The committee should be comprised of at least one independent supervisory board member being competent in the fields of finance and accounting. It seems that audit committees are among the most important tools in monitoring the accounting system.

Another important tool that allows the supervisory board to fulfil the responsibility of maintaining financial reports integrity is the supervision over the process of external audit. According to the Accounting Act, the entity that is to investigate or to have insight into financial reports cannot be chosen by the management board. The choice of such an entity relies on approval by a general assembly of shareholders or, if the articles of association or an agreement state so, the supervisory board.

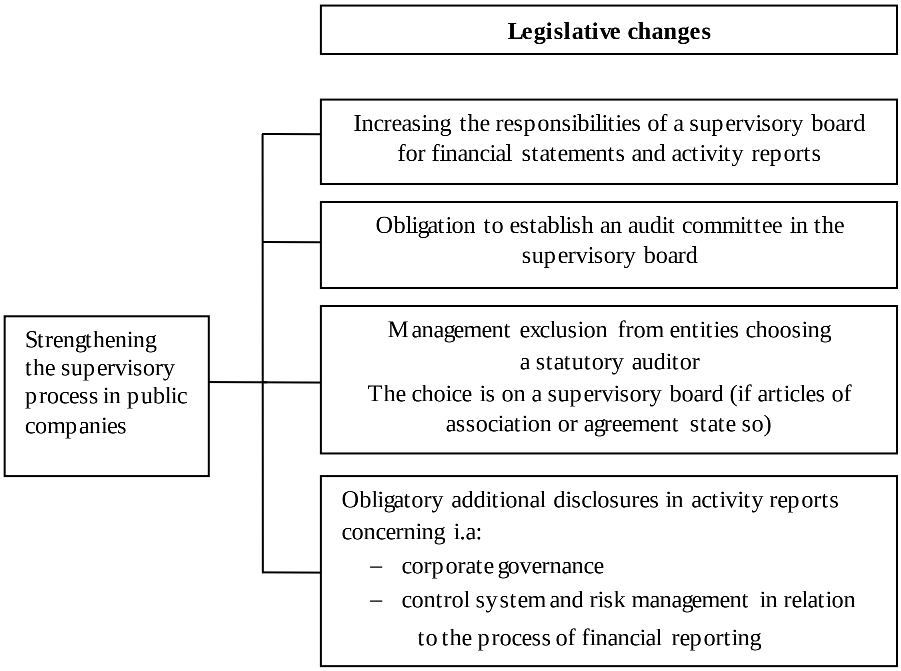
This provision aims at preventing a situation in which the management can pressurise the auditor to formulate a positive evaluation due to the fact that they have made a decision on the auditor's employment. In addition to that, in accordance with the provisions of the Act on Statutory Auditors, Their Self-Governing Organisation, Entities Authorised to Audit Financial Statements and on Public Oversight, the recommendation regarding the choice of a statutory auditor can be made by the audit committee[2]. In such a case the supervisory board members become a sort of an intermediary between the supervisory board and the statutory auditor.

The emphasis should be put on the fact that since 2009, issuers of securities are obliged to disclose particular notifications in the activities reports that concern i.a. information on utilisation of corporate governance and on main characteristics employed in the process of the internal control and risk management in relation to the process of financial reports creation. It needs to be stressed that the main objectives of the audit committee revolve around supervising the internal control system and risk management. The provisions in question constitute another mechanism used to supervise the process of financial reporting. The WSE listed companies present information on control over financial reporting within the 10 main groups of disclosures: (1) Characteristics of internal control and risk management systems; (2) IT Tools; (3) Risk; (4) Managerial Accounting; (5) Preparation of financial statements; (6) Regulations; (7) External audit; (8) Audit committee; (9) Security and data protection; (10) Internal audit (Gad 2014, p. 143).

There is no denying that the legislative changes mentioned above are a milestone in the direction of professionalization of supervisory boards. It appears that the changes might influence the strengthening of the supervisory process in public companies (see Figure 1).

[2] The statutory auditor should systematically inform board members of any anomalies. However, any differences of opinion between the auditor and management concerning the application of accounting principles and auditing standards may not constitute valid grounds to terminate the contract.

**Figure 1. Strengthening the supervisory process in public companies by means of legislative changes**




Source: (Gad 2012, p. 781).

Yet the crucial point that needs to be borne in mind is that a supervisory board needs an appropriate information support to realise its responsibilities. What is meant here is mainly information about the company itself and its environment–information ex post and ex ante alike. A supervisory board should be in possession of financial and non-financial (e.g. organization of work, employment structure, markets) information.

Realisation of duties regarding maintaining integrity of financial statements and activity reports and their compliance with accounting law demands creation of appropriate communicative channels and tools between the management and supervisory board. Such a role could be played by an information packages system, by means of which the management would forward certain information about current affairs and activities, as well as notifications concerning the accounting system, or finally those dealing with forecasting assumptions. The efficient communication system between the management and the supervisory board developed in a company makes it possible to realise new responsibilities of the supervisory board connected with ensuring accounting system reliability. Moreover, effective communication between the bodies in a company may contribute to creation of an added value to the company by the supervisory board.

It should be noted that a two-tier model of governance is practiced not only in Poland but also in Germany and Austria and does not guarantee the members of the supervisory boards the access to full information on the company. Members of the supervisory board coming from the outside of the company often do not have enough knowledge about the company. Therefore, they cannot effectively control the activities of the management board nor advise it (Jeżak 2014, p. 375).

## 4. The relationship between the supervisory board and the management and the process of their communication in the light of empirical research

### Research organisation

The operation of the supervisory board was the subject of empirical research that was conducted in September, October and November 2011[3]. The research group was made up of members of supervisory boards of Warsaw Stock Exchange listed companies. During the conduct of the research, the questionnaire interview was employed, while the tool utilised to gather data was a postal survey[4]. The research had anonymous character. The organisation of the research disabled identification of persons taking part in it.

In the research process the following questions were asked:

1. What is the experience and substantial preparation of members of supervisory boards of WSE listed companies?
2. What is the nature of the relationship between the supervisory board and the management in WSE listed companies?
3. What issues arise most frequently during supervisory board meetings in WSE listed companies?
4. Are the issues raised at supervisory board meetings initiated by its members in the practice of WSE listed companies?

[3] A similar study was carried out in September, October and November 2009.

[4] 37 questionnaires were received from 383 submissions (one questionnaire was sent to each company). The low rate of questionnaire return (9.7%) does not allow generalization of the results to the entire community. It seems, however, that the obtained results can be an important signal for the operation of the supervisory boards of Polish public companies.

5. Should the supervisory board's responsibilities include monitoring the scope and compliance with the actual state of information disclosed by a company?
6. In what way is the communication process between the supervisory board and the management organised in WSE listed companies?
7. What tools are utilised in the process of communication between the supervisory and the management board in the practice of WSE listed companies?

## Qualifications and experience of supervisory board members

The majority of respondents were experienced members of supervisory boards. More than 76 percent of them sat on at least three supervisory boards. Only for 17.6 percent of the surveyed the company in which they were supervisory board members was their first company (see Table 1). Therefore it can be supposed that the opinions voiced in the research are based on extensive professional experience of the respondents.

**Table 1. Respondents' experience in the role of supervisory board members**

| Question: What is your experience in holding the role of a supervisory board's members? | |
|---|---|
| Answer options: | Percentage distribution of answers: |
| This is the first company where I am a member of supervisory board | 17.6% |
| This is the second company where I am a member of supervisory board | 5.9% |
| I have been a supervisory board member in at least three companies | 76.5% |

Source: own study.

The supervisory board members who took part in the survey reported that they had no (36.1 percent) or little qualifications (22.2 percent) in the field of human resources. Similarly, they had little (30.6 percent) or no (27.8 percent) qualifications in the field of production and technology. The most respondents regarded themselves as experts in management science – 47.2 percent stated that they had very extensive or extensive (36.1 percent) experience in management. Only 11.1 percent of the survey participants reported high qualification in the field of law and administration, 25 percent said they had no background in law and administration, and 30.6 percent had very little experience in this field (see Table 2).

The most significant qualifications appear to be connected with accounting: 15.2 percent of the respondents regarded their qualifications in finance and accounting as very extensive, over 30 percent as extensive, and one quarter of all the respondents admitted that they had no qualifications in this field (see Table 2).

**Table 2. Selected qualifications of supervisory board members**

| Question: Are you qualified in the following fields? | | | | | |
|---|---|---|---|---|---|
| Field: | Level of qualification | | | | |
| | none | low | average | extensive | very extensive |
| | Percentage distribution of answers: | | | | |
| Finance and Accounting | 25.0% | 13.9% | 16.7% | 30.6% | 15.2% |
| Law and Administration | 25.0% | 30.6% | 19.4% | 13.9% | 11.1% |
| Management | 8.3% | 2.8% | 5.6% | 36.1% | 47.2% |
| Production | 27.8% | 30.6% | 2.8% | 25.0% | 13.9% |
| Human resources issues | 36.1% | 22.2% | 11.1% | 27.8% | 2.8% |

Source: own study.

## Relationship between supervisory board and management in the practice of WSE listed companies

In this study, the respondents were presented with different types of the relationship between the supervisory board and the management: (1) very close cooperation between the management and the supervisory board, in which the latter plays the role of the management's advisor, (2) the supervisory board is only a supervisory body, (3) the supervisory board is a disengaged administrator of the company's affairs, (4) a compromise option, in which the supervisory board plays the role of a supervisory body and is the management's advisor only on some aspects.

Nearly 46 percent of the respondents answered that in their companies supervisory boards inspected the management's actions and only in some matters they assumed the role of the advisor. More than 21 percent of the interviewees said that the supervisory board oversees the actions of the management in their companies. Results of the research show that supervisory boards act as advisors in almost 30 percent of the surveyed companies. Only 2.7 percent of the respondents stated that the supervisory board in their companies performs the function of the administrator (see Table 3).

The results show that the relations between the management and the supervisory board vary widely in the companies that were surveyed and a dominant model of the relationship cannot be clearly identified. Nonetheless, the majority of the interviewees indicated that in their companies the compromise model is in use, i.e. the supervisory board plays the role of a supervisory body and is the management's advisor only in some aspects.

**Table 3. Character of the relationship between supervisory board and management in the surveyed companies**

| Question: How would you characterize the relationship between the supervisory board and the management in your company? | |
|---|---|
| Answer options: | Percentage distribution of answers: |
| Members of supervisory board act as advisors and management's partners | 29.7% |
| Members of supervisory board mainly inspect actions of management | 21.6% |
| Members of supervisory board inspect actions of management and act as advisors only is some aspects | 45.9% |
| Members of supervisory board perform the role of administrators | 2.7% |
| None of the above | 0.0% |

Source: own study.

## Main areas of supervisory boards' activities

The issues that were most frequently addressed at supervisory board meetings were the company's current affairs that called for the board's resolution. Such an answer was given by 100 percent of the respondents (see Table 4).

As much as 94.7 percent of the interviewees said that during the meetings the supervisory board dealt with evaluation of the results of the company's operations. Supervisory boards also were frequently concerned during the meetings with realisation of the financial plan (answer given by 86.7 percent of the respondents).

At the meetings, supervisory boards relatively seldom dealt with establishing the goals of a company (answer given by 16.2 percent of the respondents) and with initiating and formulating the strategy (answer given by 35.4 percent of the interviewees).

The survey reveals that during the meetings supervisory boards were more concerned with current affairs than with issues relating to evaluation or formulation of a company's strategy. It can also be concluded that supervisory boards in the companies that were surveyed mainly performed the monitoring functions, and to a lesser extent acted as management advisors.

**Table 4. Issues most frequently addressed at supervisory board meetings**

| Question: Which of the issues are most frequently addressed at supervisory board meetings? | |
|---|---|
| Answer options: | Percentage distribution of answers: |
| Formal evaluation of management activities | 59.8% |
| Adoption of financial plan | 60.0% |
| Control of financial plan implementation | 86.7% |
| Evaluation of company's results | 94.7% |
| Strategy initiation and formulation | 35.4% |
| Strategy evaluation | 57.0% |
| Formulation of company's goals | 16.2% |
| Company's current affairs requiring supervisory board's resolution | 100.0% |
| Discussion on general direction of company's development | 70.4% |
| Other | 19.4% |

Source: own study.

More than 61 percent of the respondents stated that in their companies supervisory board members quite often raised issues to be addressed at the meeting. In case of 5.6 percent of the companies, the initiative in bringing up matters to be dealt with at the meeting has always belonged to supervisory board members. None of the respondents indicated that the members never initiate issues being the topic of the meeting (see Table 5).

**Table 5. Supervisory board members' initiative in raising matters dealt with at meetings**

| Question: How often matters dealt with at supervisory board meetings are brought up by its members? | |
|---|---|
| Answer options: | Percentage distribution of answers: |
| Never | 0.0% |
| Rarely | 13.9% |
| Occasionally | 19.4% |
| Frequently | 61.1% |
| Always | 5.6% |

Source: own study.

Almost 57 percent of the respondents stated that the supervisory board's responsibilities in their company included monitoring the scope and compliance with the actual state of information disclosed by the company. 13.5 percent of the interviewees did not have an opinion on this matter (see Table 6). Nearly 30 percent said that in their opinion the supervisory board's responsibilities did not include monitoring information disclosed by a company. It needs to be stressed that in accordance with the European Commission Recommendation of 15 February 2005, supervisory boards should monitor reliability of information disclosed by a company, especially financial information.[5]

**Table 6. Monitoring the scope and compliance with actual state of information disclosed by company as supervisory board's responsibility from the respondents' perspective**

| Question: Do the supervisory board's responsibilities in your company embrace monitoring scope and compliance with actual state of information disclosed by company? | |
|---|---|
| Answer options: | Percentage distribution of answers |
| Yes | 56.8% |
| No | 29.7% |
| Hard to say | 13.5% |

Source: own study.

Almost 60 percent of the respondents totally disagree with the claim that the supervisory board is responsible for operational activities of a company, while 34.4 percent of them tend to disagree with this statement. None of the interviewees answered that they completely agree with this claim. The answers confirm that the respondents view the supervisory board's role in a company in an appropriate way (see Table 7) – organisation of operational activities is the management's domain.

Over 18 percent of the respondents completely agree and 39 percent of them tend to agree with the statement that the main role of supervisory boards is formulation of the rules and directions of management's activities. As much as 24.2 percent of the interviewees could not decide on answer to this question (see Table 7). Only 6.1 percent of the respondents answered that they totally disagree with the claim that the role of a supervisory board is to formulate directions of management's activities. The interviewees' answers suggest that in some of the surveyed companies (24.2 percent) the relations between the supervisory board and the management in respect of determining the directions of management's activities are not fully explicit.

The majority of the respondents (54.1 percent) strongly agree and 32.4 percent of them tend to agree with the statement that the best way to evaluate a company's condition is a continual dialogue between the supervisory board and the management (see Table 7). Only 2.7 percent of the interviewees totally disagree with this statement.

[5] European Commission Recommendation of 15 February 2005 on the role of non-executive or supervisory directors of listed companies and on the committees of the (supervisory) board.

**Table 7. Selected responsibilities of supervisory board from the respondents' perspective**

| Question: Do you completely agree with the following statements? | | | | | |
|---|---|---|---|---|---|
| | I totally disagree | I tend to disagree | It is hard to say | I tend to agree | I completely agree |
| | Percentage distribution of answers: | | | | |
| Supervisory board is responsible for operational activities of a company | 59.4% | 34.4% | 3.1% | 3.1% | 0.0% |
| Supervisory board's role is to formulate rules and directions of management's activities | 6.1% | 12.1% | 24.2% | 39.4% | 18.2% |
| Most efficient way to evaluate a company's condition is a continual dialogue between supervisory board and management | 2.7% | 5.4% | 5.4% | 32.4% | 54.1% |

Source: own study.

The answers above indicate that the respondents treat communication with the management as a significant tool of supervision.

## Principles and tools of communication between management and supervisory board

The research area concerning communication between the management and the supervisory board is of paramount importance. Access to information determines the effectiveness of the supervisory board. As is highlighted in the literature, 'The success of both stronger involvement in management decision and strengthening of control efficiency as a whole depends foremost on the level of information' (Hopt and Leyens 2004, p. 147).

The vast majority of the respondents (89.2 percent) answered that communication between the management and the supervisory board took place not only at the meetings but also outside of them. It should be noted that 10.8 percent of the interviewees said that those two bodies in their companies communicated only during the meetings (see Table 8).

**Table 8. Organisation of communication between management and supervisory board in the surveyed companies**

| Question: In what way is communication between management and supervisory board organised? | |
|---|---|
| Answer options: | Percentage distribution of answers: |
| At the meetings | 10.8% |
| Outside the meetings | 0.0% |
| At the meetings and outside the meetings | 89.2% |

Source: own study.

The answers given by the respondents regarding the methods of communication between the management and supervisory board indicate that in the majority (64.9 percent) of cases, the management provides the supervisory board with information on selected areas of a company's operations without specific request, while other information is provided only when asked for. Most of the respondents pointed out that in companies in which they serve as supervisory board members, the management provides information of their own initiative only to a limited extent. Therefore there is a certain degree of risk in those companies that the management may hold back information adverse to the supervisory board. In such a case the supervisory board may not demand particular information due to the fact that it may be oblivious of its existence. Such organisation of the communication system may result from the fact that the management does not want to burden the supervisory board with information that is not crucial from the perspective of the company's functioning. It needs to be stressed that 27 percent of the respondents answered that the management provides the supervisory board with information without specific information demands from that body (see Table 9).

**Table 9. Rules of communication between management and supervisory board in the surveyed companies**

| Question: In what situation does management provide supervisory board with information? | |
|---|---|
| Answer options: | Percentage distribution of answers: |
| Without demands from supervisory board members for this information | 27.0% |
| Only when supervisory board members demand particular information | 8.1% |
| Concerning specific areas of company's functioning, without demand from supervisory board members for this information, and when the board demands particular information | 64.9% |

Source: own study.

The answers given by the respondents suggest that in the case of 24.3 percent of the entities, the management provides the supervisory board with information mainly in the form of financial statements. The majority of the supervisory boards members (62.2 percent) who participated in the research communicate with the management by means of information package generated by their company (see Table 10).

**Table 10. Communication tools between management and supervisory board in the surveyed companies**

| Question: What is the form of information that management provides to supervisory board members? | |
|---|---|
| Answer options: | Percentage distribution of answers: |
| Studies on the content and structure defined by management | 10.8% |
| Mainly in the form of financial statements | 24.3% |
| Information package generated by the company | 62.2% |
| None of the above | 2.7% |

Source: own study.

It was specified in the questionnaire what is understood by information package. According to that definition, it is a set of information with fixed content and structure transmitted to the supervisory board periodically by the management. Its content is agreed upon by the both bodies.

The practical use of information packages indicates that the process of communication between the supervisory board and the managements is conducted in a professional way. Yet, one has to remember that the efficiency of the supervision process depends on the content of the information packages.

## 5. Conclusions

The role of supervision in the modern global economy is continually growing. Particularly important, especially among companies listed in continental Europe, is the action of the internal corporate governance mechanisms. These mechanisms include, among others, control executed by the supervisory board. The kind of relationship between the supervisory board and the management board has a large impact on the efficiency of the supervisory board's work. It is also important to clearly define its powers, duties and responsibilities.

Changes in regulations introduced in the last decade pose a real challenge for members of supervisory boards operating under the current two-tier model, e.g., in Poland and Germany. The purpose of these changes was to increase the professionalization of this body. The functioning of supervisory boards is also strongly affected by expectations of economic practice. Corporate scandals of the early twenty-first century made capital market participants pay more attention to the activities of supervisory boards (in the two-tier model) or the boards of directors (in the one-tier model).

As noted by J. Jeżak (2014, p. 377), the supervisory boards operating in Poland are characterized by a weaker formal and legal position than the supervisory boards operating within the same model of governance (two-tier) in Germany. Both in Poland and Germany, supervisory boards are required to approve selected actions of management board. In Germany, the list of these actions is definitely longer. Additionally, in Poland, when the supervisory board refuses to approve certain actions of the management board it may request the approval of the general assembly of shareholders. This makes the position of supervisory boards in Poland worse than in Germany.

Owing to the empirical study we gained new insights into the functioning of the supervisory boards of companies listed on the Warsaw Stock Exchange. The results of empirical studies indicate that the supervisory boards in the surveyed companies dealt mainly with the supervision over the activities of the management boards, and only in certain areas acted as their advisers. It should be noted that one-third of respondents indicated that their company supervisory board acted as adviser, a partner of the management board. This clearly shows that the solutions characteristic of the one-tier model, in force primarily in the Anglo-Saxon system, permeate into a two-tier model, characteristic of continental Europe.

The significant involvement of the supervisory board in the process of supervision is manifested by the fact that supervisory boards in most of the surveyed companies affected the agenda of their meetings. A. Demb and F. Neubauer (2001, pp. 158, 160) confirmed in their studies that the involvement of the supervisory board in the development of the agenda of its meetings is regarded as an important mechanism to control the flow of information to the board.

In the majority of the surveyed companies, members of supervisory boards engage in supervision of the company's current affairs. Supervisory boards' responsibilities include the monitoring of the scope of information disclosed by a company.

The active role of the supervisory boards in the process of communication with the management board is reflected by the fact that most of the surveyed companies have a system of information packages, developed jointly by the management board and the supervisory board. In addition, in most of the surveyed companies this package was supplemented when the supervisory board declared a definite demand for information. It appears that this way of communication within the structures of a company enhances the effectiveness of the supervision process. As indicated by the results of research carried out by D. Johanson (2008, p. 372) information package as an oversight tool is also important in the case of a one-tier model. The results of D. Johanson's (2008, p. 372) research indicate that in the process of supervision particularly important, due to the reliability, are the financial data which are subject to external control carried out by the statutory auditors.

According to J. Jeżak (2014, pp. 378-379) the two-tier system of supervision, mandatory also in Poland, loses its importance not only in the world but also in continental Europe. „A convergence of the monistic and dualistic systems that has been visible in Europe for some years now as well as the evolution of the dualistic system in Germany should become an impulse for departing from the existing, conservative approach to the separation of managerial and supervisory functions in the Polish commercial law" (Jeżak 2014, p. 378).

It seems, therefore, that due to the continuous legislative and economic changes problems presented in this article require further research and analysis.

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## Streszczenie

## RELACJE MIĘDZY RADĄ NADZORCZĄ I ZARZĄDEM ORAZ PROCES ICH KOMUNIKACJI W PRAKTYCE SPÓŁEK PUBLICZNYCH W POLSCE

*Celem głównym niniejszego opracowania jest prezentacja wyników badania empirycznego dotyczącego działalności rad nadzorczych w praktyce spółek notowanych na GPW.*

*Przedmiotem szczególnego zainteresowania w ramach niniejszego artykułu są dwa główne obszary badawcze: charakter relacji między radą nadzorczą i zarządem oraz sposoby i narzędzia komunikacji między tymi organami spółki. W artykule zaprezentowano różne koncepcje teoretyczne dotyczące zadań rad nadzorczych oraz relacji między radą*

*nadzorczą i zarządem. Co więcej, w artykule wskazano zmiany legislacyjne, które zdaniem autora, miały największy wpływ na funkcjonowanie rad nadzorczych w praktyce spółek notowanych na GPW.*

*Prezentowane w niniejszym artykule wnioski sformułowane zostały na podstawie studiów literaturowych, analizy regulacji oraz wywiadu kwestionariuszowego dokonanego wśród rad nadzorczych na przestrzeni września i listopada 2011 r. (techniką gromadzenia danych była ankieta pocztowa).*

**Słowa kluczowe**: *rada nadzorcza, zarząd, nadzór korporacyjny, komunikacja*

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**MAŁGORZATA WOCHOWSKA***

# Non-formal Learning And The Acquisition Of Skills – How Does The EU Support Youth Employment?


## Abstract

*In recent years the issue of youth unemployment has been identified as one of the most pressing for young people, who are affected particularly hard by the economic crisis in the European Union. In response, the EU institutions have designed and introduced a complex mix of political instruments, agencies, programmes and studies that are supposed to establish a complementary and systemic approach to education and youth policies. Youth policy, as a socio-economic field of EU political intervention began in 2014 to be subject to a paradigm of employability and "the economy of fighting the crisis", including issues such as non-formal and informal learning and youth work outside of schooling systems. Thus the EU policy in question has significantly shifted from "personal and cultural development, and inspiring a sense of active citizenship among young people," as it was formulated in the Youth in Action Programme 2006-2013, towards "the acquisition of professional skills of youth workers, validation systems of non-formal learning, and greater complementarities with formal education and training", as it is formulated in the Youth Sector of the EU programme for Education – Erasmus+ 2014-2020. The objective of this article is to provide a comparative insight into the context that frames the design of EU policies aimed at mitigating the phenomenon of unemployment among young people, and to show how this has changed in light of the new EU programming period.*


***Keywords**: youth unemployment, EU policy instruments, job-related skills, transversal skills, non-formal education, youth work, education and training*

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## 1. Introduction

The problem of youth unemployment in the European Union is not new, but only in the recent years it has attracted significant political attention from the EU leaders, who characterised it as precariousness and a hollowing out of opportunity for quality employment (see: Goldrin, Guidoum 2011). As shown by comparative statistics collected in the EU Member States, for the last 20 years in Europe youth unemployment has been double and sometimes triple the rate of overall unemployment (Mourshed, Patel, Suder 2014, p. 1). Still, only in the recent years has this issue has been identified as pressing, with young people being affected particularly hard by the economic crisis, like but more so than any other social group. At the end of 2012 nearly six million people in Europe under the age of 25 were unemployed,[1] and the youth unemployment rate was more almost two-and-a-half times the adult one – 23.3% against 9.3%. A total of 7.5 million young people were defined in the group of "NEETs". This term stands for those who are "Not in Employment, Education, or Training", and they are recognized as one of the key target groups of the EU education and youth policy.

The EU Youth Report issued in 2012 noted the following trends as regards the socio-economic situation of youth in the EU:

1. More school, less work (while the share of students is going up, that of young employees is going down);
2. Increase in the number of young people not in employment, education or training (NEETs);
3. Increasingly difficult labour market (during times of economic crisis, highly-skilled individuals have a better chance of finding a job);
4. Fewer early school leavers (progress has been made in reducing the share of early school leavers to reach the headline target of less than 10 % by 2020).

The elimination of national borders and of restrictions on the free movement of people, goods, services and capital has followed the establishment of the European Common Market in 1992. Since the problem of unemployment has become pan-European, and inasmuch as it mirrors structural changes in the EU economy and society, the right question to ask is whether this is the result of lack of jobs, insufficient mobility of individuals on the common market, lack of skills, or maybe rather lack of political coordination? In 2013 the Committee of the Regions (CoR) expressed its conviction that the fight against youth unemployment was undoubtedly one of the most serious problems facing the

[1] European Commission, Working together for Europe's young people – A call to action on youth unemployment, COM(2013) 447 final, Brussels 2013, p. 2

EU, hence it urgently demanded a coordinated and systematic political response[2] involving all relevant public and private stakeholders.

The report delivered in 2014 by McKinsey & Company demonstrated that European youth face three significant hurdles on their “education-to-employment” (E2E) path. It can be described as a road with three intersections: (1) enrolling in post-secondary education; (2) building the right skills; and (3) finding a suitable job. Due to the EU legal framework and the governance measures that it implements (such as the Open Method of Coordination), the EU as a *polity* can be mostly involved in the process of skills-building, be they of a vocational or non-formal nature. In fact, the whole EU education policy - and the youth sector within it - have been defined in terms of skills and competences and the capacity building of participating individuals and institutions.

When searching for the underlying reasons for the current situation, the European Commission identifies significant skills mismatches on Europe's labour market, such as the fact that despite the crisis there are over 2 million unfilled vacancies in the EU.[3] European education and training systems continue to fall short in providing the right skills for employability, and are not working adequately with businesses or employers to bring the learning experience closer to the reality of the working environment.[4] In fact, the McKinsey & Company report in 2014 also demonstrated that while there are more people looking for work, employers in Europe cannot find the skilled workers they need. According to their analyses, in Europe 74% of education providers were confident that their graduates were prepared for work, but only 38 percent of youth and 35 percent of employers agreed with their assessment (Mourshed, Patel, Suder, p. 2). These skills mismatches are a growing concern with respect to European industry's competitiveness. It is thus no wonder that youth employment has become a top priority for the European Union.

It has been commonly underlined that youth unemployment has a significant impact not only on individuals, but also on society and the economy as a whole, having implications for social cohesion. The Committee of the Regions (CoR), in its 2014 opinion “Quality Framework for Traineeships”, underlined that the extremely wide variation in unemployment rates between regions was undermining the European Union's social and territorial cohesion objectives.

[2] Committee of the Regions, Youth Employment Package, EDUC-V-032, Brussels 2013, p. 3.

[3] European Commission, DG Employment, Social Affairs and Inclusion service, http://ec.europa.eu/social/main.jsp?catId=1036&langId=d (31/1.2015).

[4] European Commission, Rethinking Education: Investing in skills for better socio-economic outcomes, COM(2012) 669 final, Strasbourg 2012, p .2.

“The economy and fighting the crisis” is at the top of the EU priorities, and it is concomitant with what is expected by the Europeans themselves – half of them spontaneously mentioned fighting the crisis as the main task of the EU by positively influencing employment (19%), the quality of life (13%), and economic stability (9%). As we can read in the Eurobarometer on “European Citizenship” in 2013[5]: “Employment has gained ground among expectations of the European Union.”

## 2. Employability measures in political instruments

As was stated by the European Commission and subsequently supported by the Committee of the Regions in 2014, if the target set in the Europe 2020 Strategy - achieving an employment rate of 75% of the 20 to 64 age group by 2020 - is to be realistic, then youth education must be improved, i.e. better targeted to the needs of the labour market and supporting the acquisition of relevant skills such as the digital skills that are expected to be required in 90% of jobs in the nearest future.[6] As the CoR underscored, coordinated and multi-level political action is a must in order to ease the transition from education to work by boosting the supply of high quality apprenticeships and traineeships and addressing skills’ shortages. The European targets set forth in the Europe 2020 Strategy in the field of education concern early childhood education and early school leaving; basic skills acquisition; completion of higher education; lifelong learning support; transition to the labour market; education, training and job-related mobility between countries; and last but not least – raising youth employability rates.

Since in all Member States young people tend to be more affected by unemployment than their elders (Paz 2012, p. 3, in: Dietrich 2012, p. 13), the phenomena of youth unemployment manifests some particular characteristics compared to unemployment among any other social groups. According to Martin Paz this is due to the fact that young people are the future adult labour force, therefore Europe's strategy has become to help especially young people to enter and remain in the labour market and to acquire and develop the skills that will facilitate their employment. Given the scale of youth unemployment since the current economic crisis began, the European Employment Strategy 2020 identified tackling unemployment in this group is a priority (Paz 2012, pp. 6-7). Within the framework of the European Strategy 2020 “Youth on the Move” a range

[5] Standard Barometer 79, European Citizenship. Report, http://ec.europa.eu/public_ opinion/archives/eb/eb79/ eb79_citizen_en.pdf, 2013

[6] Committee of the Regions, Quality Framework for Traineeships, ECOS-V-053, Brussels 2014, p. 3.

of measures are established, aimed at promoting young people in working and studying abroad. In short the objective is to get young people back into work, education or training.[7]

In 2009, the Council endorsed the renewed framework for European cooperation in the youth field (2010-2018), known as the EU Youth Strategy[8] which contains the following objectives: (1) to create more and equal opportunities for all young people in education and in the labour market; and (2) to promote active citizenship, social inclusion and solidarity of all young people. The EU Youth Strategy advocates a cross-cutting approach, branching out into the following eight different fields of action: Education and Training, Employment and Entrepreneurship, Social Inclusion, Health and Well-being, Participation, Culture and Creativity, Volunteering, and Youth and the World. The EU Youth Strategy and its implementation are based on the Open Method of Coordination.[9]

As Jacqueline O'Reilly from the Business School in Brighton has claimed, understanding youth unemployment cannot be limited only to the sphere of economic production and a narrow focus on skills attainment, but it also needs to incorporate other phenomena in order to better understand how the different trajectories for young people have been created and are being reproduced. Therefore O'Reilly and her team, in a large-scale FP7 research project[10] examining obstacles and opportunities affecting youth employment in Europe, took into account the nature and mechanisms of flexicurity regimes and how they contribute to achieving economic and social independence, as well as the implications of unemployment in the longer term regarding healthcare, psychological well-being, pensions, etc.

In December 2012 the Commission called on Member States to ensure that all young Europeans receive, within four months of leaving school or becoming unemployed, either a good quality offer of employment, continued education, an apprenticeship or a traineeship. The Commission’s package, entitled the “Youth Employment Package”, came with a budget of 6 billion EUR and Country-Specific Recommendations issued by the Commission. It was further stated that since the best results in terms of youth employment are seen in countries where young people have the chance to take part in high-quality

[7] idem.

[8] Council Resolution of 27 November 2009 on a renewed framework for European cooperation in the youth field (2010-2018) (2009/C 311/01), OJ C 311, Brussels 2009, pp. 1-11.

[9] EU Youth Report, Status of the situation of young people in the European Union, Accompanying the document “Draft 2012 Joint Report of the Council and the Commission on the implementation of the renewed framework for European cooperation in the youth field (EU Youth Strategy 2010-2018)”, SWD(2012) 257 final, Brussels 2012, p.3.

[10] http://www.style-research.eu/

traineeships,[11] the Youth Employment Package should support traineeships co-financed by the European Social Fund (ESF) 2014-2020 and targeting young people from the Union's regions worst affected by youth unemployment.[12] It declared that the European Structural and Investment Funds (ESIF) within the Multiannual Financial Framework for 2014-2020 should have a crucial role to play in supporting young people and implementing the Youth Guarantee with a minimum share of 25% of cohesion policy funding for the ESF to ensure that at least EUR 80 billion remains available for investment in Europe's human capital investment in young people through the European Social Fund.[13] This approach reflects the priority that the EU attaches to fighting and preventing youth unemployment and, as in case of the entire ESIF, this paradigm of fighting the crisis is described as an investment. According to the European Commission, it is essential to boost growth and competitiveness inasmuch as skills will determine Europe's capacity to increase productivity. Skills can trigger innovation and growth, move production up the value chain, stimulate the concentration of higher level skills and shape the labour market.[14]

Policy strategies in the youth field in the European Union are therefore expected to respond to the current situation and the effects it may have on society, the economy, and public finances. The phenomena should be therefore analysed in the broader context of social, cultural, industrial and innovation policies, and in a multi-level perspective as it requires engagement from multiple public and private institutions operating on diverse levels of governance and involved in different sectors of education. But it is the European Commission which remains the political centre and the policy-maker, as it holds numerous political instruments such as: Eurostat, the EURYDICE Network that provides information on and analyses of European education systems and policies;[15] the European Inventory on the validation of non-formal and informal learning (Cedefop)[16] Joint Research Centre, also called "the Commission's Science Hub", which aims to improve policy knowledge of education and training systems;[17] the EU Skills Panorama collecting data, information and intelligence on trends for skills and jobs across Europe;[18] the European Sector Skills Councils designed to anticipate the need for skills in specific

[11] European Commission, Moving Youth into Employment, SWD(2012) 406 final, COM(2012) 727 final

[12] Committee of the Regions, Quality Framework for Traineeships, op.cit., p. 10.

[13] European Commission, Working together for Europe's young people, op.cit.

[14] European Commission, Rethinking Education: Investing in skills, op.cit.

[15] http://eacea.ec.europa.eu/education/eurydice/index_en.php

[16] http://www.cedefop.europa.eu/

[17]https://ec.europa.eu/jrc/

[18] http://euskillspanorama.cedefop.europa.eu/default.aspx

sectors more effectively and achieve a better match between skills and labour market needs;[19] the Centre for Research on Education and Lifelong Learning (CRELL), which combines expertise in the fields of economics, econometrics, education, social sciences and statistics in an interdisciplinary approach to research in order to guide policy-makers and steer Member States towards increased effectiveness, efficiency and equity in their education and training systems.[20] The Commission also supports the Education and Training Monitor (ETM), which is an annual series that reports on the evolution of education and training systems across Europe. ETM collects quantitative and qualitative data and is supposed to support the implementation of the strategic framework for European cooperation in education and training (ET 2020) by strengthening the evidence-base and by linking it more closely to the broader Europe 2020 strategy and the country-specific recommendations adopted by the Council as part of the 2014 European Semester.[21]

Another group of policy instruments refer to the acquisition of skills. The European Skills/Competences, Qualifications and Occupations (ESCO) identifies and categorises skills, competences, qualifications and occupations and is linked to relevant international classifications and frameworks, such as the European Qualifications Framework (EQF),[22] and in turn the EQF is supposed to help compare national qualifications systems to make them more understandable across different countries and systems in Europe.[23] The EU also promotes the use of Europass, which is a set of five standardised documents and a skills passport available for free in 26 languages,[24] and a "youth-work-friendly" instrument called Youthpass – a European recognition tool for non-formal and informal learning in youth work.[25]

By designing and using the above-mentioned instruments, the EU institutions seek to provide a complementary and systemic approach to education and youth policies that, after 2014 being subject to the paradigm of employability and "the economy of fighting the crisis" as the EU top priority, is manifested by an explicit shift of education and training towards market requirements in the framework of the Erasmus+ Programme.

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[19] http://ec.europa.eu/social/main.jsp?catId=784&langId=en

[20] https://crell.jrc.ec.europa.eu/

[21] http://ec.europa.eu/education/tools/et-monitor_en.htm

[22] https://ec.europa.eu/esco/home

[23] http://ec.europa.eu/ploteus/

[24] http://europass.cedefop.europa.eu/en/home

[25] https://www.youthpass.eu/en/youthpass/

In pursuance of the Open Method of Coordination, the EU institutions are to set the frameworks for youth policy, while national, local and regional governments, together with educational institutions, civil society organisations and enterprises, should implement its goals. In some fashion all levels of governance of the EU policy are financially and politically encouraged to realize such policies with the common vision of "fighting the crisis together". This process will depend, however, on the political will of the Member States within their active labour market policies and support for training and apprenticeships, as well as on the capacity of the private sector, especially SMEs, to create opportunities for young people[26] in line within the EU priorities. On the other hand, as Jo Shaw noted, some of the current concepts implemented at the supranational level are more likely to be seen as a provocation and a threat to the continued existence and relevance of the Member States, under whose protective umbrella (however leaky) citizens still want to take refuge in times of crisis. The voices calling for free movement to be given greater prominence and in particular for the mobility of young people to be supported in order to combat youth unemployment are very much minority voices (Shaw 2012, pp. 13-14), even though according to the EU leaders as many Europeans as possible must participate in inter-cultural education and training because it enables them to adapt to the changes brought about by the integration of states and to better understand each other through lifelong learning (Meung-Hoan 2004, p. 10).

## 3. Youth policy and the acquisition of skills

In many advanced countries, such as the EU Member States, there has always been a considerable concern about the quality and quantity of workforce skills. As Andrews, Bradley and Stott put it, this concern stems from the view that a highly skilled workforce is necessary for survival in an increasingly competitive world market, as well as from the view that the pace of skill-based technological change generates a need for an adaptable and flexible workforce (Andrews, Bradley, Stott 2002). As the EC claims, education needs to encourage the transversal skills (**entrepreneurship, digital skills, and language**) needed to ensure that young people are able to adapt to the inevitable changes in the labour market during their career.[27] The European Union, when promoting

[26] European Commission, Working together, *op.cit.*, p. 6.

[27] European Commission, Rethinking Education, *op.cit.*, p. 2.

entrepreneurship as a key competence,[28] highlights the importance of advancing a "European entrepreneurial culture". As a result, entrepreneurship education is now being increasingly encouraged across Europe.[29] The McKinsey & Company report completes this picture by demonstrating that young people are often not learning a sufficient portfolio of general skills while they study, with employers reporting a particular shortage of soft skills such as spoken communication and a work ethic.[30] Therefore, according to the report employers and education providers should work together closely to address this problem at its roots.

With the introduction of the EU youth policy within the framework of the Youth in Action (YiA) Program in 2007, with a budget of 885 million Euro for seven years' duration, non-formal learning and education, provided in the form of youth exchanges, youth initiatives, and voluntary services and trainings, was defined as learning outside institutional contexts, aimed at providing space for association, activity and dialogue, as well as support and opportunities for young people (13-30 years of age) as they move from childhood to adulthood. Learning was supposed to enable youth to acquire essential skills and competences and contribute to their personal development, social inclusion and active citizenship, thereby improving their employment prospects. Learning activities were to provide an added value not only for a particular young person, but also for the society and the economy as a whole, as it is claimed in EU Youth Strategy and in the Education and Training 2020 document (ET2020). In terms of quantitative results, YiA enabled more than 200,000 young people and youth workers per year to exercise non-formal learning mobility across the EU and in 140 countries beyond by getting involved in educational activities outside schools.[31] It was strongly underscored that being involved in YiA projects placed the participants in an intercultural setting and empowered them and raised their awareness of being European.[32] The Programme set out to achieve five main objectives, tackled through five main actions: (1) Youth for Europe: youth exchanges and local initiatives; (2) European Voluntary Service: voluntary activities abroad; (3) Youth in the World: promoting partnerships among young people from the EU and Partner Countries; (4) Youth Support Systems aimed at youth workers

[28] Recommendation of the European Parliament and of the Council on key competences for lifelong learning, 2006/962/WE, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri= CELEX :32006H0962&from=PL (31/1/2015).

[29] European Commission, Focus on: Young people and entrepreneurship, European good practice, Publications Office of the European Union, Luxembourg 2013.

[30] Committee of the Regions, Youth Employment Package, EDUC-V-032, Brussels 2013, p. 3.

[31] European Commission, Focus on: Young citizens of Europe. European good practice projects, Publications Office of the European Union, Luxembourg 2013, p. 78.

[32] *Idem*, p.4.

and organisations; (5) Support for European Co-operation in the Youth Field: policy cooperation and dialogue. The programme is estimated to have supported around 8,000 projects and to have provided opportunities and experiences to around 150,000 young people and youth workers every year.[33]

The evaluation of the programme was carried out in 2011 while it was underway, and besides providing quantitative data on its performance (like the number of projects submitted – 42,700, or projects granted – 21,800)[34], it showed probably more relevant long-term outcomes, such as the level of impact of the participation in the YiA programme on future educational and professional perspectives, with over 70% of respondents agreeing with the following statements: "*I have a clearer idea about my professional career aspirations and goals*", and "*I believe that my job chances have increased*". The average appreciation by youth of the extent to which they had increased their competences proved also very promising, with the top three categories being (1) Communication in foreign languages, (2) Social and civic competences, and (3) Cultural awareness and expression. As far as the impact on youth organisations, the following results were measured: increased appreciation of cultural diversity, project management competence, and the extent to which their projects were perceived as enrichment by the local environment and community.

## 4. Trends in the EU education policy

In 2014, with the introduction of the Multiannual Financial Framework for 2014-2020 and the Erasmus+ Programme, young people, employers, and education providers had to follow a different paradigm. They were told that skills gained thanks to informal and non-formal learning should, in the first place, facilitate acquisition of the ability to plan, implement and evaluate work and experiences. In 2014 the CoR underlined the importance of validation procedures for skills acquired outside the formal education system as a vital part of fundamental changes to the European model for vocational education and training,[35] recalling the previously

[33] Decision No 1719/2006/EC of the European Parliament and of the Council of 15 November 2006 establishing the 'Youth in Action' programme for the period 2007 to 2013, L 327/31, Official Journal of the European Union.

[34] http://ec.europa.eu/youth/tools/documents/2011-monitoring-main-results_en.pdf

[35] Committee of the Regions, Recognition of skills and competences acquired through non-formal and informal learning, EDUC-V-043, Brussels 2014, p.1.

-established European Guidelines for validating non-formal and informal learning.[36] These pan-European principles were designed to strengthen the comparability and transparency of validation approaches and methods across national boundaries[37].

With regard to non-formal and informal learning, the policy in question has significantly shifted its focus from the personal and cultural development of young people, as was the case in the Youth in Action Programme 2006-2013, towards the acquisition of professional skills by young workers, validation systems of non-formal learning, and greater complementarities with formal education and training, as can be observed in the Youth Sector of the Erasmus+ Programme 2014-2020 – the EU programme for Education, Training, Youth and Sport, with a global budget of 14,774 billion Euro, that is supposed to deliver a results-driven "real life projects". These new approach was determined to be necessary in view of a whole combination of negative factors, such as: the economic crisis, high youth unemployment, skills gaps, low employability of graduates, a growing demand for highly skilled employees, a global competition for talent, and the internationalisation of education. At the same time it made use of an extraordinary offer to broaden learning and the potential of ICT and that of of complementarity between formal, informal and non-formal learning. All this was designed due to build closer links with the priorities of the world of work in the youth field and exert a positive impact on the EU economy.

Erasmus+ supports activities in all fields of education, training, youth and sport, including Higher Education, VET, Adult Education and the School sector. It was decided to make use of the positive connotations that Europeans revealed towards the "Erasmus student exchange" programme, and designated as "Erasmus+" the entire range of EU educational policy for students, youth, children at school, academic staff, adult learners, youth workers, etc. Besides supporting the "obvious" education providers across the EU (schools and universities), the programme finances or co-finances transnational projects proposed by youth organisations, research centres, local and regional authorities, and almost any other organisation that can prove that their activities or their project proposal complies with the programme. The range of participating countries has been expanded in 2014 by involving FYROM, EEA countries, Turkey and Partner Countries from the Eastern Partnership and Southern Mediterranean, Western Balkans and Russia.

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[36] The European Centre for the Development of Vocational Training (Cedefop) is the European Union's reference centre for vocational education and training.

[37] European Inventory on the validation of non-formal and informal learning, Office for Official Publications of the European Communities, Luxembourg 2009, http://www.cedefop.europa.eu/ EN/Files/4054_en.pdf (31 January 2015).

This educational programme is claimed to bring "more cooperation for more innovation" and is to be achieved via 25,000 cross-sectoral strategic partnerships, 300 Knowledge and Sector Skills Alliances,[38] 1,000 Capacity Building Projects, etc. Nevertheless, these numbers do not reveal the real impact to such an extent as would be possible taking into account such indicators as: youth job-placement rates, carrier developments of the programme participants, or employer satisfaction with the graduates of different Erasmus+ activities. As far as the Youth sector in Erasmus+ is concerned, its goal is still to improve the level of key competences and skills of young people and youth workers, and to promote democratic participation in Europe and in the labour market through active citizenship, intercultural dialogue, social inclusion and solidarity. Activities must develop and embed new methods, tools or materials in order to build young people's key competences, basic skills, language and IT skills, and new youth work approaches, including strategies to tackle social exclusion and early school leaving, and new methods, tools or materials to build capacity and professionalise or modernise youth work by the use of ICT, virtual mobility, online learning, and reform of the youth work curricula. All the projects under Erasmus+ must demonstrate, in order to be financed, their relevance to the objectives of the programme, the specific Action they tackle, EU strategic documents and recommendations, and the EU agenda (relevance is 30% of the evaluation criteria).

The trends in the Erasmus+ programme for education and training and in the youth sector until 2020 may be summarised as follows:

1. There has been a shift from "inspiring a sense of active citizenship and tolerance among young Europeans and to involve them in shaping the Union's future" (YiA 2007-2013) to "initiatives fostering entrepreneurship and social commitment" (Erasmus+ 2014-2020).
2. Education and training, in face of the current context of high youth unemployment, are gaining more and more importance in the EU policy agenda as a way to invest in human capital.
3. Youth activities are more job-oriented and market-oriented than before, with more complementarities between formal, informal and non-formal learning required.
4. Emphasis is placed on fostering strategic cross-sectoral cooperation between public and private institutions for better exchanges of practice, appropriate curricula and skills provision and a real-life approach.
5. Emphasis is placed on promoting work-based learning, including quality traineeships, apprenticeships and dual learning models, as well as building

[38] Knowledge and Sector Skills Alliances in Erasmus+ are large-scale structured partnerships between education and training establishments (mostly academia) and business.

learning mobility more systematically into curricula ("embedded mobility") to help the transition from learning to work.

6. Projects are expected to be more results-driven and output-oriented.
7. Pedagogical approaches and methodologies should be aimed at delivering transversal competences, the entrepreneurship mindset and creative thinking, and better exploiting ICT.
8. There should be more focus on Strategic Partnerships instead of individual projects and mobilities, by designing long-term development plans of participating institutions.
9. Emphasis is placed on increasing the compliance of youth work and non-formal education with the general political EU agenda is required for more strategic solutions and support for a systemic approach to education and youth policies.
10. Emphasis is placed on increasing the complexity of agencies and political instruments to be included when planning a transnational cooperation financed by the programme (such as: ESCO, EQF, Europass, Youthpass, Eurostat, EURYDICE, Cedefop, etc.)
11. Emphasis is placed on increasing the number of potential partners in the EU and in the Partner Countries, strengthening cooperation with third countries and focusing on EU neighbouring countries.

The trends visible in the Erasmus+ programme reflect the current EU paradigm of fighting the crisis, as is manifested by the explicit shift of education and training towards market requirements. This trend is especially easy to recognize with regard to the youth sector and youth work, together with simultaneous decreasing emphasis placed on intercultural competences, self-expression and bottom-up initiatives.

EU institutions obviously need to involve public/private stakeholders and institutions in order to achieve any systemic approach, validate the capacity of non-formal and informal learning, and achieve mutual recognition of market-oriented skills. In consequence, a complex system of agencies and political instruments has been designed in recent years that are aimed at facilitating this political and socio-economic process. It seems that with the support of all the research centres and instruments (Education and Training Monitor, Centre for Research on Education and Lifelong Learning, Joint Research Centre, etc.), EU policy makers should be able to provide all institutional stakeholders, as well as individual job seekers, with the required recognition of employment trends in particular sectors and developments in the area of skills. However, these instruments remain mostly unknown to the public or considered as inadequate, inaccessible or uninteresting, and hard to find and apply to real life.

## 5. Conclusions

In 2015 we are still at the starting point of implementation of the EU youth policy in its current form. The new EU programmes, such as Erasmus+, were defined in the form of goals to be achieved, accompanied by indicators that are both quantitative or qualitative in nature. In case of quantitative indicators Erasmus+ will be evaluated by the number of Strategic Partnerships or Knowledge Alliances established, new institutions involved, individual mobilities carried out, and Intellectual Outputs produced. With reference to qualitative indicators, the participating youth and adult learners, trainers, VET instructors, academic staff, NGO members, employment agencies, local and regional authorities, policy makers and others are supposed to raise their transversal skills (literacy, digital and language) and contribute to the implementation of EU instruments in the youth policy field. In contrast to the Youth in Action Programme 2007-2013, which was aimed at "inspiring a sense of active citizenship and tolerance among young Europeans", a significant shift in Erasmus+ has been made towards the "acquisition of market-related skills". The trends in Erasmus+ reflect the EU policy framework as it was set out in Europe 2020 and Education and Training 2020 Strategies and in The Renewed Framework for European Cooperation in the Youth Field (2010-2018).

If education in the EU is supposed to serve as investment, then it needs to deliver policies based on concrete evidence. What will be needed in the upcoming years are comparative analyses on the performance of countries and regions, and institutions and youth organisations implementing the Erasmus+ programme, as well as of administrative bodies implementing policy measures in order to further separate out those factors and measures that make a difference, namely those that are actually results-driven, taking into account that the Erasmus+ Youth programme is only one part of the EU instruments designed to combat youth unemployment.

As the Eurobarometer shows, citizens expect the EU to take efficient action to combat the present situation which is characterised by precariousness and affects all the Member States. Nowadays the European Union is said to have a critical role to play in building support structures that allow the best educational interventions to scale upward and reach the greatest number of young people, as well as provide labour-market information to capture employment trends and help institutional decision makers, employers, and job seekers make better decisions on which gaps need to be filled. Another task for the EU is to ameliorate the European Qualifications Framework in order to make vocational qualifications transferable across borders, and provide for the recognition of non-formal and informal learning that facilitates cross-border worker mobility, boosts competitiveness and enhances territorial and social cohesion. The strategy behind this is that by making job-related qualifications (together with non-formal and cross-cutting competences) transferable across borders, the chances to improve the quality and the flow of educational and labour mobility rise. Last, but not least, the EU is expected to make sure that the information on relevant practices with respect to matching labour-market demand and supply is shared among stakeholders in order to help regional and national public-employment services compare their successful interventions. With use of the Open Method of Coordination and tools like the European Panorama[39] it can promote the sharing of best practices throughout Europe so as to help the Member States formulate minimum requirements for traineeships, cross-sectoral cooperation, policy support etc. based on such practices.

On the other hand, the current EU economic and political crisis has undermined citizens' trust that “more Europe” is going to solve all their problems, as the European integration process appears to many to be as much part of the problem as it is likely to be part of the solution (Shaw 2012, p. 1). It is therefore true that what is needed to help gain back trust towards the European integration project, is probably not more strategic political solutions proposed by the EU institutions, or sets of new objectives, initiatives, key benchmarks and indicators, studies, international surveys, and analyses - but instead delivery of tangible results in terms of raising youth employability.

This article has tackled the issue of youth employment in the European Union mostly by making reference to initiatives that promote non-formal education and the acquisition of the so-called transversal skills – such as Erasmus+. The analysis presented shows that such programmes should not be considered as regular employment instruments that are well known in the Member States and their local labour offices, but that they should rather serve to **create opportunities that in a long run will raise employability of young people, who will be equipped with the skills required on the market**. The EU has defined its youth entrepreneurship indicators as: measuring the share of self-employed young people; and dissemination of entrepreneurial attitudes among youth.[40] In the end, as these indicators reveal, these must be young people themselves to handle the situation, as the EU can only provide them with some frameworks – policy tools, programmes, certificates, and recommendations on the most profitable vocational choices in Europe.

[39] See: http://euskillspanorama.cedefop.europa.eu/default.aspx

[40] Commission Staff Working Document, On EU indicators in the field of youth, SEC(2011) 401 final, Brussels 2011, p. 4.

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## Streszczenie

## EDUKACJA POZAFORMALNA I NABYWANIE UMIEJĘTNOŚCI – W JAKI SPOSÓB UNIA EUROPEJSKA WSPIERA ZATRUDNIENIE MŁODZIEŻY?

*W ostatnich latach problem bezrobocia wśród młodzieży w Unii Europejskiej został zidentyfikowany jako palący, zważywszy na to, iż grupa ta została szczególnie dotknięta przez kryzys gospodarczy. W odpowiedzi na kryzys instytucje UE zaprojektowały złożoną siatkę politycznych instrumentów, agencji, programów i inicjatyw, które służyć mają ustanowieniu systemowego podejścia do polityki w zakresie kształcenia i młodzieży w Europie. W 2014 polityka młodzieżowa UE jako jedna z dziedzin interwencji politycznej została podporządkowana nowemu paradygmatowi „gospodarki walczącej z kryzysem”. Także* *w odniesieniu do edukacji pozaformalnej i nieformalnej oraz pracy z młodzieżą, która prowadzona jest głównie poza systemem edukacji szkolnej, polityka UE znacznie zmieniła cele strategiczne, odchodząc od „rozwoju osobistego i kulturalnego oraz wzmacniania poczucia aktywnego obywatelstwa wśród młodych ludzi" (Program „Młodzież w działaniu" 2006-2013), na rzecz „nabycia umiejętności zawodowych, stworzenia systemów walidacji uczenia się pozaformalnego i większej komplementarności wobec formalnego kształcenia i szkolenia" (Program „Erasmus + Młodzież" 2014-2020). Celem niniejszego artykułu jest analiza porównawcza społeczno-ekonomicznego kontekstu, który określa, w jaki sposób UE projektuje swoje polityki służące redukcji zjawiska bezrobocia wśród młodych ludzi, oraz jak podejście to zmieniło się w świetle instrumentów finansowych w nowym okresie programowania.*

***Słowa kluczowe:*** *bezrobocie wśród młodzieży, polityka na rzecz zatrudnienia, instrumenty polityczne Unii Europejskiej, umiejętności zawodowe, umiejętności podstawowe, edukacja pozaformalna, praca z młodzieżą, edukacja i szkolenia*

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