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ANNA KRAJEWSKA*

Fiscal Policy In The EU Countries Most Affected By The Crisis: Greece, Ireland, Portugal, And Spain

Abstract

The global financial crisis which began in 2007-2008 had a negative effect on the economy of the European Union, mainly in selected countries of the euro area: Greece, Ireland, Portugal and Spain. These peripheral euro zone countries come out of recession and the financial crisis largely due to the great financial support of the international institutions. Hundreds of billions of euro were spent to save these economies. At the same time, however, these countries were characterized by the lowest level of fiscal policy - measured by share of taxes in GDP - among the countries of the euro area.

In this paper I will try to answer the following questions:

1. *What were the causes of the downturn in those countries, and what restructuring actions were taken;*
2. *What changes were introduced in the tax system under the policy to repair public finances;*
3. *How have these changes affected the level and the structure of budget revenues from taxes, and to what extent has the crisis affected the change in the tax burden on consumption, labour, and capital.*

Keywords*: taxes, financial crisis, Greece, Portugal, Spain, Ireland*

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1. Introduction

The global financial crisis which began in 2007-2008 in the USA had a negative effect on the economy of the European Union, mainly in the Euro area. The falling budget revenues during the recession were coupled with an increase in public expenditure resulting from the implementation of anti-crisis programs, which led to an increase in the budget deficit and public debt. Anti-crisis packages have been used to the greatest extent in countries such as United Kingdom, Germany, France, Austria, Denmark, Sweden, Belgium, and also in Spain, while the countries that have proven to be the weakest links in the Euro area, i.e., Greece, Ireland, and Portugal, almost did not use them at all (Owsiak 2011, pp. 71-75, Mering 2011, pp.209-215). These peripheral euro zone countries are coming out of recession and financial crisis largely due to the great financial support of the so-called "Troika" (European Commission, European Central Bank and International Monetary Fund).Hundreds of billions of Euro have been spent to save these economies. At the same time, however, these countries are characterized by the lowest level of fiscal policy - measured by share of taxes in GDP - among the countries of the Euro area. In 2007, tax revenue (including SSC) ranged from 31.6% of GDP (Ireland) to 37.1% (Spain), with the EU-17 average of 40.1% (Taxation trends… 2013, p. 172).

This paper will answer the following questions:

1. What were the causes of the downturn in those peripheral countries, and what restructuring actions were taken;
2. What changes were introduced in the tax system under the policy to repair public finance;
3. How have these changes affected the structure of budget revenues from taxes, and to what extent has the crisis affected the change in the relationship of the tax burden on consumption, labour, and capital.

2. The crisis of public finance

The data in Table 1 indicates that, while in 2009-2010 the budget deficit and public debt grew throughout the Euro area (EU-17), the public finance crisis became most apparent in the four countries discussed herein. A change in this trend has been observed since 2011. It is distinctly weaker in the countries under study (in comparison to the Euro area).

2.1. Greece

The immediate cause of the Greek crisis was the information that the Greek government passed false statistical data to Eurostat. It turned out that over a number of years Greece distorted its statistics in order to undervalue the actual debt. It should be recognized that for many years public spending (government expenditure) was high, mainly due to three items:

1. Large military expenditures - Greece ranks second (after the U.S.) in terms of defence spending per capita among the 27 members of NATO.[1]
2. The high share of budgetary expenditure on salaries of public sector employees. For example, the average expenditure for this purpose in the Euro area is about 10% of GDP, while in Greece the expenditure for this purpose ranged from 11% (2007) to 13.5% (2009).[2]
3. High budgetary expenditure on servicing public debt in Greece - about 5-6%, and even 7% of GDP in 2011, compared to the Euro area average of 3% of GDP.[3]

Table 1. Public expenditure, revenue, deficit, and public debt (as % of GDP)

	2007	2008	2009	2010	2011	2012	Difference: 2012 compared to 2007
Total general expenditure							
Greece	43.3	50.6	54.0	51.4	52.0	53.6	+10.3
Ireland	36.8	42.8	48.1	65.5	47.1	42.6	+5.8
Portugal	45.8	44.8	49.8	51.5	48.3	47.4	+1.6
Spain	39.2	41.4	46.2	46.3	45.7	47.8	+8.6
Euro area	45.6	47.1	51.2	51.0	49.5	49.9	+4.3
Total general revenue							
Greece	40.2	40.7	38.4	40.6	42.4	44.6	+4.4
Ireland	36.7	35.5	34.5	34.9	34.0	34.5	-2.2
Portugal	44.1	39.6	39.6	41.6	45.0	40.9	-3.2
Spain	36.9	35.1	36.7	36.2	36.2	37.1	+0.2
Euro area	45.0	44.9	44.9	44.8	45.3	46.3	+1.3

[1] http://en.wikipedia.org/wiki/Greek_government-debt_crisis

[2] Government Finance Statistics. Summary Tables, Eurostat, European Commission, http:// epp.eurostat.ac.europa.eu, 2013.

[3] Ibidem.

Deficit							
Greece	-3.1	-9.8	-15.7	-10.7	-9.5	-9.0	-5.9
Ireland	0.3	-7.4	-13.7	-30.6	-13.1	-8.2	-9.5
Portugal	-2.7	-3.6	-10.2	-9.8	-4.3	-6.4	-9,1
Spain	2.2	-4.5	-11.1	-9.6	-9.6	-10.8	-13.0
Euro area	-0.6	-2.1	-6.4	-6.2	-4.2	-3.7	-3.1
Public debt							
Greece	94.5	112.9	129.7	148.3	170.3	156.9	+62.4
Ireland	25.4	44.2	64.4	91.2	104.1	117.4	+92.0
Portugal	63.6	71.7	83.7	94.0	108.2	124.1	+60.5
Spain	36.2	40.2	54.0	61.7	70.5	86.0	+49.8
Euro area	53.0	70.2	80.0	85.4	87.3	90.6	+37.6

Source: epp.eurostat.ec.europe.eu (accessed: 18.03.2014).

High spending on public administration is not a new phenomenon in Greece. It dates back to the government of Andreas Papandreou, who while taking over power in 1974 handed out state jobs to previously persecuted members of the socialist party PASOK. This practice was continued by later prime ministers. As a result Greece, with its population of 11 million, employs 650,000 state officials. In the opinion of the European Union and the IMF this is about 150,000 too many. Moreover, the wages of officials grew rapidly. The average salary in the public sector, which not long before the crisis had been €1,900, reached twice higher than the national average. In addition, every public employee was entitled to 14 payments per year (the additional two were for Christmas and Summer Holidays), a monthly allowance for each child, and allowances for work in harmful conditions (Kot 2013). It is not surprising that successive governments went further into debt. The adoption of the euro by Greece in 2001 allowed the use of low-interest loans to finance increased public spending. This system collapsed after the disclosure of information about the flawed statistical data. In November 2009, the Fitch rating agency downgraded Greece's credit rating from A to A–, and this was followed by other agencies. Greek securities were downgraded to junk bond status, and the prices of Greek bonds tumbled with the risk of insolvency of the country. The situation was so dire that there was talk of excluding Greece from the euro zone (the so-call 'Grexit'). Luckily for Greece, the "Troika" decided to provide financial assistance in the amount of €240 billion in exchange for Greece taking measures to improve public finances. These measures included: pressure to lower public expenditures (decrease employment in public sector, freeze and/or reduce the salaries of civil servants, extend the retirement age and freeze pensions); privatization of some public entities, including the postal service, in order to

obtain funds to repay the debt; and implementation of a more flexible labour market by, *inter alia*, extending the work time to increase productivity, permitting work on Sundays, and the deregulation of 14 professions; measures aimed at eliminating corruption; and improvement in tax collection and the tax system.

2.2. Ireland

Ireland joined the Community in 1973. Only a small improvement in its economic situation, however, could be observed through the mid-1980s. It is generally agreed that in principle the real acceleration started after 1993 (OECD 1999, p. 26). The years 1996-2000 were particularly successful, when the average annual growth rate of the GDP was 10%, and the unemployment rate fell to 4.1% in 2000 (compared to an average unemployment rate of 14.5% in the period 1991-1995).

The high and long-term growth Ireland was owing to (Krajewska, Krajewski 2005, pp.128-129):

- The large inflow of foreign direct investment, mainly from the U.S.;
- Skilful use of EU structural funds;
- Greater opening of the Irish economy and greater and deeper integration with the EU;
- A substantial increase in R & D expenditures;
- An increase in expenditures on technical infrastructure;
- A better educated society.

The Irish economy was developing rapidly mainly thanks to the large inflow of foreign investment. Because Ireland was strongly linked with American capital, Ireland was the first EU country affected by the financial crisis, which began in the U.S. Ireland was the first state in the Euro area to enter into recession, as declared by the Central Statistics Office.[4] Another weakness of the Irish economy was its strong dependence on the construction sector, which during the investment boom provided an increase in GDP, employment, and tax revenues. However, the construction sector was very heavily dependent on the banking sector. When the regulation of the banking sector proved to be insufficiently strong, the economy began to plunge into crisis. In 2008 GDP fell by 3% and in 2009 by 7%. Attempts by the government to rescue the economy, especially the banking system, led to a rapid increase in budget deficit: from 7% in 2008 to 14.0% in 2009, and to 31.2% in 2010 (see Table 1). As a result, on 21 November 2010 the government decided that Ireland could not cope without the

[4] Central Statistics Office, Ireland. Key short-term economic indicators (http://www.cos.ie/indicators/default.aspx?id=1NQQ17A).

support of the European Financial Stability Facility. On 28 November, the European Union, the IMF and the Irish state agreed to a €85 billion rescue deal.[5]

2.3. Portugal

Portugal was admitted to the EEC in 1986, and since 2002 has been in the Euro area. Through effective use of the opportunities which opened up after its entry into the Community, Portugal became one of the fastest growing countries in Europe (Łuczak 2002). Services, especially tourism, trade, transport, telecommunications, and financial services prevail in the economy. The construction market was also quickly developing.

The Portuguese financial crisis began as a part of the global financial crisis and continues as part of the European sovereign debt crisis, which has affected primarily the southern European states and Ireland.[6]

After the financial crisis of 2007-2008, it was known already in 2008-2009 that two Portuguese banks (Banco Português de Negócios (BPN) and Banco Privado Português (BPP) had been accumulating losses for years due to bad investments, embezzlement, and accounting fraud. The case of BPN was particularly serious because of its size, market share, and the political implications – Portugal's then-current President Cavaco Silva and some of his political allies maintained personal and business relationships with the bank and its CEO, who was eventually charged and arrested for fraud and other crimes.[7] On the grounds of avoiding a potentially serious financial crisis in the Portuguese economy, the government decided to give bail out the banks, eventually at a future loss to taxpayers.

The crisis of the public sector – a budget deficit of around 10% of GDP in 2009-2010, and public debt in 2012 amounting to 124% of GDP - was a disaster to which the Portuguese Government had been contributing for many years. Here's how its administration was assessed: "In 2005, the number of public employees per thousand inhabitants in the Portuguese Administration (70.8) was above the European Union average (62.4 per thousand inhabitants), but in 2011, the number of Portuguese public employees had not ceased to increase while the EU average had decreased. Already internationally known for decades as excruciatingly slow and inefficient by European Union and USA standards, Portugal's justice system was by 2011 the second slowest in Western Europe

[5] Government Statement on the announcement of joint EU-IMF Program for Ireland (http://www.guardian.co.uk/business/ireland).

[6] 2010-2013 Portuguese financial crisis (http://en.wikipedia.org/wiki/).

[7] http://www.jn.pt/PaginaInicial/Seguranca/Interior.aspx?content_id=2623133

after Italy's, even though it has one of the highest rates of judges and prosecutors, over 30 per 100,000 people, a feature that plagued the entire Portuguese public service, reputed for its overcapacity, useless redundancies and a general lack of productivity as a whole."[8]

The worsening situation in international financial markets exerted pressure on Prime Minister José Sócrates to make radical changes in economic policy, like other European governments had done before. Thus, in September 2010, the Portuguese Government, following other Eurozone partners, announced a fresh austerity package through a series of tax hikes and salary cuts for public servants.[9] On 23 March 2011, José Sócrates resigned following passage of a no-confidence vote, sponsored by all five opposition parties in parliament, over the government's spending cuts and tax increases.[10]

On 16 May 2011, the Eurozone leaders approved a €78 billion bailout package for Portugal, with became the third Eurozone country, after Ireland and Greece, to receive emergency funds. In order to accomplish the European Union/ IMF–led rescue plan for Portugal's sovereign debt crisis, in July and August 2011 the new government, led by Pedro Passos Coelho, announced it was going to cut back on state spending and increase austerity measures, including public servant wage cuts and additional tax increases. The Portuguese government also agreed to eliminate its golden share in Portugal Telecom, which gave it veto power over vital decisions (Kowsmann 2011). By 2012, all public servants had already seen an average wage cut of 20% relative to their 2010 baseline, with cuts reaching 25% for those earning more than €1,500 per month.[11]

Prime Minister Coelho announced in February 2014 that 'the worst is already behind us and Portugal is entering the expected growth phase.' He also declared that an austerity program, implemented in exchange for multi-billion euros in assistance, would be terminated in May. It should be noted, however, that the social costs of the crisis are enormous. More than 100,000 Portuguese left Portugal in 2013 in search of work, including 71,600 persons aged 25-34 years. In the history of this ten-million-inhabitant country, such a record number had not been seen before.[12]

[8] Insight: Rushed Portugal justice reform risks more error than trial (http://www/reuters.com /artice/2012/09/19/us-portugal-judiciary-reform-idUSBR88109V20120919).

[9] 2010-2013 Portuguese financial crisis…, op. cit.

[10] Portuguese parliament votes against austerity plan (http://www.france24.com?en/20110323)

[11] Institute of Management Technology Nagpur: "Eurocrisis" (http://okonomes.webly.com).

[12] www.forbes.pl/portugalia

2.4. Spain

Spain was admitted to the EEC in 1996, and in 1998 jointed to the Euro area. Its efficient utilization of EU funds and easy access to cheap loans after joining the Euro area resulted in an investment boom. The Spanish economy was developing very well and was described as the Europe's "golden child", a model for other countries to follow.

It is a common opinion that the Spanish crisis was a consequence of the collapse of the construction sector, which at its peak in 2006 provided 20% of GDP. This meant a simultaneous serious increase in unemployment and a rapid decrease in budget revenues from taxes. At the same time, spending on unemployment benefits grew by almost 50% - from €15 billion to €30 billion. The great unfinished investment projects became a symbol of the crisis. They were started during the boom but have not been completed owing to lack of remaining funds, e.g., the so-called "ghost airport" in Castellón.

The collapse of the construction market, which was based on long-term loans, struck the banking sector. The Government had no choice but to bail out the banking sector, which also burdened public finances. In this situation, Prime Minister José Luis Zapatero, following the example of the anti-crisis packages introduced in the United States, took measures aimed at stimulating consumption and investment demand. This was reflected, among others, in lowering the income tax rate for individuals and legal entities, and tightening of the labour market. This might have stimulated the demand, but it also meant that from 2009 to the present the budget deficit (10-11% of GDP) in Spain has been a larger problem than the public debt, which for the whole period under study has been at a level lower than the average for the Euro area 17 (in 2012, the public debt in Spain was 86% of GDP, while the average for the Euro area stood at 90.6% of GDP). The failure to supervise the granting of loans was another mistake which was made during the initial period of the crisis. It is true that banks have taken over a lot of property from insolvent borrowers, but there is still no demand for this real estate.

Another very serious problem is the employment crisis in Spain. "After having completed substantial improvements over the second half of the 1990s and during the 2000s, which put a few regions on the brink of full employment, Spain suffered a severe setback in October 2008, when it saw its unemployment rate surging to 1996 levels. During the period October 2007 – October 2008 Spain had its unemployment rate climb 36%, exceeding by far the unemployment

surge of past economic crises like 1993".[13] In particular, during this particular month of October 2008, Spain suffered its worst unemployment increase ever recorded, and the country suffered Europe's biggest unemployment crisis during the 2008 crisis.[14] A particularly disturbing feature of unemployment in Spain is the very high youth unemployment rate of over 50%. Paradoxically, "Spain's current generation is considered the most educated that the country has ever had, yet it faces the greatest rate of unemployment in Europe. Roughly 68% of young people are willing to leave the country to search for a job, and those with college degrees are willing to settle for working at so-called mini-jobs for a pay check."[15]

Spain is the fifth largest economy in the European Union, and for this reason its problems raise special concerns. Hence, on 9 June 2012 the Eurogroup held an emergency meeting to discuss how to inject capital into Spanish Banks (Stubbington 2012). The IMF and Eurogroup also announced intentions to provide up to €100 billion to the Fund for Orderly Bank Restructuring to the Spanish government.[16]

3. Main recent tax reforms - implemented, on-going, or announced

3.1. Greece

Greece was admitted to the EEC in 1981. The process of adaptation of the Greek tax system to the solutions adopted in the Community was, however, very slow. VAT was introduced only in 1987, i.e., after six years.

The initial standard rate of VAT was set at 16%, and after a few years rose to 18% and then to 19%. Thus, it was one of the lowest in the EU. Only since 2010, as part of the rehabilitation program, has the standard rate of VAT increased to 23%, while the reduced rates were maintained: 6.5% (previously 4.5% and 5%) for newspapers, magazines, books, and hotel services, and 13% (previously 9%) for food and agri-food products, passenger transport, social housing, medical and dental services, medicines and electricity. Some services such as legal, artistic, and security services, which had previously been exempt

[13] Agencias (4 November 2008), „La recesion economica provoca en octubre la mayor subida del parode la historia" (http://www.elpais.com/articulo/internacional/recesion).

[14] "Builder's nightmare" (http://www.economist.com/word /europedisplaystory.cfm?story_id= 12725415).

[15] Spanish financial crisis http://enorg.wiki2008-14-

[16] http://www.diariodeavios.com/2012/06/comunicado-intergrupo-el-rescate-a-la- banca-espanola/

from VAT, have been taxed since 2011. A 30% reduction of VAT was, however, maintained on the Greek Aegean islands (except for Crete). At the end of July 2013, VAT was reduced for restaurants and hotels from 23% to 13%. These reductions were temporary and lasted until the end of 2013. According to calculations by the Greek Ministry of Finance, the reduction of VAT was to reduce customers' bills by about 8.1% and lead to a recovery in the tourism industry. At the same time, however, it meant a reduction in the state budget revenues of about €100 million.[17] Excise duty is levied on alcohol, tobacco, cars, electricity, and luxury goods. Excise duties before the crisis ranged from 10% to 75%, and in some cases was as high as 200%. Since 2009, the excise duty on fuel has been raised every year, from 2010 on alcohol and tobacco, and from 2011 also on luxury products. Indirect taxes provide about 40% of budget revenues. The share of indirect taxes in tax revenues declined slightly (in 2009), but increased in the following years due to increases in indirect tax rates.

To a relatively large degree, Greek budgetary revenues are fuelled by social security contributions. Their share in the budget revenue differs only slightly from the average for the Euro area. Contributions are paid by employees and employers, and their amount did not change during the crisis. The rate for white-collar employees is 16.5% and for blue-collar workers, 19.95%. The employer pays a social contribution of 28.46%. The contributions are paid up to a defined maximum monthly wage. The monthly ceiling for 2012 was €2,432.25 if the employment had started prior to 1 January 1993, and €5,543.55 if employment started thereafter. According to Law 4093/2012, from 1 January 2013 onwards, the monthly ceiling became €5,543.55 for both categories of employees (Taxation trends...2013, p. 91).

Income taxes in Greece are very unstable. Changes in the tax system are made each time a new government comes to power, and every new finance minister usually means changes in taxes.

The taxation of income from employment has undergone a series of changes. The number of rates, and the bottom and top PIT tax brackets, and the amount of tax-free income have been changed. For example, in 2010, four rates - from 15% to 40% - were applicable (top rate above €75,000). In 2011 there were eight tax brackets with tax rates from 10% to 45% (top rate applicable above €100,000). In 2013 again three rates were introduced – 22% to 42% (top rate applicable above €42,000), for employment income consisting of salaries and pensions. The basic tax-free threshold has been reduced to €5,000 (from €12 000). For 2010-2013 the tax rate includes the solidarity contribution (ranging from 1% to 4%), with the top rate applicable on net annual income

[17] http://www.coslychacwbiznesie.pl/biznes/zadluzona-grecja-obniza-podatek

exceeding €100,000) (Taxation trends… 2013, p. 35). Real estate rental income from securities is subject to 10% tax up to €12,000, and 33% on the amounts above that. According to the latest amendments, the tax-free bracket is replaced with a system of tax deductions (Taxation trends… 2013, p. 90).

An important element of the tax reform was the introduction of taxation of additional remuneration (bonuses) which banks operating in Greece pay to their CEOs, board members, and directors. Bonuses in excess of the €60,000 ceiling per year are subject to a progressive taxation from 50% to 90%.

Greece has been cutting the statutory CIT rate from its high of 40% in 2000 to 20% in 2011-2012. From 2013, the corporate income tax rate is 26% for income up to €50,000, and 33% for income in excess of that amount. At the same time, tax breaks for young entrepreneurs have been introduced. Persons who have not exceeded 30 years of age at the time of starting a business are exempt from tax during the first five years following the business start-up.

The phenomenon of tax evasion is in Greece very widespread and has a long history. Greeks like to refer to the time when the country was under the rule of the Ottoman Empire, and the failure to pay taxes was considered an act of courage and patriotism. But also since gaining independence, avoiding taxes has been the result of, on one hand, a complicated tax system, and on the other hand inefficient tax administration, lack of any penalties for evasion of taxes, widespread corruption and a developed grey economy, supported by a large share of small and medium-sized enterprises and an economic structure conducive to tax fraud (agriculture, tourism, services).

In order to combat these practices, Greece has recently changed its law. Now anyone who owes more than €10 thousand to the tax office can go to jail based on mere suspicion of tax evasion. And because the prosecution has 18 months' time to file charges, many people pay in advance to avoid prison.

3.2. Ireland

In the past few years, the share of tax in relation to GDP shows a declining trend - from 32.1% in 2006 to 28.9% in 2011 (Taxation trends… 2013, p. 172), which puts Ireland in last place among the countries of the Euro zone in that respect. The decline in tax revenues is due to the high dependence of the Irish economy on the construction sector. When this sector collapsed, this seriously affected the condition of public finances. The structure of budgetary income taxes differs significantly from that in other EU countries. In Ireland, the share of the income tax from natural persons - 32.0% in 2011 - is relatively large

compared to the Euro area average of 22.3%, while the state budget is to a much smaller extent supplied with social security contributions - only 17.2% of budget revenues, compared to 36.5% for the whole Euro area.

There are two income tax rates in Ireland, and they are high. From 2007 they were 20% and 41% (previously, since 2005 they were 20% and 42%, and in 1997 they were even higher: 27% and 48%). Currently, the top income tax rate in comparison to other countries of the EU-17 is slightly lower (44.5% for the Euro area, but the lower rate is still high).

The income tax computed in this way is adjusted by a tax-free amount (e.g., for a single person the exemption is €1,650) and by an extensive system of deductions with respect to mortgage payments, the costs of renting an apartment, age, education costs or having disabled children (Taxation trends…2013, p. 98).

The basic corporation income tax rate is 12.5%. The increase to 25.0% of the corporate income tax rate applies to income derived from financial transactions, such as gains from investments. Newly established companies may be exempted from income tax for a period of three years, provided their tax liability will not exceed the amount of €40,000 per year. The exemptions do not apply to service companies and those dealing with the exploitation of raw materials.[18]

The standard 21% VAT rate of 2001 was temporarily increased to 21.5% in 2009. Over the two following years the previous 21% rate re-applied, but from 2012 the standard rate was raised to 23%. In the case of certain goods (certain types of food) and services (e.g., renovation services) a reduced rate of 13.5% applies.

Excise duties are applied to alcohol, tobacco, fuels, and oils. In 2013, the excise duty increased on alcohol and tobacco (€0.10 for a pint of beer or cider, €1 per 75cl bottle of wine, €0.10 per pack of cigarettes (20 pieces), €0.50 per 25g pack of tobacco).

From July 2013 a new Local Property Tax (LPT) was introduced to replace existing charges on dwellings. The rate is 0.18% on the value of residential property up to €1 million. For property valued at more than €1 million, the rate is 0.18% for the first €1 million and 0.25% on the excess. There are no income-based allowances, but it is possible for certain groups with low incomes to defer payment. Deferred LPT is subject to an annual interest rate of 4%. New property bought before 1 January 2011 and second hand property bought in 2013 is exempt until the end of 2016 (Taxation trends…2013, p. 99).

Summing up the changes in the tax system instituted during the crisis, one should stress their moderate nature. The key revenue raising measures included the extended social insurance tax base, a new property tax, increased excise

[18] http://dublin.trade.gov.pl/pl/przewodnikdublin/article/detail,344,System_podatkowy.html

duties on alcohol and cigarettes, and increased rates for vehicle registration tax and motor tax on all vehicles. The use of the tax system to stimulate the development of small and medium-sized enterprises, employment, R & D, and investment should be viewed positively.

3.3. Portugal

Portugal entered the EEC in 1986, with a tax system which clearly differed from that applied in the Community. Cedular income taxes were very complicated (Komar 1989, pp. 47-48). Soon, however, reform measures were undertaken. Already in 1986, VAT was introduced, and three years later a thorough reform of income taxes was carried out, and PIT and CIT were introduced.

The personal income tax is levied on the aggregated base of six income categories. There is no personal allowance, but a single personal tax credit which is linked to the minimum wage and the family situation of the taxpayer. In recent years, the number of tax brackets [thresholds] and tax rates underwent frequent changes. Until 2005, the top personal tax rate was 40%, and was later increased to 45.9% in 2010, 50% in 2011, and 53% in 2013. Within this top rate is a new surcharge of 3.5% levied in 2011 on all aggregated categories of income. In 2012 and 2013 a 2.5% surcharge is applied to the highest income bracket (Taxation trends…2013, p. 35). The highest rate applies to income above €80,000. "Unjustified" increases in personal income of more than €100,000 are taxed at a special rate of 60% (Komar 1989, p. 130).

Until the end of December 2011, two corporate income tax rates – a standard and a reduced one - were applicable in Portugal. Taxable profits up to €12,500 were subject to a reduced rate of 12.5%. A 25% rate was applied to taxable profits exceeding €12,500. As of 1 January 2012, the reduced CIT rate of 12.5% was abolished. A state surtax of 3% is levied on corporate income between €1.5 and €10 million, and a 5% rate is levied on taxable profit surpassing €10 million, with effect from 1 January 2012 (Komar 1989, p.131).

For many years the standard 17% VAT rate was relatively low. In 2005, it was raised to 21%, and since 2011 is 23%. At the same time, in 2011 the reduced rates of 5% and 12% were raised to 6% and 13%. The reduced 6% rate applies to food, public transport, medical products, and hotel services. The intermediate 13% rate applies to processed food products (canned meat, fish, fruit, and vegetables), vegetable and animal fats, and wine, ornamental plants, tickets to circus, theatre, and film performances and bullfighting. Insurance, financial, education, and health care are exempt from VAT. VAT rates in

Madeira and the Azores are slightly different from the continental rates, and are as follows: Madeira - 22%, 12%, 5%, and the Azores - 16%, 9% and 4%[19].

Currently, two property taxes are in force in Portugal. With effect from 1 January 2012, the minimum and maximum rates of the real estate tax on urban property were increased by 0.1 percentage points (to 0.3-0.5%). There is no net wealth tax. The gift and inheritance tax was abolished in 2004.

In May 2011, the provisions of a Memorandum of Understanding on Specific Economic Policy were agreed between the EC, the ECB, the IMF, and Portugal signed on. It obligated Portugal to increase budget revenues. For this purpose, from 1 January 2012 Portugal introduced an excise duty on electricity consumption by consumers, producers, traders and self-producers. Furthermore, the maximum rates of excise duties on petrol, alcohol, heating diesel and tobacco were increased. The real estate tax on urban property was increased by 0.1 percentage points. As already indicated above, VAT rates were raised (both standard and reduced), as well as the CIT rates (for small businesses). A bank levy was introduced for the period 2011-2014, at 0.05% of the total liabilities of the bank. The budget is expected to receive €565 million in this period from these kinds of taxes.[20]

In order to increase the tax revenue, the government has also taken the following actions:[21]

1. The number of tax inspections was increased, the purpose which is to check the cash registers, obligatory since 2012, in economic entities offering goods and services (for this purpose the number of full-time inspectors was increased from 1,700 to 3,000);
2. A tax amnesty was introduced. On a temporary basis entities which were behind in their tax payments owed to the state and SCC were exempted from the obligation to pay interest and administrative costs of debt service, provided they settled with the state by 20 December 2013. It is estimated that in this way the revenue of the state budget could increase by €500-600 million;
3. Portuguese debt collectors continue the previously commenced process of seizing cars for overdue obligations to the state. These cars are then auctioned off on the internet to the public at a discounted rate. It is estimated that in 2012 the budget in this way gained around €500 million. In the first half of 2013, 21,000 cars were seized (most from the construction industry and from developers, and from the textile and footwear sectors).

[19] http://lizbona.biz/system_podatkowy_w_portugalii.html

[20] www.forbes.pl/portugalia

[21] Ibidem.

As a result of these measures, budgetary revenues from taxes in 2013 were higher by 13% than in 2012, CIT revenues increased by 35.5%, PIT revenues by 18.8%, and VAT revenues by 3.5% (www.forbes.pl/portugalia).

3.4. Spain

Spain is a country where the share of budget revenues from taxes in relation to GDP declined very quickly in recent years - from 37.1% in 2007 to 31.4% in 2011. This places Spain second after Ireland among the countries with the lowest level of fiscalization. At the same time, a rapid increase in public spending due to rising unemployment and implementation of anti-crisis programs caused the budget deficit, since 2009, to rise to 10-11% of GDP.

In the initial period of the crisis Spain focused on launching instruments to stimulate overall demand. This also concerned income taxes from individuals and legal entities. In 2006, the top rate of personal income tax was 45%.The following year it was reduced to 43%. Four rates applied: 24%, 28%, 37%, and 43%. These rates remained until 2010. Only after pressure from the international institutions did the government introduce, in January 2011, two additional rates for the wealthiest taxpayers - 44% for income over €120,000 and 45% for income above €175,000. Furthermore, in January 2012 the government introduced a temporary supplementary progressive levy (covering the years 2012 and 2013) applied to each tax band of the general government tax base, which implies the existence of seven brackets (24.75%, 30%, 40%, 47%, 49%, 51%, 52%). The top PIT rate refers to income above €300,000. Since 2011 regional governments are liable to set up their own PIT schedule for taxing the general income tax base (Taxation trends…2013, p.146).

It is worth noting that in 2007 the Act on the Prevention of Tax Fraud came into force, with an emphasis on increasing the transparency of transactions, tightening controls, and toughening penalties for violations.

Like the PIT, the CIT rate has also been reduced. In 2007, the corporate income tax rate was 32.5%, and since 2008 has been reduced to 30%. SMEs enjoy a reduced rate of 25% for the tax base of up to €300,000. A lower CIT rate is levied on cooperatives (20%) and projects meant to invest in environmental protection.

In order not to decrease consumption, VAT was not raised until 2010. The standard 16% rate and the reduced 7% and 4% were replaced by 18% and the reduced 8% and 4%. These rates applied for the period 2010-2012. From 2013, the new rates apply: the standard 21% and the reduced 10% and 4%. The 10% rate includes passenger transport, restaurant services, cultivation of

agricultural land, cleaning streets, parks, water treatment, and veterinary services. The rate of 4% is applied to bread, flour, milk, cheese, eggs, fruits, vegetables, books, journals, magazines, school supplies, medicines, cars, and equipment for people with disabilities.[22]

Each professional category has minimum and maximum social contribution bases. Since 2013, the maximum monthly base is €3,425.7; the minimum varies depending on the type of work (ranging from €753 to €1,051.50 per month). The total rate for the general regime is 6.35% of covered earnings for the employees, and 29.9% for employers, e.g. for a total contribution of 36.25%. Self-employed persons contribute between 26.5% and 29.8% of their earnings (Taxation trends…2013, p.147).

4. The impact of the crisis and the austerity measures on the level and structure of taxes. Comparative analysis

4.1 The level of tax revenue

The data in Table 2 shows that the austerity measures and slight recovery recorded in 2010 in the Euro area have stabilized revenues from taxes. In the countries surveyed however, this process has been varied. Tax increases were faster in Greece - they started in 2010 and in 2011, and the share of taxes in relation to GDP was close to the situation before the crisis. Much of the credit was given to international organizations which, in return for their assistance, very strongly encouraged Greece to make changes in the tax system. Although in 2010 Spain experienced a slight increase in the share of tax revenues to GDP, but in the next year the share decreased. As a result, in 2011 the share of taxes in GDP was 5.7 percentage points lower than in 2007. In Ireland, a slight increase in tax revenue was not recorded until 2010, but the share of taxes in GDP was still 2.7 percentage points lower than before the crisis. Portugal is the only country among the four under study where fluctuations in total taxes as a percentage of GDP were minor.

[22] http://madrid.trade.gov.pl/pl/przewodnik/article/detail,622,System_podatkowy_w_Hiszpanii.html

Table 2. Total taxes (including SSC) as % of GDP

	2007	2008	2009	2010	2011	Difference 2007-2011	Ranking 2011	
							2007	2011
Greece	32.5	32.1	30.5	31.7	32.4	-0.1	15	15
Ireland	31.6	29.8	28.3	28.3	28.9	-2.7	16	17
Portugal	32.8	32.8	31.0	31.5	33.2	+0.4	14	16
Spain	37.1	33.0	30.7	32.1	31.4	-5.7	12	13
Euro area weighted	40.1	39.6	39.1	39.0	39.5	-0.6	x	x

Source: Taxation trends…, op. cit., p. 172.

It is worth mentioning that despite the significant external aid for saving public finances, the countries under study have the least level of fiscalization of economy measured by share of taxes in GDP. In 2007 they ranked 12-16 among EU-17. The last was Estonia, a new member of Euro area. In 2011 Ireland was last. The positions of Portugal and Greece also deteriorated.

4.2 Taxation of consumption, labour, and capital

The response of tax policy pursued in the analysed countries to the current crisis will be analysed in two ways:

1. Distribution of the total tax burden by economic function, i.e., the share of taxes on consumption, labour, and capital in relation to GDP and total tax revenues;
2. Analysis of trends in the implicit tax rate (ITR) on consumption, labour, and capital. The ITR is an indicator which expresses the relation of the tax burden levied on different activities to total revenue on this activity. The ITR takes into account the legislation and the resulting tax burden, which may affect the behaviour of various entities and their decisions.

The data in Table 3 shows that in the Euro area countries, on average more than 50% of budget revenue comes from the tax burden on labour, and in addition this share has been growing in recent years - from 50.3% in 2007 to 53.0% in 2011. The tax on labour, apart from income tax on the employed involves social security contributions paid by employers and employees and other tax burdens on labour.

Table 3. Structure of taxes by economic function (as % of total taxation)

	2007	2008	2009	2010	2011	Difference 2007 to 2011[2]
Taxes on consumption						
Greece	36.5	36.0	35.5	38.9	38.5	+2.0
Ireland	35.8	36.9	36.2	36.6	34.8	-1.0
Portugal	38.9	37.5	35.3	37.3	38.7	-0.2
Spain	25.0	24.9	23.7	27.4	26.9	+1.9
Euro area[1]	26.9	26.6	26.9	27.6	27.4	+0.5
Taxes on labour						
Greece	39.0	39.4	39.7	39.3	36.5	-2.5
Ireland	34.2	38.0	41.5	41.2	41.9	+7.7
Portugal	38.0	38.5	42.5	41.6	41.7	+3.7
Spain	45.7	51.5	55.5	54.0	54.8	+9.1
Euro area[1]	50.3	52.0	53.8	53.4	53.0	+2.7
Taxes on capital						
Greece	24.5	24.6	24.9	21.8	25.0	+0.5
Ireland	30.0	25.1	22.4	22.3	23.3	-6.7
Portugal	23.4	24.0	22.2	21.0	21.5	-1.9
Spain	30.5	25.3	23.8	21.1	21.0	-9.5
Euro area[1]	23.6	22.7	20.4	20.2	20.5	-3.1
Taxes on corporate income						
Greece	7.5	7.8	8.1	7.7	6.5	+1.0
Ireland	11.3	9.8	8.6	9.0	8.3	-3.0
Portugal	10.9	11.1	9.2	8.5	7.7	-3.2
Spain	12.8	8.8	7.6	5.8	5.9	-6.9
Euro area[1]	8.5	7.5	5.5	5.9	6.3	-2.2

[1]Weighted average

[2]In percentage points

Source: Author's own calculation based on *Taxation trends*…, op. cit.

Taxation of labour grew in these three countries: Spain, Portugal, and Ireland. In Spain taxes increased from 45.7% of total tax revenue to 54.7%, an increase of 9.1 percentage points. This can be explained by a major increase in the top income tax rates from 43% to 53%. A large increase in the tax burden on labour was also seen in Ireland: from 34.2% to 41.9%, or 7.7 percentage points, although here it was the effect of the extension of the tax base and reduction of some tax allowances and deductions. Viewed against this background the increase in the tax burden on labour in Portugal was relatively small - from 38% to 41.7%, i.e., 3.7 percentage points. Among the countries studied, only in Greece did the taxes on labour decrease: from 39% to 36.5% of total tax revenue,

even though the PIT rate increased in Greece. At the same time, however, public sector wages were severely reduced as well as many tax advantages. In addition, the sector of small businesses and self-employed is well developed in Greece and their income may be treated by statistics as capital taxation. In Greece, the self-employed represent 31.9% of all employed, versus the EU average of 15%.[23]

Another measure of the tax burden on labour is the implicit tax rate (ITR) on labour, measured as the share of taxes levied on labour (income tax and social security contributions) in the total gross wage fund in the economy.

Table 4. Implicit tax rate in %

	2007	**2008**	**2009**	**2010**	**2011**	**Difference 2007 to 2011**[2]
ITR – consumption						
Greece	16.5	15.4	14.6	16.4	16.3	-0.2
Ireland	25.2	23.3	22.3	22.3	22.1	-3.1
Portugal	19.1	18.2	16.7	17.6	18.0	-1.1
Spain	15.7	13.9	12.5	14.7	14.0	-1.7
Euro area[1]	19.8	19.3	18.8	19.3	19.4	-0.4
ITR – labour						
Greece	33.3	32.9	30.0	31.5	30.9	-2.4
Ireland	25.7	24.7	25.4	26.2	28.0	+2.3
Portugal	23.7	23.6	23.9	24.0	25.5	+1.8
Spain	33.7	32.4	31.4	32.7	33.2	-0.5
Euro area[1]	37.8	37.9	37.3	37.4	37.7	-0.1
ITR – capital						
Greece	18.4	18.8	18.3	16.5	.	.
Ireland	19.4	17.2	15.6	14.0	.	.
Portugal	33.3	37.2	31.6	28.4	.	.
Spain	41.6	31.0	26.3	.	.	.
Euro area[1]	30.8	29.4	28.5	27.2	28.9	-1.9
ITR – corporate income						
Greece	18.5	17.0	18.3	17.8	.	.
Ireland	8.8	8.5	7.6	7.8	.	.
Portugal	27.4	36.1	.	.	.	.
Spain	55.4	31.7	21.8	.	.	.
Euro area[1]	29.6	28.0	19.0	18.8	20.3	-9.3

[1]Weighted average
[2]In percentage points

Source: Author's own calculation based on *Taxation trends*…, op. cit.

[23] Greek Myths and Reality (http://www.brookings.edu/research/papers/2013/08/06-greece-recovery-dervis).

The average level of the ITR on labour in the EU-17 (Table 4) did not change during the period under study - it ranged between 37.3 and 37.9%. Among these four countries there are, however, different trends. An increase in this ratio can be observed in Portugal (by 1.8 percentage points) and Ireland (by 2.3 percentage points). It must be kept in mind, however, that in both countries the level of the ITR on labour is relatively low. In Ireland, this is due to the low social security contributions, and in Portugal due to the low initial rates of PIT. The Greek ITR on labour fell from 33.3% in 2007 to 30.9% in 2011. Given the low direct taxes, the influence of social contributions on the overall development of the indicator is significant, and particularly relevant for the rise experienced in 2010. In Spain, in turn, the fluctuations are bidirectional. First, until 2009, ITR on labour was falling (from 33.7% to 31.4%), but in 2011 reached a level close to the initial one (33.2%).

In the Euro area, the share of consumption taxes in budget revenue in the period under study was quite stable (26.9% in 2007 and 27.4% in 2011). A similar share of consumption taxes remained in Spain, although it was growing at a slightly faster rate (from 25% to 26.4%). In the other three countries, the share of consumption taxes in the total budget revenue was larger (35.5-39%).

The fiscal effects of these actions were not evident. The data from Table 4 for the years 2007–2011 shows that although the consumption tax rates increased, this was not reflected in the level of implicit tax rates on consumption (which measures the relationship between the amount of all consumption and the total domestic households' consumption expenditure).

The lowest ITR on consumption was in Greece and Spain. This was due to a relatively broad application of the reduced VAT rates as compared to the standard rate.

While investigating the tax burden on capital, the European Commission takes into account income from various sources, namely: corporate income tax – CIT, income from economic activity such as a small business and self-employment, taxes on wealth, capital, and savings held by households and enterprises, and taxes on capital transactions.

Taxes on capital are very sensitive to economic trends (Moździerz 2011, pp. 63-64, Krajewski 2006, pp.71-72).This is demonstrated by the declining share of these taxes in relation to total tax revenue in the EU-17, from 23.6% in 2007 to 20.5% in 2011. This resulted from the decrease in the level of economic activity. The revenue from corporate tax fell relatively faster than all tax revenue from capital. One should note that the biggest declines in the share of these taxes in total tax revenue took place in Spain and Ireland.

The ITR on capital also shows the downward trend. This is due to the decrease in tax rates generally introduced, especially for small and medium-sized enterprises, in order to revive economic recovery and increase employment. Tax breaks for start-ups also began to be generally used.

5. Conclusions

1. The Euro area countries which were first affected by the financial crisis still suffer from a large deficit and public debt. This is so even though these countries received massive external aid and commenced restructuring measures, often very difficult for the public and which required great sacrifices (drastic reduction in public spending, freezing wages in the public sector and pensions). Unemployment is still high in these countries, especially among young people.
2. In 2007, the share of budget revenue from taxes in relation to GDP in the countries under study was the lowest among the EU-17 countries. Despite the restructuring actions taken in 2011, these countries have not improved their position; it has even deteriorated. This means that the burden of restructuring activities was borne by means of external assistance.
3. Statistical data shows that in the case of Ireland, Portugal, and Spain, the tax burden is being shifted from capital and consumption onto labour, which is contrary to the long-term trends and can inhibit the growth of employment. In Greece, on the other hand, it is the other way around. The tax burden on labour is decreasing while the tax burden on consumption is increasing, coupled with a relatively stable tax burden on capital.

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Streszczenie

POLITYKA FISKALNA W KRAJACH EU NAJBARDZIEJ DOKNIĘTYCH KRZYSEM - GRECJA, IRLANDIA, PORTUGALIA, HISZPANIA

Światowy kryzys finansowy, który rozpoczął się w latach 2007-2008 w USA wpłynął negatywnie na gospodarkę Unii Europejskiej, a głównie na euro area, czyli w Grecji, Irlandii, Hiszpanii i Portugalii. Te peryferyjne kraje strefy euro wychodzą z recesji i kryzysu finansowego w dużym stopniu dzięki wielkiemu wsparciu finansowemu instytucji międzynarodowych. Na uratowanie tych gospodarek przeznaczono setki miliardów euro. Równocześnie jednak kraje te charakteryzowały się najniższym stopniem fiskalizacji mierzonym udziałem podatków w GDP wśród krajów należących do strefy euro.

W referacie podjęta została próba odpowiedzi na następujące pytania:

1) *Jakie były przyczyny załamania koniunktury w tych krajach oraz jakie podjęto działania restrukturyzacyjne;*
2) *Jakie zmiany w systemie podatkowym wprowadzono w ramach polityki naprawy finansów publicznych;*
3) *Jak wprowadzone zmiany wpłynęły na strukturę dochodów budżetowych z podatków oraz w jakim stopniu kryzys wpłynął na zmianę relacji obciążeń podatkowych konsumpcji, pracy i kapitału.*

***Słowa kluczowe**: podatki, kryzys finansowy, Grecja, Portugalia, Hiszpania, Irlandia*

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JANINA WITKOWSKA[*]

Capital Movements Between The European Union And Turkey Within The Integration Processes

Abstract

The institutional model used in the integration process between the European Union (EU) and Turkey was that of establishment of a customs union under an Association Agreement. In the context of the difficulties that have occurred in the membership negotiations between the EU and Turkey, the question arises whether real economic integration between them has gone further than that achieved at the stage of a customs union. Free movement of capital, constituting one of the so-called four fundamental freedoms within the single European market, is the subject of examination in this paper. The obligations of Turkey, as an EU candidate country, in the field of free movement of capital are more demanding under the EU scheme of liberalization of capital flows than within the OECD, which is regulated by the Code of Liberalisation of Capital Movements and the Code of Liberalisation of Current Invisible Operations. Real economic integration between the EU and Turkey requires further liberalization of the free movement of capital. While Turkey encourages the inflow foreign direct investment using a generous package of incentives, the role of FDI in its economy still remains moderate.

Keywords: *European Union, Turkey, integration processes, capital movements, foreign direct investment*

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1. Introduction

Turkey has been undergoing a long-lasting integration process with the EU, which commenced in 1963 with the signing the Association Agreement (Ancara Treaty). The next steps in the EU –Turkey relations were: Turkey's submission of an application for the membership of the EEC in 1987; establishment of a customs union between the EU and Turkey in 1996; and the EU's acceptance of Turkey's status as a candidate country for EU membership in 1999. The accession negotiations were opened in 2005, however they encountered serious political barriers and have been frozen for the last three years. The parties have signed a readmission agreement in December 2013, ands aim at continuing the accession negotiations.

In the context of such a long and difficult process of political and institutional integration between the EU and Turkey, the question arises whether real economic integration between them has gone further than that achieved at the stage of a customs union. The free movement of capital, constituting one of so-called four fundamental freedoms within the single European market, is the subject of examination in this paper.

The aim of the paper is to analyze and evaluate both the legal status of capital movements between the EU and Turkey and the state of the art of real capital movements between them, with special reference to foreign direct investment stocks and flows.

The more detailed research tasks are as follows:

- to present a theoretical background for analysis of integration processes between countries at different levels of development;
- to analyze legal and economic aspects of the integration processes to date between the EU Member States and Turkey;
- to evaluate the progress in the establishment of free movement of capital between the EU Member States and Turkey;
- to examine foreign direct investment flows between the EU Member States and Turkey as well as their role in the modernization of a candidate country.

The EU, UNCTAD, OECD and CEIC statistical data bases are used to analyze and evaluate capital movements between the EU and Turkey.

2. Theoretical background for analysis of integration processes between countries at different levels of development

An analysis of the integration processes between the EU and Turkey can be based on the theoretical findings and postulates formulated to date in the economic literature. These include:

- economic integration between independent countries should be treated as a long-term process, usually embracing several stages (free trade area, customs union, common market, economic and monetary union) (Balassa 1961, Molle 1995, Pelkmans1997),
- a logical scheme of achievement of the integration stages should be respected, i.e. trade liberalization should precede the liberalization of capital movements (Molle 1995),
- capital movements in the form of foreign direct investment cannot thrive or develop intensively without a certain level of trade flows between countries (Molle, Morsink 1992),
- integrating countries are expected to be at a similar level of economic development in order to facilitate the integration process,
- if countries at different levels of development decide to integrate, an adjustment period is required and a compensation mechanism for weaker partners should be activated, i.e. a socio-economic policy with special financial funds (Molle 1995, Nienhaus 1987).

The integration processes between the EU and Turkey should be perceived of as integration between countries at different levels of development, although the differences between them have been diminishing. In such a case both legal and real integration require time and effort on both sides. Cost-benefit analyses at each stage of the integration process shows that a weaker partner needs some transition periods to establish the free movement of goods, services and capital, as well as to fulfill other requirements connected with common policies such as environmental protection and competition policies. The stronger partners usually expect some transition period related to the free movement of workers, and some experiences indicate that some additional measures may also need to be undertaken temporarily to protect other segments of their market. At the end of the transition period the stronger partners gain access to the market of a weaker partner and vice versa. The net result depends on their competitive advantages.

3. Legal and economic aspects of the integration processes to date between the EU Member States and Turkey

Turkey applied for associate membership in the European Economic Community (EEC) in 1959, at a time when the EEC included only six member states. The EEC suggested the establishment of an association, which would be treated as a preliminary stage of integration, leading to Turkey's accession in the future (Nas 2008, p. 142, Aksu 2012, pp. 6-7). Hence, at the very beginning of the integration process the long-term aim of mutual relations was clearly defined.

The legal and economic integration processes started with entry into force of the Association Agreement in 1964, which proclaimed (Article 2) that a customs union would be progressively established between the EEC and Turkey over a period of 12 years. According to the additional Protocol, which was signed in 1970 and entered came into force in 1973, the transitional period was prolonged for up to 22 years (Additional Protocol 1972). The full customs union was achieved via some gradual adjustments. Turkey was to eliminate custom duties on 55 percent of its imports from the ECC, mainly manufactures, over the period of 12 years, and for remaining manufactures over the period of 22 years. The EEC commitments included removing its restrictions on all Turkish industrial goods, except textile and petroleum products, and the granting of preferential duties by the EEC on the majority of Turkish agricultural exports to the EEC. These EEC commitments were fulfilled in 1973 and 1987 respectively (Nas 2008, pp.142-145, Aksu, p. 7). In January 1996, Turkey entered into the customs union with the Community on the basis of the Association Council Decision 1/95 (Rapoport 2011, pp.175-176). This decision secured Turkey's alignment with the EU customs policy. The institutional framework of the association was completed with a new joint committee dealing with technical aspects of the customs union.

The economic consequences of the establishment of the customs union are assessed quite positively. Both short-term static welfare effects and long-term dynamic effects seem to appear. Trade creation and trade diversion effects are confirmed by research on the dynamics and structure of Turkey's trade with the EU. An increase in Turkey's trade volume with the EU has taken place, as well as the diversification of both exports and imports. (Nas pp.146-150). The data presented in the Graph No 1 shows that Turkey's total trade volume was growing slightly during the first years after the entry into force of the customs union. A more rapid increase in the total trade volume has been observed since 2003, with the exception of years 2009-2010, when the global financial crisis occurred. Export to and import from the EU showed the same tendencies (see Graph No 2). It is worth noting that Turkey's

export to the EU increased 5.3 times in the years 1996-2013, and import from the EU grew 4 times in the same period. The net current account of Turkey amounted, however, to-29.4 billion USD in 2013 (CEIC data and own calculations).

At the beginning of the customs union, the EU as a whole was the dominating trade partner of Turkey, which is confirmed by the EU shares in Turkey's total export and import (see Graph 3). In 1996 these shares amounted to 51.5% and 53.2% respectively. The EU share in Turkey's total export was growing in subsequent years and amounted to 57.9% in 2004. Since then, a it can be observed that the EU share in Turkey's total export has been decreasing. The EU accounted for only 41.5% of Turkey's export in 2013, i.e. 10 percentage points less than in 1996. The EU share in Turkey's total import was decreasing throughout the whole analyzed period. This share amounted to 49.3% in 2004 and 36.7 % in 2013. In comparison to the beginning of the customs union, this share diminished by 16.5 percentage points (CEIC data and own calculations). The EU as a whole remains, nevertheless, Turkey's biggest trading partner while Turkey continues to be the EU's sixth largest partner in foreign trade (EC 2013, pp. 4-5).

The data cited above shows that Turkey being a member of the EU customs union has differentiated the directions of its trade flows and led to the development of its trade relations with third countries. At least three factors seem to influence these processes. Firstly, the creation of the customs union with the EU requires Turkey's adjustments to the EU FTA's and gives it opportunities to diversify its trade relations.[1] Secondly, the WTO membership of both partners has had an impact on the weighted average tariff rates used after entering the customs union into life. These rates amounted to 5.48% before and 4.65% after the creation the customs union. This means that the WTO members also benefited from the customs union between the EU and Turkey (Rapoport 2011, p.193). Although it has been pointed out that Turkey is the subject of WTO disputes, lower trade barriers under the WTO rules enable it to develop foreign trade. Thirdly, the decrease in the EU's share in Turkey's total trade in the years 2008-2013 might have been related to the consequences of the global financial crisis, which were acute for some EU Member States.

The specific type of the association model, including a customs union instead of a free trade area, which was implemented in the relations between the EU and Turkey was expected to help in the future accession negotiations.

[1] Turkey has concluded 19 preferential agreements with the EU partners, of which 11 is now in force (Rapoport 2011, p. 183).

However this model, chosen in the 1960s, could not absorb new integration aspects occurring over time and it is evaluated rather critically in the context of the accession negotiations (Rapoport 2011, pp.194-195).

4. Accession negotiations between the EU and Turkey – achievements and obstacles

Following the adoption by the European Commission of the European Strategy for Turkey in 1998, in 1999 the European Council gave Turkey the status of a candidate country for EU membership. This was treated as a groundbreaking event for Turkey-EU relations (Aksu, p. 12-13; Joseph, p.174-175). Turkey was assessed to have fulfilled the Copenhagen criteria and the accession negotiations were officially launched on 20 October 2005. The Negotiating Framework provided for 2014 as the earliest possible date for accession, but the negotiation process was treated as 'open-ended' and without any guarantees (Hakura 2006, p. 11). The screening process, as the first phase of the negotiations, was completed on 13 October 2006.

The initial optimism about the new opening in Turkey-EU relations was also based on some changes in Turkish politics and in its economy. Turkey adopted several reform packages in order to fulfil the EU obligations related to the democratisation of different aspects of life. Turkey also improved its position in the world economy, moving from the 26th position to 16th in a group of the largest economies in the world by 2011. The years between 2002-2012 were perceived as '… *transformative years in Turkey's history in terms of political, economic and social developments*.'(Aksu 2012, p.13). Despite these achievements however, serious political obstacles appeared and the relations between Turkey and the EU became almost frozen. The reasons for this were: the Cyprus issue, human rights violations, problems with the current judicial system in Turkey, and anti-Turkish sentiments in Europe (Aksu 2012, p.15). The reluctance of some European societies towards the prospects of Turkish membership of the EU might be explained, on the one hand, by cultural and religious differences between both partners, and on the other hand by socio-economic factors. The latter were connected with the free movement of people, agricultural subsidies, and structural policy. The Negotiating Framework specified that these issues may be subject to long-term restrictions or permanent derogations, which would be a controversial solution (Hakura 2006, p. 14), as Turkey is against these derogations. In this context a more general question arises if such a flexibility mechanism introduced by the EU in

relations with a future members does not undermine the key legal principle of non-discrimination and equality of all the EU Member States (Inglis 2011, pp.1-28).

According to the Ministry of Foreign Affairs of the Republic of Turkey, the results of the negotiations to date between the Turkey and the EU are as follows (Turkey –EU Relations, http://www.mfa.gov.tr):

- 13 chapters[2] have been opened to negotiations so far, and one of them has been provisionally closed (25-'Science and Research'),
- The negotiations on 8 chapters[3] cannot be opened at present as a result of the EU Council decision of December 2006, on the ground that Turkey is not undertaking its obligations stemming from the Additional Protocol to the Ankara Agreement in its entirety (Turkey's position with respect to the Greek Cypriot Administration),
- No more chapters can be provisionally closed – the justification is as above
- In 2007, France blocked the opening of the negotiations on five chapters; however, the blockage on chapter 22 was lifted,[4]
- In 2009, the Greek Cypriot Administration unilaterally stated that it would block the opening of six chapters.[5]

According to the European Commission's progress report on the negotiations with Turkey, the opening of the negotiations on the chapter 22 is an important step towards overcoming the three-year stalemate in these negotiations (EC 2013). The document points out some progress as far as fulfilment of the political criteria is concerned. Turkey has adopted both the judicial reform and the democratisation packages in 2013. Nevertheless, further progress is held back by various persisting factors. The main political obstacle seems to be the implementation of the Additional Protocol to the Association Agreement and related to the *Cyprus issue*. At the same time, an assessment of the fulfilment of the economic criteria shows that Turkey is a functioning market economy and it would be able to cope with the competitive pressure and market forces within the EU in the medium term. The implementation of some structural reforms, however, should be accelerated.

[2] These include among others: chapter 4-'Free Movements of Capital'.

[3] These are: '1- Free Movement of Goods', '3-Right of Establishment and Freedom to Provide Services', '9-Financial Services, '11- Agriculture and Rural Development', '13-Fisheris', '14-Transport Policy, '29-Customs Union' and '30-External Services'.

[4] It is '22-Regional Policy and Coordination of Structural Funds'.

[5] Among others it is: '2-Freedom of Movement of Workers".

As above mentioned facts and opinions show, serious barriers have appeared in the course of the membership negotiations between the EU and Turkey, and completing the negotiations will be rather a difficult and long-lasting task.

5. Progress in the establishment of the free movement of capital between the EU and Turkey

The free movement of capital is a constitutive element of the common market, and a candidate country must undertake the necessary measures in order to achieve the required liberalization level. Turkey, as a member of the OECD from 1961 and a candidate country for membership of the EU, is expected to liberalize capital movements in its relations with other Member States.

The OCED members should respect the Code of Liberalisation of Capital Movements and the Code of Liberalisation of Current Invisible Operations. These Codes constitute legally binding rules and are implemented through 'peer pressure'. Policy reviews and assessments and examinations of countries are used as methods of putting pressure on the Member States (OECD, http://www.oecd.org). One important aspect of implementing the OECD Codes is 'benchmarking', which gives countries a type of guidance and support in the field of their own financial liberalization (OECD 2002).

The implementation of the provisions of the Code of Liberalisation of Capital Movements is not unconditional. An OECD member has the right to:

- lodge reservations relating to the obligations resulting from the Code (Article 2b),
- introduce clauses of derogations if economic and financial conditions justify such a course (Article 7),
- use exceptions to the principle of non-discrimination because of being part of a special customs or monetary system (Article 10),
- withdraw from the Code by transmitting a notice in writing to the Secretary-General of the Organisation (Article 22).

Turkey has introduced financial liberalization gradually over the course of its OECD membership. Historically, the main step in the financial liberalization process was the abolition of the limitations and controls imposed on interest rates and foreign currency transactions at the beginning of the 1980s (Ekinci 2006, pp. 21-24; Takim 2010, p.528-529). In 1982, the Capital Market Law was enacted in Turkey in order to regulate the Turkish capital market, and within this scheme the Capital Market Board was established. In 1986, the Istanbul Stock Exchange (ISE) was established and government

bonds and securities exchange markets started functioning. The Turkish Central Bank initiated open market transactions in 1987. Resolution No 32 of the Council of Ministers, enacted in 1989, introduced full liberalization of capital movements and thus the process related to the liberalization of foreign currency operations and capital movements was concluded (Takim 2010, p.528-529). Turkey became integrated into global financial markets as a result of these legislative processes by 1991 (Ekinci 2006, p.22).

Foreign direct investment, treated as one of the types of capital movements, was also liberalized by Turkey incrementally in the years 1954-2003. As a result, Turkish legal regulations offer basic guarantees for foreign investors, i.e. a freedom of investing in Turkey, a national treatment. i.e. equal treatment with local investors, no restrictions on the share of foreign partners, and a guarantee against expropriation or nationalisation without proper compensation (Ekinci 2006, pp.22-23).

The above presented state of legal regulations in Turkey concerning capital movements would imply that this country is fully adjusted to the rules of free capital movement, not only within the OECD but also within the EU. However, the list of reservations lodged within the OECD Codes includes a relatively high number of derogations from its provisions. These include reservations related to direct investment, to some operations in real estate, in securities on capital and money markets, some operations in negotiable instruments and non-securitised claims, some operations in collective investment securities, credits granted by non-residents to residents and vice versa, some credits and loans granted by residents to non-residents, and the operation of deposit accounts (OECD 2011, pp. 132-135).

In its *Turkey 2013 Progress Report*, the European Commission evaluates the current state of liberalization processes in this country concerning the *Free movement of capital* as not satisfactory enough, although some progress has been observed recently (EC 2013, pp. 26-27). The main objections of the EU are related to:

- Turkey's legislative framework on the **acquisition of real estate by foreigners**, which is not in line with Article 63 of the Treaty of Functioning of the European Union. The EC states: '*Arrangements for real estate acquisition remain non-transparent, not aligned with the acquis and restrictive of rights of a number of Member States nationals'* (EC 2013, p. 27); Greek, Bulgarian and Cypriot citizens are subject to specific restrictions;
- **sector restrictions on foreign ownership** in Turkey; some restrictions continue to exist in radio and TV broadcasting, transport, education, and electricity generation and distribution;

- the **fight against money laundering and terrorist financing**; although Turkey adopted the Law on Prevention of Financing of Terrorism and a relevant implementing regulation in 2013, the new Law does not address all the shortcomings identified by Financial Action Task Force; as a result, Turkey is still on the list of *jurisdictions with strategic anti-money laundering/counter-terrorist financing deficiencies*. It is pointed out that while the new Law gives the legal basis for freezing terrorists' assets, nevertheless Turkey's activities remain limited in this field.

The European Commission takes note of some progress as regards payment systems. A new Law was introduced regulating settlements systems in securities and payments, and electronic money. Implementation regulations will be adopted within a year, hence, it is concluded that the current legislative framework needs to be aligned with the *acquis*.

The evaluation of the liberalization processes in the field of free capital movements between the EU and Turkey shows that adjustments are still required. A sensitive issue is the acquisition of real estate in Turkey by non-residents, which is determined by both economic and political factors. The obligations arising from Turkey's preparation for membership of the EU seem to be more demanding than those related to its membership of the OECD.

6. Foreign direct investment flows between the European Union and Turkey as a candidate country

The main factors influencing the scale of FDI flows into Turkey are related to its advantages, which are: economic growth, market size, labour costs, strategic geographical location, an investment climate determined by a generous incentive policy, and customs union with the EU.

As indicated above, Turkey encourages FDI inflows into its economy using a generous package of incentives. Implementation of the incentive policy is based on the national treatment rule, which means that incentives are available to both domestic and foreign investors alike. The new incentive package entered into force in 2012 includes VAT and customs duty exemptions, employer social security contribution exemptions, corporate or personal income tax concessions and land grants and interest–rate subsidies to investment projects. The eligibility of incentives depends on region, sector and size criteria, which are quite commonly used by less developed recipient countries (OECD 2012, p.55, Investment Incentives Turkey, www.incentives.gov.tr).

Benefits for investors locating their investment in the least developed regions amount up to 45% of initial investment costs, and up to 25% in the more developed regions. Additionally, in the case of investment in the least developed regions employer and employee social security contributions and personal income tax will be exempted for 10 years. Sector differentiation of incentives is relatively low. However, some 'priority' sectors receive stronger incentives, irrespective of regional location. These are: tourism, mining, railroad and maritime transport, pharmaceuticals, defence and education. Moreover, newly defined 'strategic' sectors will receive additional benefits. These are sectors where Turkey's dependence on imports is the highest. Finally, incentives are differentiated by investment size. The largest investment projects, with initial costs above TL 50 million, are granted additional tax concessions (OECD 2012, Investment Incentives Turkey, www.incentives.gov.tr).

The strength of the particular internal factors mentioned above could be subject to dispute. However, FDI inflows are dependent on global and regional factors as well. Graph No 5 presents the trends in FDI flows into and out of Turkey in the years 1990-2012. This data shows that at the beginning of the functioning of the customs union with the EU there were no rapid changes in FDI inflows into Turkey. The inflows soared a decade later, i.e. in 2005-2007, similar to the trends in global FDI inflows. The global financial crisis drastically reduced both the global FDI inflows and FDI inflows into Turkey. The latter declined more than by a half. The recovery of the global FDI flows is a rather slow and bumpy road (UNCTAD 2013). In 2012 Turkey received USD 12 billion, i.e. USD 10 billion less than in the record year 2007, but still almost five times more than in 2004. Positive decisions taken by foreign investors to invest in Turkey in the years 2005-2012 might have been influenced by the structural reforms undertaken in Turkey and by incentive regimes, which were modified in 2004, 2005 and 2009. However, FDI flows are more sensitive to the global economic and political situation than trade flows. Hence, Turkey and other countries have experienced a deep decline in FDI inflows. Almost 71% of FDI located in Turkey comes from the EU and is characterized by a strong high-technology component (EC 2013, p.5). FDI outflows from Turkey are limited as far as their scale is concerned, but they have been growing in recent years. Turkey remains a net importer of capital in the form of FDI.

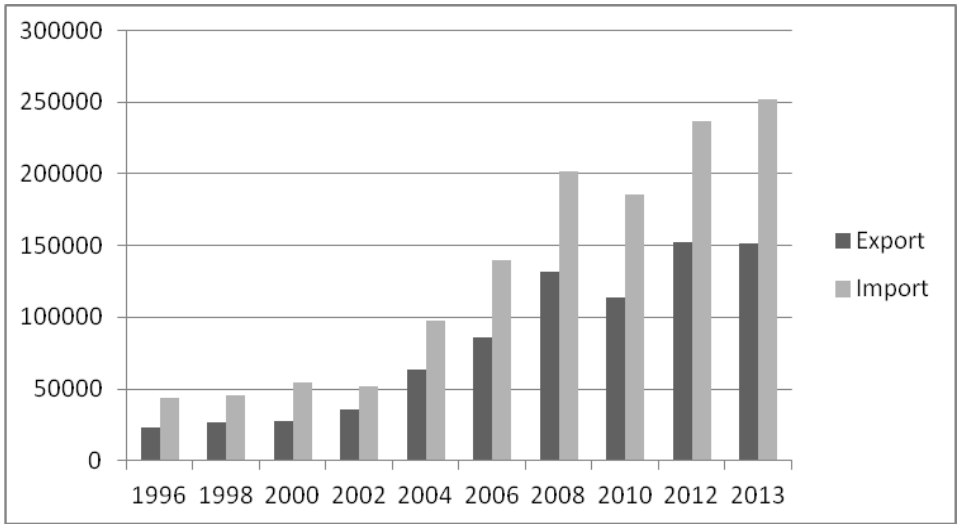
The relative importance of FDI in Turkey's economy is still moderate. FDI inward stocks amounted to USD 140 billion and constituted 18.1% of Turkey's GDP in 2011. FDI outward stocks amounted to USD 26 billion and 3.4% of its GDP. FDI inflows as a percentage of GDP confirms that Turkey relies mainly on internal factors in its development. This measure amounted to 2.1% in 2011 (OECD 2013).

In the context of the above cited data it is difficult to state definitely if investment creation and diversion effects within the customs union occurred in the case of Turkey.

7. Conclusions

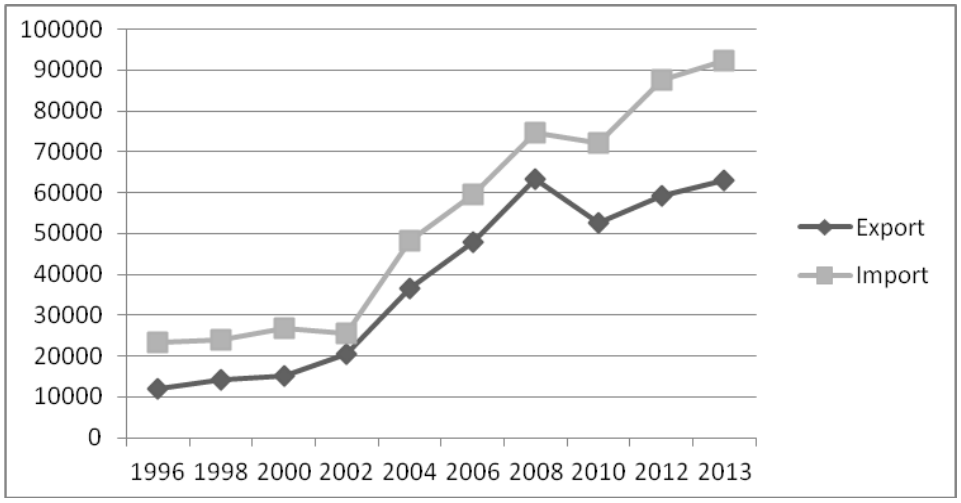
1. The integration processes to date between the EU and Turkey were conducted unconventionally, by using the institutional model of establishment of a customs union under an Association Agreement. Despite the earlier expectations, it has not helped much in the membership negotiations.
2. A specific feature of the EU-Turkey membership negotiations is the occurrence of serious political obstacles. These seem to be much stronger than they were in the previous enlargements.
3. Acceptance of permanent derogations related to some sensitive areas under the future EU-Turkey membership agreement, as proposed by the EU, could break the rules of non-discrimination and the equality of all EU Member States, which might constitute serious legal and political problems.
4. The case of Turkey, as well as the experiences from last three enlargements, seem to confirm that integration processes between countries at different levels of development cause economic problems, although benefits have also been achieved by all the partners. The EU Member States should be determined to offer assistance on an appropriate scale for a weaker candidate country.
5. The obligations of Turkey as a candidate country in the field of free movement of capital are more demanding under the EU scheme of liberalization of capital flows than within the OECD, regulated by its Codes.
6. Real economic integration between the negotiating parties has not gone further than that achieved at the stage of customs union. The free movement of capital requires further liberalization processes.
7. Turkey encourages foreign direct investment inflows using a generous package of incentives. However, the role of FDI in its economy still remains moderate.

Graph 1. Turkey's total export and import , USD Million, 1996-2013



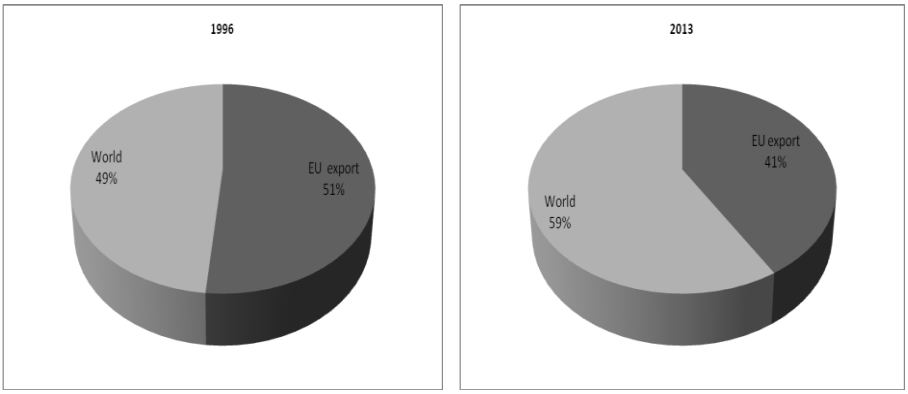
Source, CEIC data basis and own elaboration.

Graph 2. Turkey's export to and import from the EU27, USD Million, 1996-2013



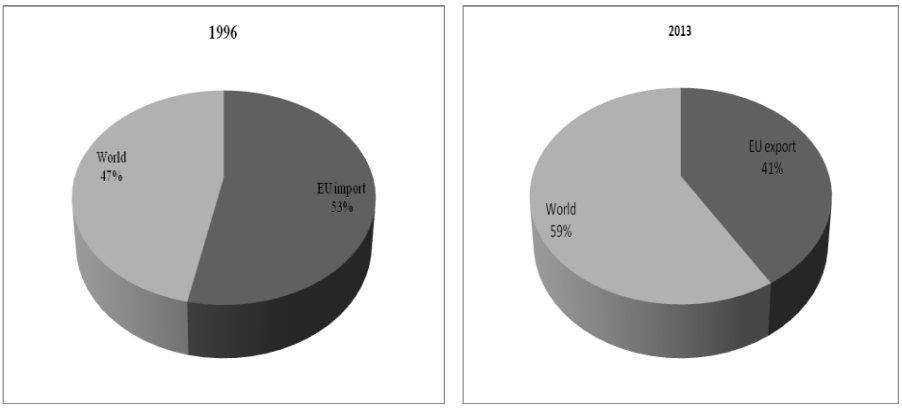
Source, CEIC data basis and own elaboration.

Graph 3. The EU's shares in Turkey's total export - 1996, 2013 (in %)



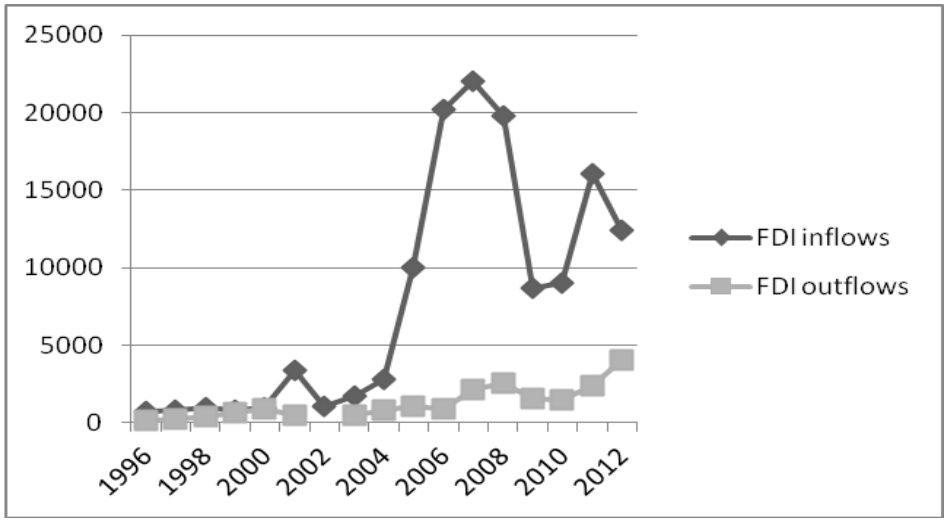
Source: CEIC data base and own calculations.

Graph 4. The EU's shares in Turkey's total import - 1996, 2013 (in %)



Source: CEIC data base and own calculations.

Graph 5. Foreign direct investment flows into and out of Turkey, USD Million, 1996-2012



Source: UNCTAD data base and own elaboration.

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Streszczenie

PRZEPŁYWY KAPITAŁOWE MIĘDZY UNIĄ EUROPEJSKĄ A TURCJĄ W PROCESIE INTEGRACJI

W procesie integracji między Unią Europejską a Turcją wykorzystany został instytucjonalny model, zakładający utworzenie unii celnej w ramach umowy o stowarzyszeniu. W kontekście trudności, jakie wystąpiły w trakcie negocjacji o członkostwo Turcji w UE, pojawia się pytanie, czy realna integracja gospodarcza między tymi partnerami wykroczyła poza poziom osiągnięty na etapie unii celnej. Przedmiotem artykułu jest swobodny przepływ kapitału, stanowiący kluczową swobodę w ramach jednolitego rynku europejskiego. Zobowiązania Turcji w zakresie swobodnego przepływu kapitału są bardziej daleko idące w ramach wymagań obowiązujących w UE, niż w ramach członkostwa w OECD, regulowanych tzw. Kodeksami. Rzeczywista integracja ekonomiczna między UE a Turcją wymaga dalszej liberalizacji przepływów kapitałowych. Turcja zachęca bezpośrednich inwestorów zagranicznych do inwestowania, wykorzystując hojny pakiet zachęt. Rola bezpośrednich inwestycji zagranicznych w gospodarce Turcji pozostaje jednak umiarkowana.

Słowa kluczowe: *Unia Europejska, Turcja, procesy integracji, przepływy kapitałowe, bezpośrednie inwestycje zagraniczne*

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Labour Taxation In Poland Compared To The Other OECD Countries

Abstract

The aim of the study is to identify the level and diversity of labour taxation, expressed by the so-called tax wedge, in Poland compared to the other OECD countries. The identification is based on an analysis of statistical data collected in the OECD database for the years 2000-2012. The study interprets key terms such as labour taxation, tax wedge, and non-wage costs of labour. The further section synthetically discusses theoretical findings and the results of empirical research concerning effects of labour taxation on the functioning of the labour market and, in particular, its impact on employment and unemployment. The author's own research includes a comparative analysis of tax wedge sizes in different household types in Poland and the other OECD countries in the years 2000-2012. The major conclusion of the analysis is that labour taxation in Poland insufficiently takes into account the financial situation of low-earning individuals and those providing for children (i.e. children within households). The results of the conducted research form the basis for drawing synthetic conclusions and making recommendations for Poland. The main suggestion is that a selective reduction in the non-wage costs of labour of low-earning individuals and those burdened with family responsibilities should be considered.

***Keywords**: tax; labour taxation; tax wedge; employee, employer, labour costs, earnings*

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1. Introduction

In all developed countries labour, as one of the factors of production, is subject to taxation in the process of its use. The level, principles or diversity of taxation depend on national solutions arising from established priorities of national socio-economic policies. At the same time, labour taxation is one of those policy instruments that arouses the most controversy. Depending on the assumed criteria, labour taxation may simultaneously be judged to be too low or too high, insufficiently or excessively diversified. Such judgments are made by both economic theoreticians and policy practitioners, who are constantly trying to find an optimal level and structure of labour taxation, from the point of view of its social and economic functions. This study joins in the discussions by attempting a comparative analysis of labour taxation in Poland and countries forming the international *Organization for Economic Co-operation and Development* (OECD). The principal aim of the study is to identify the level and diversity of the so-called tax wedge in Poland, compared to the other OECD countries. The identification is based on an analysis of statistical data collected in the OECD database for the years 2000-2012. Results of the analysis permit the drawing of conclusions concerning the labour taxation policy implemented in Poland.

2. Labour Taxation – Comparative Analysis

2.1. Interpretation of Key Terms

Labour taxation consists of income taxes and social security contributions (paid by both the employee and employer). Income taxes are components of every country's tax system, providing for mandatory payments to be paid by natural and legal persons to the state. As such, they perform specific functions, being (among others) a source of revenues for the public finance system. Income taxes collected from hired workers are not directly associated with the labour market, although they impact on the behaviours of both partners participating in hiring processes in that market, i.e. employers and employees. On the other hand, a direct relationship occurs between the functioning of the labour market and social security contributions (Boeri, Ours van 2011, pp. 119-129).

Labour taxation performs functions similar to those of all other taxes, in particular, fiscal and regulatory functions. The fiscal function consists of providing

sources of revenues for state and local budgets, as well as social security funds. The regulatory function consists of affecting the volume of income at the disposal of taxpayers and their households, because labour taxation is one of the financial means through which income adjustment occurs. While the fiscal function is fulfilled by both income taxes and social security contributions, the regulatory function is ascribed, first and foremost, to income taxes.[1] The degree of regulation depends on the nature of the tax nature, i.e. whether it is a fixed (lump-sum), linear, degressive or progressive tax, as well as whether the so-called "negative taxation" takes place in the form of benefits compensating incomes deemed to be insufficient. Finally, taxation of earnings can also perform a stimulating function aimed at affecting the behaviours of employers and employees in the labour market. That is so when exemptions, allowances, or increased rates are used to diversify employers' and employees' tax burdens, both in the case of income taxes and social security contributions.

Labour taxation is an important component of the non-wage costs of labour, strongly determining their level. It affects the relationship between gross earnings, being the employer's costs, and the net earnings received by the employee. The share of labour taxation in the total labour costs borne by the employer is referred to as the "tax wedge". The OECD Glossary of Statistical Terms defines the tax wedge as the "*sum of personal income tax and employee plus employer social security contributions together with any payroll tax less cash transfers, expressed as a percentage of labour costs*" (Glossary 2014).[2] As suggested by the definition, the tax wedge shows not only burdens in respect of labour taxation but also all kinds of financial transfers received by the employee, such as income-dependent employee benefits aimed at providing financial incentives to work.

In practice, the relationship between the employee's gross and net earnings depends on the individual situation of his or her household. Therefore, tax wedges are calculated separately according to marital statuses (single individuals and married couples), number of earners (only for married couples), number of children provided for by the employee and the relationship between his or her earnings and average earnings. The results of these calculations indicate, in particular, the occurrence and strength of mechanisms reducing tax burdens of employees with low earnings and/or providing for family members.

[1] Social security contributions can also serve the regulatory function only in the event they are different for different groups of payers.

[2] Sometimes the tax wedge also contains indirect taxes on consumption (VAT and excise tax), which offers complete information on the difference between gross earnings and earnings allocated to consumption (Nickel, Layard, 1999, pp. 3029-3083, Bukowski, 2005, p. 156, Boeri, Ours van, 2011, pp. 121-122).

2.2. Results of the Research to Date

Labour taxation – as such – increases the price of labour, causing, on one hand, an increase in the total costs of labour, and on the other hand, interfering with the market or, so to speak, the natural relationship between the cost of labour and its marginal productivity. This issue is the subject of many theoretical discussions (see, among others, Nickel, Layard 1999, pp. 3029-3083, Koskela 2002, pp. 63-85) and empirical studies.

In general – according to the theoretical approach – increased labour costs result in decreased demand for labour. Due to the fact that those costs are a source of financing certain benefits which only employees are entitled to (e.g. related to retirement or unemployment), they may translate into an increase in the labour supply. That is the case, however, only in conditions assumed to be inherent in the functioning of labour markets under the neoclassical approach and, in particular, in conditions of perfect elasticity of labour supply and demand in relation to similarly perfectly elastic wages (Bukowski 2005, p. 158). In practice, such a situation does not occur in contemporary labour markets – there is, among others factors, the phenomenon of downward wage rigidity consequential to setting the minimum wage.

Empirical research into labour taxation most commonly focuses on the relationship between labour taxation and volumes of employment and unemployment. Results of studies to date have usually led to a conclusion that high labour taxation adversely affects the labour market by decreasing employment and contributing to increased unemployment. It also results in higher employment in the grey area of the economy, which is directly caused by a decline in employees' net earnings, encouraging them to take up unregistered employment. Therefore, it can be concluded that if the tax wedge is high it ought to be reduced in order to increase the demand for labour and, first and foremost, for legal employment, simultaneously decreasing socially and economically troublesome unemployment (Dolenc, Laporšek 2010, pp. 356-357, Dolenc, Vodopivec 2005, pp. 303-304, Wojciechowski 2008, p. 9). The effect is, however, not guaranteed because – as stems from the theory of the functioning of labour markets and economic practice – all those variables are influenced by many factors and not merely the labour taxation level.

It should be emphasised that the research carried out in OECD countries indicates that the negative impact of the tax wedge on employment is the most severe for low-skilled individuals, most often low-earning ones, because their wages are less elastic than the earnings of highly-skilled employees. With respect to the latter, a high tax wedge may only insignificantly contribute to a decrease in the employment of highly-skilled individuals, whereas it causes

unemployment among low-skilled workers to a much larger extent. Thus, the macroeconomic effects of the level of labour taxation on total employment (in the economy as a whole) depend on the qualifications structure of labour supply: they are stronger in countries with a large share of low-skilled employees and weaker in countries where that share is small (Góra *et al.*, 2006, p. 49). A similar impact of the tax wedge is observed for young employees, whose productivity of work and earning level are relatively low at the early stages of their careers.

Researchers have demonstrated less interest in the diversity of tax wedge sizes depending on households' individual situations. This is so despite the increasing recognition of the role of labour taxation in affecting the financial situations of households of both low- and high-earning individuals, as well as those more burdened or less burdened with the responsibilities associated with providing for children.

2.3. Statistical Analysis

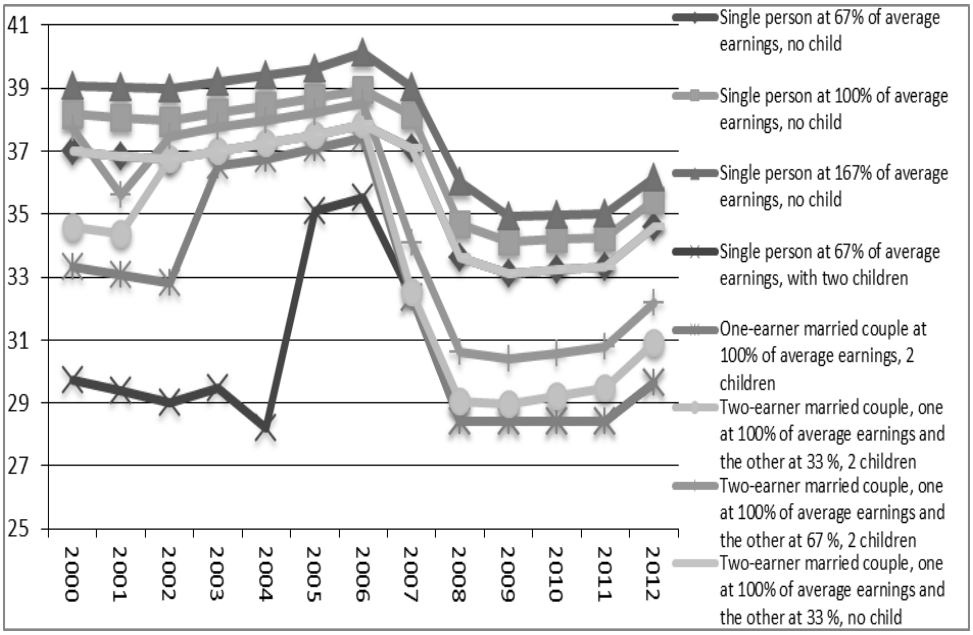
In the years 2000-2012, the highest tax wedges in Poland occurred in households of single individuals earning 167% of average earnings and with no child: from 39.1% in 2000 to 36.2% in 2012. The lowest tax wedges occurred in households of single individuals earning 67% of average earnings and with two children (29.7% and 29.6% respectively), and in single-earner married couples earning 100% of average earnings and with two children (33.3% and 29.6% respectively) (Figure 1).

In the study period, all tax wedges in Poland decreased by 2.9 percentage points (pp.) on average for all household types (from 35.8% to 32.9%). The largest decrease was observed for households of two-earner married couples - with one earning 100% of average earnings and the other 67% - and with two children (a decrease of 5.5 pp.), while the smallest decrease was observed in the group of households of single individuals earning 67% of average earnings and with two children (decrease of only 0.1 pp.).

An abrupt decrease in tax wedges in Poland occurred from 2007 to 2008, when employees' disability pension insurance contribution was reduced, having previously been 13% of the assessment basis, of which 6.5% was paid by the employee and 6.5% by the employer. The reduction was made in two steps: on 1 July 2007 the part of disability pension contribution paid by the employee fell by 3 pp., while on 1 January 2008 the total contribution fell by 4 pp. (2 pp. for

employees and 2 pp. for employers).[3] Following these reductions, employees paid the contribution accounting for 1.5% of the assessment basis, whereas employers paid 4.5%, making a total of 6% of the assessment basis. In 2012 tax wedges rose, which mainly resulted from the decision to increase, by 2 pp., the part of disability pension insurance contribution financed by employers.[4] As a consequence, the disability pension insurance contribution went up from 6% to 8% of the assessment basis. This change was justified by the need to reduce the Social Insurance Fund deficit related to the disability pension fund.

Figure 1. Tax wedges according to household types in Poland from 2000 to 2012



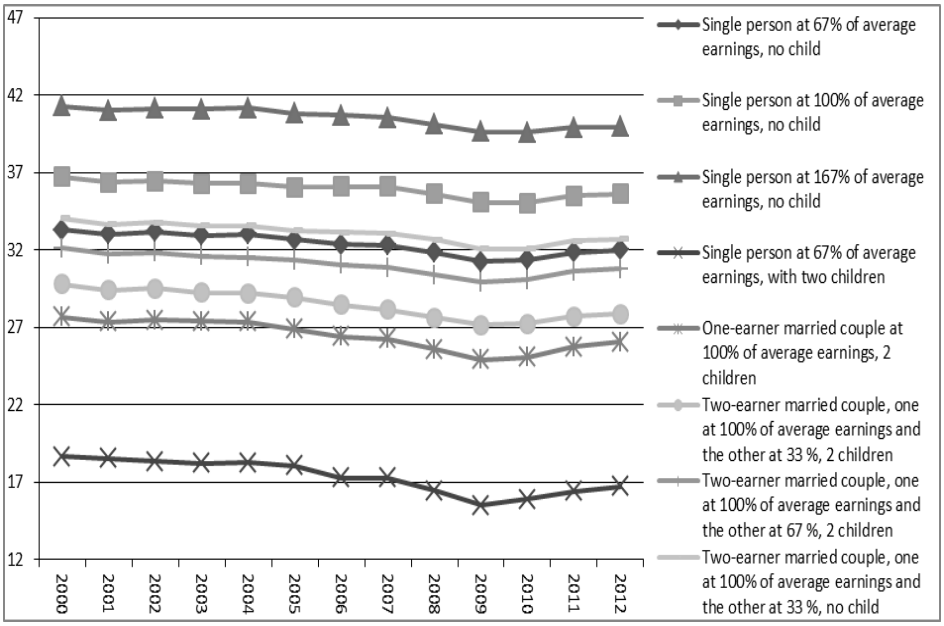
Source: OECD StatExtracts, *Taxing Wages*, http://stats.oecd.org/index.aspx, accessed on 5 April 2014.

In the years 2000-2012, changes in the sizes of average tax wedges in the OECD countries showed a steady downward trend for all household types. They decreased by 1.5 pp. on average, with most considerable decrease occurring for households of two-earner married couples, one earning 100% of average earnings and the other 33%, with two children (by 1.9 pp.), and markedly the least decrease for households of single individuals at 100% of average earnings, with no child (by 1.1 pp.) (Figure 2).

[3] Pursuant to the Act of 15 June 2007 on the Amendment to the Act on the Social Insurance System and Certain Other Acts (Journal of Laws [*Dz.U.*] of 2007 No. 115, item 792).

[4] Pursuant to the Act of 21 December 2011 on the Amendment to the Act on the Social Insurance System (Journal of Laws [*Dz.U.*] of 2011 No. 291, item 1706).

Figure 2. Average tax wedges according to household types in 35 OECD countries from 2000 to 2012



Source: OECD StatExtracts, *Taxing Wages*, http://stats.oecd.org/index.aspx, access on 5 April 2014.

Two conclusions can be drawn from the comparison among tax wedges occurring in Poland and average ones for 35 OECD countries in the study period.

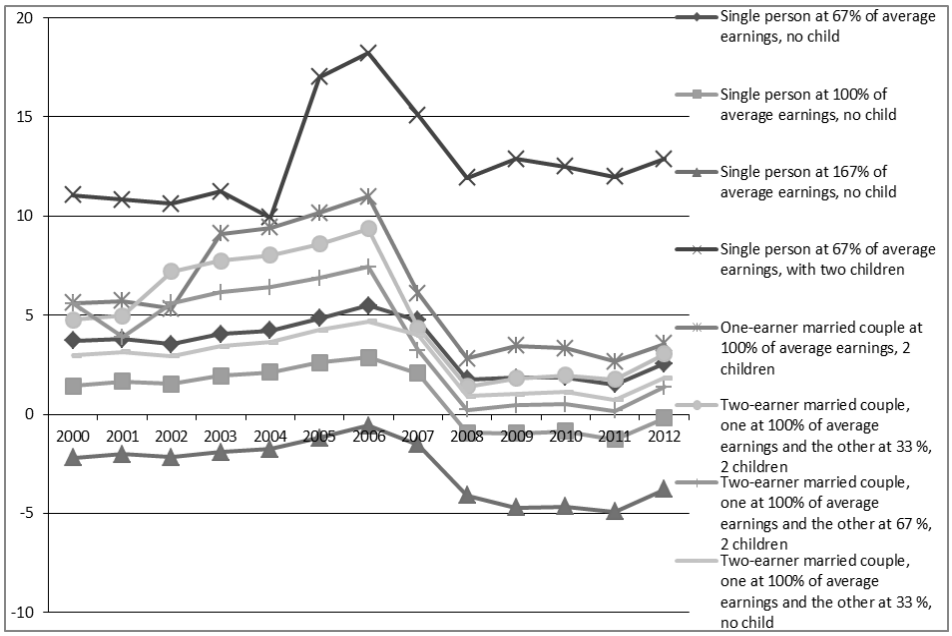
Firstly, tax wedge sizes in Poland were much less diversified according to household types than in OECD countries. In Poland, labour taxation of different household types was considerably more similar as compared to the average for OECD countries. The coefficient of variation computed for the values of tax wedges in different household types in Poland in specific years of the 2000-2012 period ranged from 3.3 in 2005 and 2006 (the lowest value) to 8.9 in 2004 and 2008 (the highest value), while it was 7.5 in 2012. In the same period, the coefficient of variation calculated for the average value of tax wedges in OECD countries ranged from 19.8 in 2000 (the lowest value) to 22.9 in 2009 (the highest value) and was 21.5 in 2012. It should be added that, in 2012, coefficients of labour taxation variation for different household types were lower than those in Poland only in Turkey (4.8) and Greece (6.4). That is direct evidence of the flattening of Poland's labour taxation scale applicable to earners in households and indirect evidence of the non-adjustment of Poland's tax policy, in its part concerning labour taxation, to the needs and capabilities of different household types.

Both in OECD countries and Poland, the highest tax wedge occurs for single individuals at 167% of average earnings, with no child, i.e. those with

high earnings and no family responsibility burdens. That is quite obvious and consistent with the sense of the so called social justice. The lowest tax wedge (again – both in Poland and the other OECD countries) occurs for households of single individuals at 67% of average earnings, with two children, i.e. single parents, which should also be appreciated if only from the point of view of the pro-family policy. Interestingly, the difference between those two wedges was relatively small in Poland: in 2012 it was 6.5 pp., while it was as big as 23.2 pp. on average in OECD countries. In other words, in all countries, net incomes of households of working single parents with average earnings were higher than net incomes of working single individuals, but in some countries, Poland included, the differences were slight.

The comparison of tax wedges in Poland and average tax wedges for 35 OECD countries also leads to the other conclusion, namely that they were considerably higher for most Polish household types, which can be clearly seen in Figure 3.

Figure 3. Differences between tax wedge sizes for different household types in Poland and 35 OECD countries from 2000 to 2012



Source: OECD StatExtracts, Taxing Wages, http://stats.oecd.org/index.aspx, accessed on 5 April 2014.

In Poland, the most favourable situation occurred for single individuals earning 167% of average earnings, who were burdened with considerably lower labour taxation than their OECD counterparts. In turn, the labour taxation of

Polish single individuals earning 100% of average earnings and with no child was similar to the tax wedge level in OECD countries. In the other household types, labour taxation was higher than OECD countries' average. From this point of view, the worst situation occurred for low-earning single parents of two children (single individuals earning 67% of average earnings, with two children). In their case, the size of the tax wedge size in Poland went from 9.9 pp. (2004) to 18.2 pp. (2006), higher than the OECD average in the study period.

Compared to the other OECD member states, labour taxation in Poland was relatively high (Table 1). In 2012, 35 countries were ranked in order from the lowest to the highest tax wedge size, and Poland's labour taxation burdens ranked as follows:

- single person at 67% of average earnings, no child – 18th place;
- single person at 100% of average earnings, no child – 14th place;
- single person at 167% of average earnings, no child – 11th place;
- single person at 67% of average earnings, with two children – 27th place;
- one-earner married couple at 100% of average earnings, 2 children – 20th place;
- two-earner married couple, one at 100% of average earnings and the other at 33%, 2 children – 20th place;
- two-earner married couple, one at 100% of average earnings and the other at 67%, 2 children – 16th place;
- two-earner married couple, one at 100% of average earnings and the other at 33%, no child – 17th place.

Tax wedge sizes in OECD member states were significantly diversified. In 2012, for instance, net incomes of couples with one earner and two children were lower than gross incomes from 0.551% in New Zealand to 43.1% in France.

Generally low labour taxation was observed in non-European countries, in particular countries such as: Chile, Mexico, New Zealand, Australia, Korea, Israel or the United States, and in Europe in Switzerland. Interestingly, in some countries net incomes of households of single parents with low earnings and two children exceeded their gross incomes, which was the case in Ireland (with a difference as large as 25.6%) as well as New Zealand, Canada, Australia and Israel. This was cause by specific benefits or tax allowances available to those household groups in those countries. It is worth mentioning that tax systems in some countries take into account taxpayers' personal and socio-economic situations, which permits adjusting tax burdens to their payment capabilities in adopted tax solutions, considering mainly their family situations and, especially, the number of dependent children (see: Ślesicka 2011, pp. 58-87). Such solutions are applied to a very limited extent in Poland. The Polish tax system offers only two income tax preferences. One is the option for spouses to file a joint income

tax and single parents to do the same if the raised child is the second earner in the family. The other is a tax-deductible child allowance (since 2007).[5] These solutions, minimalist in their nature, result in Poland's very low ranking in all the quoted classifications and, in particular, in the case of labour taxation of single parents with low earnings and two children (27th place).

It should be emphasised that a majority of European Union member states ranked low in all the classifications. That especially applied to France, Belgium and Sweden, i.e. countries with extensive systems of social benefits. Among EU member states, relatively low tax wedge sizes were characteristic of only countries such as Ireland, the United Kingdom, Luxembourg and the Netherlands. Taking this into consideration, it may be said that labour taxation in Poland was not especially high inasmuch as its tax wedges were similar to those of most of the European Union member states, as has also been observed in other analyses (Nadolny 2009, pp. 11-14, Bartosik 2012, pp. 35-40). Poland stood out as a country with particularly low labour taxation of single individuals earning 167% of average earnings and without children. In that category its tax wedge was the lowest among all EU countries (ranking number one among 21 EU member states).

[5] For more on this issue, see: Rękas 2012, pp. 426-429.

Table 1. Tax wedges for different household types in OECD countries in 2012 (in %)

Country	Single person at 67% of average earnings, no child	Single person at 100% of average earnings, no child	Single person at 167% of average earnings, no child	Single person at 67% of average earnings, with two children	One-earner married couple at 100% of average earnings, 2 children	Two-earner married couple, one at 100% of average earnings and the other at 33%, 2 children	Two-earner married couple, one at 100% of average earnings and the other at 67%, 2 children	Two-earner married couple, one at 100% of average earnings and the other at 33%, no child
Australia	21.489	27.208	33.029	-3.99	16.515	18.558	24.92	23.39
Austria	44.208	48.882	51.363	27.927	37.971	37.828	41.204	45.06
Belgium	50.461	56.048	60.957	36.885	41.375	42.592	49.005	48.832
Canada	26.126	30.806	32.944	-7.099	18.225	23.691	26.937	27.669
Chile	7	7	7.902	6.059	7	4.842	6.624	7
Czech	39.326	42.412	44.88	14.564	20.684	29.812	34.033	40.204
Denmark	36.999	38.554	45.069	11.687	27.845	32.471	34.151	37.197
Estonia	39.167	40.4	41.387	26.085	32.341	34.972	36.551	39.167
Finland	36.73	42.508	48.457	25.548	37.341	34.927	37.097	38.802
France	47.108	50.224	54.04	38.999	43.122	41.037	45.629	46.414
Germany	45.581	49.75	51.201	31.394	34.169	38.959	42.511	45.581

Greece	38.64	41.946	47.046	37.568	42.97	41.403	41.911	41.206
Hungary	47.629	49.425	50.611	21.667	33.598	34.81	39.12	47.182
Iceland	29.868	34.516	39.046	20.588	22.701	28.792	32.5	30.125
Ireland	20.074	25.948	38.172	-25.633	6.377	12.622	18.019	19.631
Israel	12.508	19.194	27.402	-0.805	15.078	9.953	12.669	16.102
Italy	44.485	47.605	52.969	28.688	38.332	40.227	42.99	44.45
Japan	29.857	31.167	34.135	23.288	25.515	27.043	28.015	30.327
Korea	17.993	20.992	22.571	17.287	18.493	18.51	18.594	19.967
Luxembourg	28.902	35.76	43.133	2.717	13.315	17.621	22.984	27.41
Mexico	13.525	18.961	21.877	13.525	18.961	16.601	16.762	16.601
Netherlands	33.16	38.557	42.342	11.248	32.001	29.555	31.764	34.452
New Zealand	13.112	16.388	22.376	-18.401	0.551	8.667	14.684	15.233
Norway	34.257	37.573	43.192	21.891	31.344	31.965	33.828	34.988
Poland	**34.578**	**35.455**	**36.156**	**29.633**	**29.633**	**30.907**	**32.167**	**34.578**
Portugal	32.005	36.738	42.457	21.677	26.941	28.084	31.373	32.005
Slovak Republic	36.871	39.628	41.581	24.456	25.837	30.386	33.559	36.594
Slovenia	38.455	42.349	47.269	12.532	22.827	28.937	34.1	39.987
Spain	37.024	41.401	43.589	29.904	35.44	36.944	37.917	38.028
Sweden	40.733	42.844	50.687	32.776	37.539	37.104	38.817	41.082
Switzerland	18.588	21.458	26.029	4.239	9.498	12.211	15.29	19.119
Turkey	36.131	38.153	41.606	35.012	36.91	37.693	38.389	38.252
United Kingdom	28.214	32.329	38.13	8.446	27.914	24.86	28.033	28.214
United States	27.421	29.582	34.423	9.298	18.354	22.95	24.823	27.983
OECD – Average	**32.007**	**35.64**	**39.942**	**16.755**	**26.08**	**27.869**	**30.793**	**32.73**
Poland's position – OECD countries (35)	**18**	**14**	**11**	**27**	**20**	**20**	**16**	**17**
Poland's position – EU countries (21)	**6**	**3**	**1**	**15**	**9**	**9**	**6**	**6**

Source: OECD StatExtracts, Taxing Wages, http://stats.oecd.org/index.aspx, access on 5 April 2014.

3. Conclusions

The comparative analysis of labour taxation in Poland and OECD member states leads to two main conclusions, and consequently permits making appropriate recommendations.

Firstly, it would be difficult to unequivocally appraise the size of the tax wedge in Poland, as the appraisal depends on the benchmark. If the assumed benchmark is the average labour taxation in OECD countries, then the tax wedge is considerably higher in Poland. If, however, comparison is made among Poland and the EU member states, Poland's tax wedge can be considered moderate. An obvious question which arises is whether labour taxation in Poland can be reduced. The question is justified in the current conditions of chronic and still high unemployment, with the low ability of the economy to create new jobs. Such a step seems to be desirable taking into account theoretical findings and economic practice in various countries. It appears, however, that it is not possible in the foreseeable future. A reduction in income taxes would disrupt the appropriate level of budget deficit and public debt, i.e. the nominal criteria necessary to be met by candidate countries to become members of the Economic and Monetary Union, of which Poland is one. In addition, cutting social security contributions is unrealistic in the light of the current and expected (considering the ageing of the society) deficit of the Social Insurance Fund.

Secondly, a relatively low diversity of labour tax burdens of individuals in different household types was observed in Poland, which had also been noted in earlier studies (Krajewska 2007, pp. 192-193, Polarczyk 2007, p. 3). The problem, however, lies in the fact that the diversification did not show an upward trend in the study period, which contributed to preserving the unfavourable structure of taxation. Undoubtedly, labour taxation in Poland insufficiently takes into account the financial situation of low-earning individuals and, in particular, those with dependent children. That, on one hand, creates conditions for the impoverishment of some social groups and, on the other hand, stands in contradiction to the declarations to implement a pro-family policy. Such a system of labour taxation makes it more difficult to enter the labour market and remain employed, especially for young people and those characterised by low productivity (most commonly low-skilled workers). Therefore, a selective reduction in non-wage labour costs of those employee groups would be recommended. This could be carried out in at least three ways. The reduction may result, firstly, from subsidising their employment from public funds through employee benefits; secondly, from reducing social security contributions (apart from the "capital" contribution) and taxes paid on their earnings; and,

thirdly, by introducing tax allowances for those who employ them. In general, the aim would be to make the net earnings received by low-earning individuals sufficiently attractive and competitive as compared to income received from sources other than official (legal) employment, in other words to reduce all kinds of services or activities which take place in the so-called grey area. It would also be necessary to introduce family allowances within personal income tax or/and introduce special benefits for employees providing for children. The resulting short-term decline in the level of budget revenues would translate into increased public finance revenues over the long-term, after the labour market situation would have improved.

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Streszczenie

OPODATKOWANIA PRACY W POLSCE NA TLE POZOSTAŁYCH KRAJÓW OECD

Celem opracowania jest identyfikacja wysokości i zróżnicowania opodatkowania pracy, wyrażanego poprzez tzw. klin podatkowy, w Polsce na tle krajów OECD. Identyfikacji tej dokonano na podstawie analizy danych statystycznych zgromadzonych w bazie OECD obejmujących lata 2000-2012. W opracowaniu dokonano interpretacji pojęć kluczowych, takich jak opodatkowanie pracy, klin podatkowy i pozapłacowe koszty pracy. W dalszej części syntetycznie omówiono ustalenia teoretyczne i wyniki badań empirycznych dotyczących skutków opodatkowania pracy dla funkcjonowania rynku pracy, a zwłaszcza jego wpływ na zatrudnienie i bezrobocie. Badania własne objęły analizę porównawczą wielkości klina podatkowego w różnych typach gospodarstw domowych w Polsce i pozostałych krajach OECD w latach 2000-2012. Najważniejszą konstatacją wynikającą z analiz jest, iż w Polsce opodatkowanie pracy w zbyt małym stopniu uwzględnia sytuację materialną osób nisko zarabiających oraz mających na

utrzymaniu dzieci. Wyniki przeprowadzonych badań stały się podstawą sformułowania wniosków syntetycznych i rekomendacji dla Polski. Zasugerowano w nich przede wszystkim, by rozważono selektywne obniżenie pozapłacowych kosztów pracy osób nisko zarabiających oraz obciążonych obowiązkami rodzinnymi.

***Słowa kluczowe**: podatek, opodatkowanie pracy, pracodawca, pracownik, koszty pracy, wynagrodzenia*

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The Structure Of Unemployment In Poland And The European Union Between 2000 And 2012

Abstract

This paper has two main objectives. The first is to show changes in the levels of unemployment and unemployment rates in Poland and other European Union countries and to explain why the Polish rates are relatively high. The second is to analyse the structure of unemployment by gender, age, levels of education, and duration of unemployment. In order to assess the Polish unemployment structure it is compared with the analogous structures in the other European Union countries.

The analysis will indicate the groups of the labour force with high risk of unemployment. Among the groups of high risk of unemployment are women, youth, people with low skills, and the long-term unemployed.

***Keywords**: unemployment, unemployment rate, the structure of unemployment*

1. Introduction

The main objective of this paper is to present the characteristics of unemployment in Poland in the years 2000-2012, including trends in the levels and rates of unemployment and its determinants, as well as shifts in the structure of unemployment according to different socio-economic and demographic criteria. This analysis is intended to demonstrate characteristics of Polish

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unemployment and identify the groups of people who are in a worse position in the labour market and those most at risk of unemployment. The analysis will make it possible to fight unemployment more effectively. The aspects of unemployment in Poland presented in the paper are compared with changes in unemployment in other member states of the EU-27.

The structure of the paper is as follows. Section 2 presents an analysis of the level and dynamics of changes in unemployment and the unemployment rate. Section 3 shows changes in the structure of unemployment according to selected criteria such as gender, age, educational level, and duration of unemployment. Section 4 contains the main conclusions of the paper.

2. Trends in levels of unemployment and the unemployment rate in Poland and the EU-27, in the years 2000-2012

The commonly held conviction that the unemployment is of a multi-faceted nature is an important starting point for the analysis of unemployment. It requires searching its determinants in different areas and economic processes: demand and supply side of the economy, institutional arrangements in the labour market, as well as socio-economic and demographic characteristics of individuals (Godfrey 1986, pp. 6-9; Kwiatkowski 2005, p. 46 et seq.).

In order to present the dynamics of changes in unemployment in Poland, the Labour Force Survey (LFS) method was taken into account, based on questionnaire surveys of the economic activity of the population. According to this method, since the first quarter of 2001, in accordance with the recommendation of Eurostat, persons aged 15-74 years are classified as unemployed[1] if they simultaneously meet three conditions: during the reference week they were without work, actively having sought employment, and available to start work within the next two weeks after the reference week, or were waiting to start work as they had already found a job (*Kwartalna informacja o rynku pracy* 2012, p. 1).

[1] Based on the Act of 20 April 2004 on employment promotion and labour market institutions, in force since 1 June 2004 (Journal of Laws No. 99, Item 1001 as amended), the second method of studying the size of unemployment is used, based on the statistical reporting of regional labour offices.

Table 1. Size, dynamics and unemployment rate according to LFS, in Poland, in the years 2000-2012

Year	Number of unemployed in thousands[a)]	Dynamics(2000 = 100)	Unemployment rate in%
2000	2,760	100.0	16.0
2001[b)]	3,186	115.5	18.5
2002	3,375	122.3	19.7
2003	3,273	118.6	19.3
2004	3,081	111.6	18.0
2005	2,893	104.8	16.7
2006	2,076	75.2	12.2
2007	1,448	52.5	8.5
2008	1,154	41.8	6.7
2009	1,471	53.3	8.5
2010	1,649	59.7	9.3
2011	1,682	60.9	9.7
2012	1,757	63.7	10.1

[a)] Data for the 4th quarter

[b)] Since 2001, unemployed persons comprise persons aged 15 to 74; prior they included all persons aged 15 and over.

Source: *Kwartalna informacja o rynku pracy*, Central Statistical Office (GUS), Warsaw 2004, 2006, 2008, 2011, and 2013, pp. 1, 7, and 9, *Concise Statistical Yearbook of Poland 2007*, Central Statistical Office, Warsaw, p.254; *Aktywność ekonomiczna ludności Polski w latach 1992-2001*, GUS, Warsaw 2002, p. 21; 4th quarter of 2004, p. 46.

The data set forth in Table 1 shows that unemployment in 2012, compared to 2000, decreased by 1,003 thousand people (36.3%). The rate of unemployment also fell by[2] 5.9 ppt. However, compared to the highest unemployment rates in the years 2002-2003, the decline amounted to 9.6 percentage points (from 19.7% to 10.1%).

If we take into account changes in the unemployment levels and rates in the years 2000-2012, it should be noted that they did not have a uniform character. The period under consideration can be divided into the following specific sub-periods:

- 2000-2003 was a period of unfavourable trends in the labour market, reflected by rising unemployment and a rising unemployment rate,

[2] The LFS unemployment rate is calculated as the share of the unemployed (total or a group) in the number of economically active population (total or a given group), *Concise Statistical Yearbook of Poland 2012*, pp. 158 and 164.

- 2004-2008 was a period of economic recovery and improvement in the labour market, resulting in a downward trend in the number of unemployed and a declining unemployment rate;
- 2009-2012 was a period of declining economic growth and unfavourable trends in the labour market, and both the level and rate of unemployment increased again.

The number of unemployed in the first sub-period, which starts with the year 2000, was under 3 million people, while in subsequent years unemployment rose to over 3 million people, and in 2003 the number of unemployed was 513,000 persons higher than in 2000. The most unfavourable situation in the Polish labour market, not only during this sub-period but over the whole period under study, was in 2002, when unemployment reached its highest level. The number of unemployed amounted to 3,375,000 people, an increase of 615,000 over the base year 2000. This upward trend in unemployment in the sub-period contributed to a significant increase in the unemployment rate (by 3.3 ppt).The unemployment rate reached its highest level in Poland in 2002, when it increased to 19.7%.

The reasons for the adverse trends in the labour market in the period 2000-2003 can be found in the deterioration of economic conditions. The slowdown in real GDP growth (*Statistical Yearbook of the Republic of Poland 2003,* p. 585) from 3.7% in 2000 to 1% in 2001 and to 1.4% in 2002 was a result of deflationary policies, the deficit in the international exchange of goods, as well as of economic stagnation in Western Europe.[3] The increase in unemployment and in the unemployment rate in this period was closely associated with a decrease in the number of persons employed and the employment rate, which in 2002 reached its lowest level of 44.1%, according to the Labour Force Survey (*Statistical Yearbook of the Republic of Poland* 2001, p. 101, 2003, p.143).

Difficulties in the labour market were also a consequence of the reforms initiated in 1999 in the spheres of health, administration, and the social insurance system. This is to a certain degree can be attributed to the fact that government paid social insurance contributions for the unemployed if they registered with the labour office, which resulted in an increase in the number of registrations with labour offices. From the beginning of 1999, as a result of the baby boom, the inflow of graduates into the labour market has increased, a fact not without significance for the growth of unemployment and the increase in the unemployment rate. At the same time the share of the youngest group (15-24

[3] The "overheated" Polish economy, together with over-stimulated domestic consumption and investment demand came across a barrier of supply and capital constraints. It is true that a restrictive monetary policy reduced demand and reduced the inflation rate, but it also weakened economic growth.

years) in the employed as a whole was decreasing, from 10.5% in 2000 to 8.8% in 2002 and to 9.3% in 2003 (*Aktywność ekonomiczna ludności Polski*, IV kwartał 2000, p. 15; 2001, p. 15; 2004, p. 75).

Table 1 shows a noticeable improvement in the labour market in the second sub-period, spanning 2004 through 2008. This finds expression in the downward trend in unemployment and in the unemployment rate.

These downward trends in unemployment and in the unemployment rate were closely related to the economic recovery in the Polish economy and to job growth. The Polish GDP showed an increase in the period under study of 5.3% in 2004, 3.6% in 2005, and reached its highest growth rates in 2006 (6.2%) and 2007 (6.8%), with a slightly lower increase in 2008 (5.1%) (*Statistical Yearbook of the Republic of Poland 2011*,p. 684). The employment rate, according to the LFS, also showed an increasing trend, from 45.1% in 2004 to 51% in 2008.

An important role in accelerating the pace of economic growth and improvement in the labour market was played by Poland's accession to the European Union in 2004, and above all by the implementation of a pro-employment policy of economic growth, resulting from the requirements of the European Employment Strategy and the Lisbon Strategy (Kwiatkowska 2007, pp. 58-66).

The third sub-period, covering the years 2009-2012, again shows an increase in the number of unemployed and in the unemployment rate. These rising dynamics of unemployment can be assessed, however, as significantly weaker than in 2000-2003. In 2012, the number of unemployed had increased by 286,000 (19.4%) compared to 2009. The unemployment rate also increased by 1.6 ppt (to 10.1% in 2012). The deterioration of the situation in the labour market was due to the economic slowdown in Poland and in other European Union countries. In 2009, real GDP grew by only 1.6%, and although in the following years the growth was higher - 3.9% in 2010, 4.3% in 2011, and 1.9% in 2012 - nonetheless the growth rate was lower than in the previous years 2006-2008 (more than 5-6%) (*Statistical Yearbook of the Republic of Poland* 2011, p. 630; *Concise Statistical Yearbook of Poland* 2012, p. 476, *Roczne wskaźniki makroekonomiczne*, www.stat.gov.pl, 19.02.2014).

In assessing the situation in the labour market in Poland it is worth comparing the rate of unemployment in the Polish economy with unemployment rates in other countries of the European Union 27. Data in this regard is presented in Table 2.

Table 2. Unemployment rates in the countries of the European Union 27, years 2002-2012, in %

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU27	8.9	9.1	9.3	9.0	8.3	7.2	7.1	9.0	9.7	9.7	10.5
Euro area (17)	8.5	9.0	9.3	9.2	8.5	7.6	7.6	9.6	10.1	10.2	11.4
Belgium	7.5	8.2	8.4	8.5	8.3	7.5	7.0	7.9	8.3	7.2	7.6
Bulgaria	18.2	13.7	12.1	10.1	9.0	6.9	5.6	6.8	10.3	11.3	12.3
Czech Republic	7.3	7.8	8.3	7.9	7.1	5.3	4.4	6.7	7.3	6.7	7.0
Denmark	4.6	5.4	5.5	4.8	3.9	3.8	3.4	6.0	7.5	7.6	7.5
Germany	8.7	9.8	10.5	11.3	10.3	8.7	7.5	7.8	7.1	5.9	5.5
Estonia	10.3	10.1	9.7	7.9	5.9	4.6	5.5	13.8	16.9	12.5	10.2
Ireland	4.5	4.6	4.5	4.4	4.5	4.7	6.4	12.0	13.9	14.7	14.7
Greece	10.3	9.7	10.5	9.9	8.9	8.3	7.7	9.5	12.6	17.7	24.3
Spain	11.4	11.4	10.9	9.2	8.5	8.3	11.3	18.0	20.1	21.7	25.0
France	8.3	8.9	9.3	9.3	9.2	8.4	7.8	9.5	9.7	9.6	10.2
Italy	8.5	8.4	8.0	7.7	6.8	6.1	6.7	7.8	8.4	8.4	10.7
Cyprus	3.6	4.2	4.7	5.5	4.7	4.1	3.8	5.5	6.4	7.9	11.9
Latvia	12.8	11.3	11.2	9.6	7.3	6.5	8.0	18.2	19.8	16.2	14.9
Lithuania	13.8	12.4	11.3	8.0	5.2	3.8	5.3	13.6	18.0	15.3	13.3
Luxembourg	2.6	3.8	5.0	4.6	4.6	4.2	4.9	5.1	4.6	4.8	5.1
Hungary	5.6	5.8	6.1	7.2	7.5	7.4	7.8	10.0	11.2	10.9	10.9
Malta	7.4	7.7	7.2	7.3	6.9	6.5	6.0	6.9	6.9	6.5	6.4
Netherlands	3.1	4.2	5.1	5.3	4.4	3.6	3.1	3.7	4.5	4.4	5.3
Austria	4.2	4.3	4.9	5.2	4.8	4.4	3.8	4.8	4.4	4.2	4.3
Poland	20.0	19.7	19.1	17.9	13.9	9.6	7.0	8.1	9.6	9.6	10.1
Portugal	5.7	7.1	7.5	8.6	8.6	8.9	8.5	10.6	12.0	12.9	15.9
Romania	7.5	6.8	8.0	7.2	7.3	6.4	5.8	6.9	7.3	7.4	7.0
Slovenia	6.3	6.7	6.3	6.5	6.0	4.9	4.4	5.9	7.3	8.2	8.9
Slovakia	18.8	17.7	18.4	16.4	13.5	11.2	9.6	12.1	14.5	13.6	14.0
Finland	9.1	9.0	8.8	8.4	7.7	6.9	6.4	8.2	8.4	7.8	7.7
Sweden	6.0	6.6	7.4	7.7	7.1	6.1	6.2	8.3	8.4	7.5	8.0
Great Britain	5.1	5.0	4.7	4.8	5.4	5.3	5.6	7.6	7.8	8.0	7.9

Source: Eurostat data, http://epp.eurostat.ec.europa.eu/statistics_explained/index.php? Unemployment_ statist (18.02.2014).

The data in Table 2 shows that in the period under study (2002-2012), changes in average unemployment rates in the EU-27 also make it possible to identify the same three sub-periods as in the case of the Polish economy. The sub-periods are characterized by a diversified trend of changes in these rates. Between 2002 and 2004, there was an upward trend in unemployment rates (from 8.9% to 9.3%), between 2005 and 2008 - a downward trend in unemployment rates (from 9.0% to 7.1%), while between 2009 and 2012 unemployment rates again increased (from 9.0% to 10.5%).

Between 2002 and 2007, the unemployment rates in the Polish economy significantly exceeded the average unemployment rates in the EU27, and it was not until 2008 that they reached almost the same level. In 2009-2012 the rates were lower than the EU average by 0.9 ppt, 0.1 ppt, and 0.4 ppt, respectively.

Taking into account the last year under study (2012), there is a clear difference in terms of unemployment rates between Poland and some, especially the highly developed, countries of the EU-27. The unemployment rates in 13 member states were lower than in the Polish economy (also in comparison to the average rate for the EU27). Among these countries one should mention in particular: the Netherlands (5.3%), Austria (4.3%), and Luxembourg (5.1%), with unemployment rates around 5%. In many member states, the unemployment rate was higher than in Poland, and ranged between 11-25%. In 2012 the highest unemployment rate was in Spain (25%), but high rates of unemployment were also observable in Greece (24.3%), Portugal (15.9%), Latvia (14.9%), Ireland (14.7%), and Slovakia (14 %).

Based on the above data it can be concluded that the fight against unemployment is still an important priority for the governments of the member states. It is necessary to strengthen the pro-employment mechanisms of economic growth and labour market institutions, to improve the effectiveness of activation programs for the unemployed, and to introduce more flexible forms of employment. To improve the situation in the labour market a new long-term program for the development of the European Union for the period 2010-2020 was formulated. It was designated "Europe 2020 - A strategy for smart, sustainable and inclusive growth", and continued the objectives of the Lisbon Strategy for the years 2000-2010, which due to the economic crisis were not achieved.[4] According to the Europe 2020 Strategy, the employment rate in the EU-27 should reach 75%, and for Poland a rate of 71% was adopted, which means a necessity for a significant reduction in the unemployment rate.

[4] The employment rate in the EU27 was 64.1% in relation to the 70% target set by the Lisbon strategy, Eurostat, 2011.

3. The structure of unemployment in Poland and the European Union 27

A strong diversity of unemployment among different groups of the workforce is a characteristic feature of the Polish labour market. We are particularly interested in which groups dominated in unemployment, and which were most at risk of unemployment. Recognition of these groups of unemployed is essential in order to take effective measures to prevent and reduce unemployment.

Table 3.The structure of unemployment and unemployment rates by gender in Poland, 2000-2012, based on the LFS, in %

Year	Unemployment total = 100		The unemployment rate	
	Men	Women	Men	Women
2000	48.2	51.8	14.2	18.1
2001	50.6	49.4	17.3	20.0
2002	52.3	47.7	19.0	20.6
2003	51.8	48.2	18.4	20.3
2004	50.5	49.5	16.7	19.5
2005	50.1	49.9	15.4	18.3
2006	49.2	50.8	11.0	13.7
2007	49.7	50.3	7.8	9.4
2008	48.4	51.6	6.0	7.6
2009	52.8	47.2	8.2	8.8
2010	52.0	48.0	8.8	9.9
2011	50.1	49.9	8.8	10.8
2012	50.9	49.2	9.3	11.1

Source: Aktywność ekonomiczna ludności Polski IV kwartał 2001, p. 32, XXIX; 4th quarter of 2003: XXXII; Kwartalna informacja o rynku pracy 2011, pp. 7, 9, Statistical Yearbook of the Republic of Poland 2006, p. 252, 2007, p. 244, 2010, p.238; Kwartalna informacja o aktywności ekonomicznej ludności 2013, pp. 7-8.

Gender is the main distinguishing demographic feature of the unemployed. The data in Table 3 shows that in 2001-2005 the share of males in overall unemployment was higher than females. During this period however, economic activity rates for women were lower than for men and in addition, women dominated among the unemployed. A change in the dynamics of the shares of both sexes took place in 2006-2008, a period of a relatively high rate of economic growth, causing a decrease in the share of males in unemployment at the expense of an increased share of women. This effect reversed during the economic downturn, in the years 2009-2012, when again the share of males in overall

unemployment rose. This is due to the fact that men were more often employed in the private sector, which is characterized by a greater sensitivity to changes in economic conditions (Kalinowska-Sufinowicz 2013, p. 138). Due to different trends in the shares of both sexes in unemployment (increasing percentage of women and declining percentage of men), the share of men in relation to the share of women was higher (0.2 ppt in 2011), and rose to 1.7 per cent in 2012.

The analysis of unemployment rates indicates that the risk of unemployment among women is higher than among men. This is evidenced by higher rates of female unemployment throughout the entire period under study in relation to male unemployment rates and to total unemployment rates (see Table 1).This confirms that throughout the period under study it was harder for women to find work than for men. Numerous studies show that women are losing the competition with men, due to their social entitlements (good legal protection of motherhood and work) and women's lesser, according to employers, availability and frequent absences due to caring for sick children and other family members (Socha, Sztanderska 2000, p. 254; Matysiak 2009, p. 203). These are the main causes of discrimination against women in the labour market. Being unemployed, they are in addition discriminated against in terms of available jobs and wages.

The impact of gender on the risk of unemployment is also reflected in the share of men and women among the long-term unemployed (over 12 months). In 2000, the proportion of women seeking work for over a year in the total number of unemployed women was 45.9% (the corresponding proportion of men was 36.1%). Women accounted for 57.8% of the total number of the long-term unemployed (*Concise Statistical Yearbook of Poland 2005*, p.151). In 2005, the percentage of long-term unemployed women increased to 55.3% of all unemployed women. The proportion of long-term unemployed men also rose to 44.3%, but was still lower than that of women. In 2011, the proportion of long-term unemployed women decreased to 33.9%, but was still higher compared to the percentage of men (32.5%), although this difference was small (*Aktywność ekonomiczna ludności IV kwartał 2011*, 2012, pp. 72-73). The data confirms that women find it more difficult to find work and are affected by its negative consequences in the form, among others, of depreciation of human capital, social isolation, and low income (or lack thereof) (Kalinowska-Sufinowicz 2013, pp. 163-180).

This is especially confirmed when we compare the unemployment rates for men and women in Poland and other countries in the EU-27.This data is presented in Table 4.

Table 4. Unemployment rates for men and women in the European Union in the years 2000, 2005, and 2012, in %

Country	Women			Men		
	2000	2005	2012	2000	2005	2012
EU-27	10.0	9.8	10.5	7.8	8.4	10.4
Belgium	8.5	9.5	7.4	5.6	7.6	7.7
Bulgaria	16.2	9.8	10.8	16.7	10.3	13.5
Czech Republic	10.3	9.8	8.2	7.3	6.5	6.0
Denmark	4.8	5.3	7.5	3.9	4.4	7.5
Germany	8.4	11.0	5.2	7.7	11.6	5.7
Estonia	12.7	7.1	9.3	14.5	8.8	11.0
Ireland	4.1	4.1	11.0	4.3	4.6	17.7
Greece	17.1	15.3	28.1	7.4	6.1	21.4
Spain	16.0	12.2	25.4	7.9	7.1	24.7
France	10.8	10.3	10.4	7.5	8.4	10.1
Italy	13.6	10.1	11.9	7.8	6.2	9.9
Cyprus	7.1	6.5	11.1	3.1	4.4	12.6
Latvia	12.9	8.7	13.9	14.4	9.1	16.0
Lithuania	14.1	8.3	11.5	18.6	8.2	15.1
Luxembourg	2.9	6.0	5.8	1.8	3.6	4.5
Hungary	5.6	7.4	10.6	7.0	7.0	11.2
Malta	7.4	8.9	7.3	6.4	6.6	5.9
Netherlands	3.9	5.8	5.2	2.4	4.9	5.3
Austria	4.3	5.5	4.3	3.1	4.9	4.4
Poland	18.2	19.2	10.9	14.4	16.6	9.4
Portugal	5.2	9.1	15.8	3.8	8.1	16.0
Romania	6.3	6.4	6.4	7.2	7.7	7.6
Slovenia	7.0	7.1	9.4	6.5	6.1	8.4
Slovakia	18.6	17.2	14.5	18.9	15.5	13.5
Finland	10.6	8.6	7.1	9.1	8.2	8.3
Sweden	5.3	7.6	7.7	5.9	7.7	8.2
Great Britain	4.8	4.3	7.4	5.9	5.2	8.3

Source: *Unemployment Rate, Annual Average, by Sex and Age Groups (%)*, Eurostat Database, Luxembourg,http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do(Accessed 16.11.2012), *Unemployment rate by gender and age, 2007-2012 (%)*, png, http://epp.eurostat.ec.europa.eu/statistics (Accessed 18.02.2014).

In 2000-2005, the unemployment rate for women in Poland was one of the highest in the EU-27, and it did not decline to close to the EU average until 2012, when it exceeded it by only 0.4 ppt. In 2012 women's unemployment rates close to the rate in Poland (10.9%) could be observed in countries such as Ireland, France, Hungary, and Bulgaria. The highest unemployment rates of women, amounting to over 20%, were characteristic of Greece and Spain, countries particularly affected by the financial and economic crisis. In 2012, the lowest women's unemployment rates were in Austria (4.3%), and also in the Netherlands, Germany, and Luxembourg (5.2-5.8%).

In the vast majority of member states, not only in Poland, the unemployment rate for women was higher than the unemployment rate for men. The biggest differences between these rates in the period under study were in Greece, but in Spain only in the years 2000 and 2005. In some countries, the unemployment rate for men was higher than the unemployment rate for women, particularly in Bulgaria, Estonia, Ireland, Latvia, Lithuania, Romania, Great Britain, and Sweden. It is believed that in the process of improving the situation of unemployed women a major role is played by the development of flexible forms of employment, the implementation of active labour market programs for women, and effective implementation of the concept of gender equality in the labour market as a result of legal and institutional anti-discrimination solutions. Unemployment among men rose because men lost their jobs in the fields of the economy most vulnerable to economic fluctuations, especially in the private sector, construction, and industrial production, in which a large percentage of men work.

Another criterion for the analysis of unemployment in Poland is the age of the unemployed. The data in this regard is presented in Table 5.

The analysis of unemployment rates by age groups confirms that unemployment in Poland affects mainly young people. Persons aged 15-24 constitute the group which is particularly vulnerable in the labour market. The unemployment rate in this age group was more than twice higher than among those aged 25-34 years. A particularly high unemployment rate, above 40%, could be observed in 2001-2003. In subsequent years it showed a downward trend, reaching its lowest value in 2008, (17%), but since 2009 began to rise again, up to over 27% in 2012. Despite the overall decline in the unemployment rate in the youngest age group (by 6.7 ppt in the years under study), it still remains very high, almost three times higher than the overall unemployment rate in Poland in 2012. The situation of young people in the labour market is undoubtedly difficult. Their chances are determined by the level and type of education, which determine both the effectiveness of job searches and the ability to adapt to changes in the labour market. In addition to knowledge, employers require such skills such as computer skills, knowledge of software, driving license, foreign languages, etc. Most often

unemployment affects young people with the lowest qualifications and without professional training or work experience, i.e. those who have not performed any summer, part-time, or voluntary work.

Table 5. Unemployment rate in Poland by age in the years 2000-2012 (the 4th quarter), in %

Year	Age Groups			
	15-24	**25-34**	**35-44**	**45 and over**
2000	34.1	16.2	13.2	10.7
2001	41.1	18.0	16.0	11.8
2002	43.6	20.0	15.8	13.6
2003	41.1	19.4	15.7	13.7
2004	37.3	18.0	14.6	13.6
2005	34.6	16.7	13.8	12.8
2006	15-19 27.9 20-24 26.9	25-29 13.8 30-34 9.8	9.6	9.9
2007	18.7	8.9	5.6	7.2
2008	17.1	6.4	5.0	5.2
2009	22.3	8.7	5.9	6.1
2010	23.6	9.7	6,6	7.1
2011	26.4	10,1	7,0	7.1
2012	27.4	10.7	7,5	7.3

Source: Kwartalna informacja o rynku pracy 2005, p. 9, 2006, p. 9, 2008, p. 9, 2011, p. 9, 2013, p. 9; Statistical Yearbook of the Republic of Poland 2007, p. 254.

Since 2006, the unemployment rates in other age groups were relatively lower compared to previous years. The unemployment rates in the age group ranging from 35-44 years, and in the age group of 45 years or older, were very similar and in 2012 stood at a level which was over 7 ppt lower than the overall unemployment rate.

Youth unemployment doesn't only concern Poland; it is also a major concern of the European Union. The data for the EU is presented in Table 6.

Table 6. Unemployment rates among people under 25 years of age in the member countries of the EU-27 in the years 2002-2012, in %

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU27	17.8	18.6	19.0	18.8	17.5	15.7	15.8	20.1	21.1	21.4	22.8
Euro area (17)	15.9	17.3	18.2	18.3	17.0	15.5	16.0	20.3	20.9	20.8	23.1
Belgium	17.7	21.8	21.2	21.5	20.5	18.8	18.0	21.9	22.4	18.7	19.8
Bulgaria	35.2	26.6	24.3	21.0	18.3	14.1	11.9	15.1	21.8	25.0	28.1
Czech Republic	16.9	18.6	21.1	19.3	17.6	10.8	9.9	16.7	18.4	18.1	19.5
Denmark	7.4	9.2	8.2	8.6	7.7	7.5	8.0	11.8	14.0	14.2	14.1
Germany	9.9	11.6	13.8	15.6	13.8	11.9	10.6	11.2	9.9	8.6	8.1
Estonia	17.8	20.8	21.6	16.1	11.9	10.1	12.1	27.5	32.9	22.3	20.9
Ireland	8.4	8.7	8.7	8.6	8.7	9.1	13.3	24.0	27.6	29.1	30.4
Greece	26.8	26.8	26.9	26.0	25.2	22.9	22.1	25.8	32.9	44.4	55.3
Spain	22.2	22.6	22.0	19.7	17.9	18.2	24.6	37.8	41.6	46.4	53.2
France	17.2	19.1	20.8	21.3	22.4	19.8	19.3	24.0	23.6	22.9	24.3
Italy	22.0	23.6	23.5	24.0	21.6	20.3	21.3	25.4	27.8	29.1	35.3
Cyprus	8.0	8.8	10.2	13.9	9.9	10.2	9.0	13.7	16.6	22.4	27.8
Latvia	23.6	19.9	20.0	15.0	13.5	11.9	14.5	36.2	37.2	31.0	28.4
Lithuania	22.9	24.7	22.1	14.9	8.6	6.8	12.2	29.0	35.3	32.2	26.4
Luxembourg	7.0	11.2	16.4	14.6	15.5	15.6	17.3	16.5	15.8	16.4	18.1
Hungary	11.9	13.2	15.5	19.4	19.1	18.1	19.9	26.5	26.6	26.1	28.1
Malta	17.1	17.4	16.6	16.8	15.8	13.9	12.2	14.4	13.1	13.8	14.2
Netherlands	5.4	7.3	9.0	9.4	7.5	7.0	6.3	7.7	8.7	7.6	9.5
Austria	6.7	8.1	9.7	10.3	9.1	8.7	8.0	10.0	8.8	8.3	8.7
Poland	42.5	41.9	39.6	36.9	29.8	21.6	17.2	20.5	23.6	25.7	26.5
Portugal	14.3	17.8	18.9	19.8	20.1	20.4	20.2	24.8	27.7	30.1	37.7
Romania	21.0	19.5	21.0	19.7	21.0	20.1	18.6	20.8	22.1	23.7	22.7
Slovenia	16.5	17.3	16.1	15.9	13.9	10.1	10.4	13.6	14.7	15.7	20.6
Slovakia	38.1	33.8	33.4	30.4	27.0	20.6	19.3	27.6	33.9	33.5	34.0
Finland	21.0	21.8	20.7	20.1	18.7	16.5	16.5	21.5	21.4	20.1	19.0
Sweden	16.4	17.4	20.4	22.6	21.5	19.2	20.2	25.0	25.2	22.9	23.7
Great Britain	12.0	12.2	12.1	12.8	14.0	14.3	15.0	19.1	19.6	21.1	21.0

Source: Eurostat: *Unemployment rate, annual average by age groups: less than 25*, http:/epp.eurostat.ec.europa.eu (accessed 16.11.2012) Unemployment rate by gender and age, 2007-2012 (%), http://epp.eurostat.ec.europa.eu (accessed 18/02/2014).

The data in Table 6 shows that the unemployment rate among people under 25 in the EU-27 was of a diversified character, due to changes in the overall unemployment rate. In 2002-2006, this rate reached 17-19%, in 2007-2008 decreased to 15.7-15.8%, only to once again increase during the 2009-2012 period to more than 20-22%. In every year the unemployment rates of young people exceeded twice the overall unemployment rate in the EU-27. Within the EU-27 member countries the trends in the changes of unemployment rates among people under 25 years were different in the period under study, but in most of them at the end of 2012 there was an increase in unemployment rates of young people in relation to the base year of 2002. In 2002, the highest unemployment rate among young people was in Poland (42.5%) and Slovakia and Bulgaria (38% and 35% respectively). In 2012, the highest rates of youth unemployment were in Greece (55.3%) and Spain (53.2%), where they increased more than double compared to 2002. In 2012 the lowest unemployment rates among young people, amounting to 8-9%, were in Germany, the Netherlands, and Austria, while in 2002 there were more such countries, including, in addition to the above mentioned: Denmark, Ireland, Luxembourg, and Cyprus.

The deterioration of the situation of young people in the labour market is closely linked to economic and financial crisis in the EU, but youth unemployment is structural in nature. In order to improve this situation, many documents of the European Union stress the need to ensure adequate vocational training and conditions to achieve the highest qualifications, according to each young persons' intellectual and physical capabilities. It is recommended to introduce special vocational training programs for all persons under 25 years of age who do not attend school and are unemployed or threatened by unemployment.

The unemployment rates of persons in age groups between 25-74 years were significantly lower than the unemployment rates of young people (up to 25 years). Table 7 shows average unemployment rates of persons aged 25-74 years in the EU-27 in the years 2003-2012.

Table 7. Average unemployment rates of persons aged 25-74 in the EU-27, 2003-2012, in %

2003	7.8	2008	6.0
2004	7.9	2009	7.6
2005	7.7	2010	8.3
2006	7.1	2011	8.3
2007	6.1	2012	9.1

Source: http://epp.eurostat.ec.europa.eu/, Unemployment_rate,_EU27,_2003-2012_(%).png (18.02.2014).

The unemployment rates among the 25-74 age group were more than two times lower than the unemployment rates of people younger than 25 in the years

under study. The rates and trends of their changes were varied. In 2003-2006, they were at the level of more than 7%; in 2007-2008 the average unemployment rate for people aged 25-75 years was the lowest (6%). Since 2009, with the economic downturn, these rates showed an upward trend, rising from 7.6% to 9.1% in 2012.

The level of education is the critical factor which determines people's chances in the labour market. Table 8 presents data on the structure of the unemployed, registered with labour offices in Poland, by level of education.

Table 8. The structure of unemployment by level of education in Poland in the years 2000-2012 (as of 31 December), in % of the total number of registered unemployed

Year	Education				
	Tertiary education	Post-secondary and secondary vocational	Secondary school	Basic vocational	Lower secondary. primary and incomplete primary[a)]
2000	2.6	20.8	6.2	37.0	33.4
2001	3.2	21.4	6.2	36.7	32.5
2002	3.9	21.2	6.2	36.2	32.5
2003	4.4	21.2	6.5	35.5	32.4
2004	4.9	21.9	7.0	33.8	32.4
2005	5.5	21.9	7.6	32.6	32.4
2006	6.1	22.0	8.4	30.9	32.5
2007	6.9	22.1	9.1	29.6	32.3
2008	8.5	22.3	10.2	28.6	30.4
2009	9.4	22.1	10.8	28.9	28.8
2010	10.5	22.0	10.9	28.4	28.2
2011	11.5	22.2	10.8	28.0	27.5
2012	11.7	22.1	10.6	28.3	27.3

[a)] Lower secondary education since 2002.

Source: *Statistical Yearbook of the Republic of Poland 2006*, p. 251, 2007, p. 253, 2003, p. 161, 2005, p. 248; *Concise Statistical Yearbook of Poland 2008*, p. 154, 2010, p. 156, 2012, p. 160, 2013, p. 164, Author's own calculations.

The analysis of the data shows that throughout the period considered persons with lower levels of education predominate among the unemployed, in particular those with vocational education and primary or incomplete primary (and since 2002 also secondary education). In 2000-2007, they accounted for a total of more than 60% of the unemployed (70% in 2000), although during the period 2008-2012 their share fell below 60% (to 55-58%), which should be

viewed positively. The large representation of persons without qualifications and low-skilled in the community of the unemployed people requires, first of all, that they be included in vocational training and retraining programs based on the new needs of the labour market. It also requires qualitative changes in the system of vocational education.

It is worth noting that people with post-secondary and secondary vocational education account for a relatively large and stable share of unemployment, of 20-22%. The large representation of these individuals in the total general unemployment suggests that the quality and structure of this education does not fully meet the requirements of the modern labour market, and that they have too little experience in professional practice. The percentage of the unemployed with secondary education was relatively small, although it showed an increasing trend in the examined period from more than 6% in 2000-2003 to about 11% in the years 2009-2012. Most of these people probably continue their studies at a higher level to gain qualifications and vocational training.

The relatively low percentage of those with tertiary education among the unemployed, especially in the early years of the analysis, as well as the growing trends of the share of these persons in the unemployed in the period under study, constitute important features of the structure of unemployment in Poland. The share of unemployed people with tertiary education in the total stock of unemployment in 2012 was 4.5 times higher (9.1%) than in 2000, when it was 2.6%. The overall increase in the number of people with tertiary education is considered to be an economic development opportunity, but their increasing in the share among the unemployed should be considered worrying. This situation can be explained not only by the lack of jobs and the rapidly growing number of college graduates, but also by the structural nature of this unemployment resulting from the choice of fields of study and specializations, in which some saturation of the labour market has already been observed. It is emphasized that it is necessary to increase the number of graduates in science and engineering (e.g., natural science, engineering) so that the project of building a modern economy will not encounter a barrier in terms of lack of qualified personnel.

These considerations clearly confirm the impact of the education level on the situation in the labour market in the Polish economy.

Table 9. Unemployment rates by level of education in Poland in the years 2000-2012 (4th quarter), in%

Year	Education				
	Tertiary education	**Post-secondary and secondary vocational**	**Secondary school**	**Basic vocational**	**Lower secondary. primary and incomplete primary)**
2000	4.8	13.6	19.6	19.2	20.2
2001	6.4	16.1	22.9	22.4	22.6
2002	7.5	17.4	24.0	23.8	25.4
2003	7.7	16.9	22.9	23.5	26.0
2004	6.9	16.2	20.4	22.4	24.8
2005	7.3	14.5	21.0	20.6	25.1
2006	5.8	10.9	16.1	14.5	18.8
2007	4.5	7.6	11.5	10.0	13.0
2008	3.6	6.5	9.6	7.0	11.4
2009	5.0	8.0	10.3	9.3	15.9
2010	4.7	9.1	13.1	10.4	17.1
2011	5.2	9.3	13.7	11.3	16.9
2012	5.7	9.2	14.7	11.9	18.7

Source: Statistical Yearbook of the Republic of Poland, 2006, p. 253, 2007, p. 255; Kwartalna informacja o aktywności ekonomicznej ludności2008, p. 10; Kwartalna informacja o rynku pracy 2013, p. 9, 2011, p. 9, 2004, p. 9.

The data in Table 9 on the unemployment rates, by level of education, in Poland confirms that the risk of unemployment is the lowest in the group with tertiary education. In 2006, the upward trend of this rate decreased from 6-7% in 2001-2005 to 3-5% in the years 2006-2012.The highest rate of unemployment and the associated risk of unemployment occurred among people with lower secondary, primary and incomplete primary education. Relatively high unemployment rates, of above 20%, were characteristic of those with basic vocational and general secondary education. Since 2006, the unemployment rates showed a downward trend, and the decrease in the unemployment rate was greater with respect to those with a vocational education, especially those with a specific profession which was sought after in the labour market.

The comparison of unemployment rates by education level in the EU-27 also shows that those most vulnerable in the labour market are those with the lowest level of education.

Table 10. Unemployment rates of population aged 25-64 by level of education in the EU-27 in 2000-2010, the annual average in %

Year	Level of education		
	Tertiary education	Secondary and post-secondary	Lower secondary. primary and incomplete primary
2000	4.5	8.1	10.8
2001	4.0	7.8	9.6
2002	4.3	8.2	10.1
2003	4.6	8.2	10.2
2004	4.7	8.4	10.6
2005	4.5	8.0	10.4
2006	4.1	7.2	10.0
2007	3.6	6.0	9.2
2008	3.4	5.6	9.8
2009	4.5	7.1	12.8
2010	4.9	7.8	14.2

Source: Eurostat data http://epp.eurostat.ec.europa.eu (accessed 07.12.2011).

Unemployment rates among people with the lowest levels of education stood in excess of 10% during most of the years under study. In 2009-2010, the rates increased to 12.8% and 14.2%. People with secondary and post-secondary education were less affected by unemployment, as evidenced by the unemployment rate between 5.6% and 8.4%. The lowest unemployment rates were characteristic of people with tertiary education; they were lower than 5% throughout the period under study, which confirms competitive position of persons with tertiary education in the labour market in relation to those with lower levels of education.

The job search duration is another criterion for analyzing the structure of unemployment. From the point of view of this criterion, unemployment can be broken down into:

- short-term unemployment, where the job search duration is up to 3 months,
- medium-term unemployment, where the job search lasts from 4 to 6 months,
- long-term unemployment, where the duration of unemployment is 7-12 months,
- very long-term unemployment,[5] lasting longer than 13 months.

Data on the structure of unemployment by job search period is presented in Table 11.

[5] The Act on Employment Promotion and Labour Market Institutions of 20 April 2004, defined the long-term unemployed as those persons remaining in the registry of the district labour office in total for a period of more than 12 months during the previous two years (Journal of Laws No. 99, Item. 1001).

Table 11. The structure of unemployment by job search time in Poland in the years 2000-2012 (4th quarter), in % of the total unemployed, based on LFS

Year	Job search duration in months				
	Up to 3 inclusive	4-6	7-12	13 and more	average time
2000	18.7	17.7	22.5	41.1	13.8
2001	17.5	15.9	21.2	45.4	14.6
2002	14.5	14.3	20.8	50.4	15.9
2003	16.3	14.7	18.6	50.4	16.7
2004	16.8	14.5	19.8	48.9	16.6
2005	14.8	13.9	18.9	52.4	18.4
2006	17.5	15.8	17.3	49.4	18.5
2007	22.7	17.0	17.3	43.0	17.0
2008	35.9	19.5	18.1	26.5	11.2
2009	36.2	20.5	18.1	25.2	11.2
2010	31.8	19.7	19.1	29.4	10.2
2011	47.0		19.7	33.2	11.1
2012	45.6		18.7	35.7	11.7

Source: Yearbook of Labour Statistics 2010, GUS, Warsaw, p.181; Statistical Yearbook of the Republic of Poland 2007, p. 255, 2008, p. 245, 2011, p.239; Kwartalna informacja o rynku pracy 2013, p. 7; 2005, p. 7; Aktywność ekonomiczna ludności Polski w latach 1991-2001, p. 194; 4th quarter of 2000, p. LV, 4th quarter of 2003, pp. 38, 43; fourth quarter of 2004, pp. 110, Author's own calculations.

The data presented in the Table shows that in 2000-2007 very long-term unemployment was a characteristic feature of the Polish labour market, lasting 13 months or longer. The share of the very long-term unemployed in the overall stock of unemployment ranged between 41% and 52%. The average job search duration was also long lasting, from about 14 to 18.5 months. The share of the very long-term unemployed among the unemployed did not decline until 2008. Their percentage was lower than 30% in 2008-2010, but in the period 2011-2012 it rose to 33.2% and 35.7%. The relatively high proportions of the very long-term unemployed confirms the structural nature of unemployment in the Polish economy. This phenomenon is very unfavourable from socio-economic point of view.

The reduction of the share of very long-term unemployment and long-term unemployment (7-12 months), which in the years under study was approximately 20%, is a major challenge for the Polish economy. It's about making work a real option for these long-term unemployed, and intensifying efforts aimed at establishing their economic activity.

The decline in the share of these two categories of unemployed persons in the overall unemployment (from 63.6% in 2000 to 54.4% in 2012) was followed by a slow change in the nature of Polish unemployment from long-term unemployment into short-term unemployment. A significant increase in the proportion of short-term unemployed occurred in the years 2008-2010, when they accounted for over 30% of all unemployed, and in the years 2011 and 2012, when their share increased to 45-47%. Also, the share of the unemployed seeking job for 4-6 months increased (to about 20%). In total, the share of these groups of the unemployed increased from 36.4% in 2000 to 64.3% in 2012. Such stable trends in the changes in the Polish labour market should be viewed positively. People who have been without work for a relatively short period are easier to activate, because it is not necessary to re-socialize them and to get them used to the very fact of performing work. In addition, the costs of their activation are relatively lower than in the case of the very long-term unemployed. As a result of these positive developments in the Polish labour market the average time for searching for a job has decreased to 10-11 months.

Table 12 presents the overall long-term unemployment rate (more than one year) and the rate of women and men, as well as the very long-term unemployment rate (more than two years) in the EU27 in the years 2003-2012.

Table 12. Long term and very long term unemployment rate in the EU-27 in the years 2003-2012, (%)

	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Long-term unemployment rate	4.2	4.3	4.1	3.7	3.1	2.6	3.0	3.9	4.1	4.6
Male	3.8	3.9	3.8	3.5	2.9	2.4	2.9	3.9	4.2	4.6
Female	4.6	4.7	4.5	4.1	3.4	2.8	3.1	3.8	4.1	4.6
Very long-term unemployment rate	2.4	2.5	2.4	2.2	1.8	1.5	1.5	1.8	2.2	2.5

Source: Unemployment_rate, EU-27, 2003-2012_(%).png (18.02.2014).

In 2003-2005, long-term unemployment rate stood at above 4%, showing a downward trend to the lowest level of 2.6% in 2008. Since 2009, the rate began to rise again, and in the years 2011-2012 reached more than 4%. Throughout the period under study the rate increased by 0.4 ppt. Since the beginning of the period under study till 2009, the long-term unemployment rate of women exceeded that of men. In subsequent years, 2010-2011, the rate for women was lower by 0.1 ppt than the unemployment rate for men, and in 2012 both rates converged at the level of 4.6%. The very long term unemployment rate was lower, and remained in the range of 1.5-2.5%.

4. Conclusions

The following conclusions can be drawn from the above considerations:

- Trends in the level and rate of unemployment in the Polish economy in the years 2000-2012 were closely related to changes in the economic situation. This is indicated by the three separate sub-periods.
- Similarly as in the Polish economy, there were three sub-periods trends in the unemployment rates in the EU-27.
- In 2002-2007, the unemployment rates in the Polish economy significantly exceeded the average unemployment rates in the EU-27, but since 2008 have been even slightly lower. However, compared with the highly developed countries of the EU, the unemployment rates in Poland were much higher.
- The analysis of the structure of unemployment and unemployment rates helped identify groups most at risk of unemployment in the Polish and EU labour markets, which is essential for taking effective measures to reduce unemployment. The analysis shows that a higher risk of unemployment affects women more than men, young people aged up to 25 years, people with lower levels of education, and the long-term unemployed. The dominance of these individuals in overall unemployment proves its structural nature.
- In order to improve the situation in the labour market it is essential to implement the requirements of a pro-employment economic policy by the governments of the member states of the European Union, and thus improve the quality of human capital and create more sustainable jobs.

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Streszczenie

STRUKTURA BEZROBOCIA W POLSCE I UNII EUROPEJSKIEJ W LATACH 2000-2012

Sformułowane są dwa główne cele opracowania:

- *po pierwsze, ukazanie zmian wielkości bezrobocia i stopy bezrobocia w Polsce i innych krajach UE27 wraz z określeniem przyczyn tych zmian;*
- *po drugie, dokonanie analizy struktury bezrobocia według takich kryteriów, jak: płeć, wiek, poziom wykształcenia i czas pozostawania bez pracy w Polsce i innych krajach UE27.*

Przeprowadzone analizy wykazały, iż do grup szczególnie zagrożonych na rynku pracy należy zaliczyć: osoby młode, kobiety, ludzi z niskim poziomem wykształcenia i długoterminowo bezrobotnych.

***Słowa kluczowe**: bezrobocie, stopa bezrobocia, rodzaje struktur bezrobocia*

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ZOFIA WYSOKIŃSKA[*]

Response Of The EU Member States To Climate Change In The Context Of EU Policy And Strategy

Abstract

The aim of this paper is to present selected results achieved by the Member States of the EU in the context of the recent global and European strategies oriented toward enhancement of the role of renewable energy sources and on mitigation of negative climate changes in the Earth. Special attention has been paid to those countries that have approached or already reached, in the year 2012, a share of renewable energy indicators at a percentage level higher than the required 20%.

Keywords: *renewable energy sources, electricity consumption, EU and global energy strategies*

1. Introduction

The Earth's climate is changing. The average global temperature is rising because of the increase in greenhouse gases generated from human activities. The cost of not adapting to climate change is estimated to reach at least €100 billion a year by 2020 for the European Union as a whole.

The EU has long argued for the need to limit global warming, i.e. the increase in the global mean temperature, to no more than two degrees Celsius. This imperative is now recognised by the international community. The EU has

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successfully reduced its own greenhouse gas emissions by over 18% since 1990. In doing so, it has broken the link between emissions and economic growth, the latter of which has increased by more than 40% over the same period. This shows that reducing emissions does not harm the economy.

The EU's actions to develop a low-carbon economy are also helping to boost jobs and growth by stimulating innovation in clean technologies such as renewable energy and energy efficiency. The idea of creating a green economy in Europe is not only important from the point of view of developing the labour market and creating new jobs - it also strengthens Europe's energy security and allows it to reduce its dependency on imported oil and gas. The renewable energy industry in Europe has increased its work force from 230,000 to 550,000 over the past five years. Meeting the EU's target of obtaining 20% of its energy from renewables by 2020 could create an extra 410,000 jobs across the EU in renewable energy-related sectors.

The key requirement of the EU is to become a low-carbon economy. As part of its goal of keeping the increase in the global temperature to below two degrees Celsius, the EU has committed to the long-term goal of cutting its emissions by 80-95% of the 1990 levels by 2050, in the context however of similar actions by the developed countries as a group.

The current financial and economic crisis should not delay cost-effective investments or programmed energy projects that would create jobs, enhance energy security, and help limit greenhouse gas emissions in the short and medium term. Innovation and knowledge are key factors for supporting the economic recovery and putting the world economy on a path toward more sustainable growth. There is a need to accelerate innovation in relation to the long-term challenges and to encourage the development of those new industries, companies and services which will be decisive to creating new sources of growth. The interlinked challenges of climate change, energy security and the sustainable and efficient use of natural resources are amongst the most important issues to be tackled within the strategic perspective of ensuring global sustainability. The shift towards green growth will also provide an important stimulus to recovery from the economic and financial crisis.

Stable and secure energy availability is indispensable for social and economic development. It is essential to ensure global energy security and access to energy in developing countries. The emergency response to the economic crisis should not overlook the opportunity to facilitate a global green recovery, putting our economies on a path towards more sustainable and resilient growth. Our fiscal stimulus packages are increasingly investing in measures encouraging the creation of green jobs and low-carbon, energy-efficient and sustainable growth. These include energy efficiency measures, investment in

public transportation infrastructure, incentives for recycling and for fuel-efficient vehicles, research into alternative sources of energy, support for renewable energy technologies, as well as in enhanced CO_2 reduction.

Energy is central to our lives. We rely on it for transport, for heating and cooling our homes, and for running our factories, farms and offices. However, fossil fuel is a finite resource and in addition is a major cause of global warming. So we can no longer take energy from fossil fuels for granted. We, meaning the national governments and the EU, must create an integrated energy and environmental policy based on clear targets and timetables for moving to a low-carbon economy and conserving energy. Driving the policy is the EU's bid to achieve a 20% reduction in its greenhouse gas emissions by 2020 (compared with 1990 levels), mainly by boosting the use of renewable energy and curbing energy consumption. These measures will also reduce dependence on imports of gas and oil and help shelter the economy from volatile energy prices and uncertain supplies.

The EU policy focuses on creating a competitive internal energy market offering quality service at low prices, on developing renewable energy sources, on reducing dependence on imported fuels, and on doing more while consuming less energy.

2. Sustainable energy- strategy and policy issues

The Green Paper. A European Strategy for Sustainable, Competitive and Secure Energy[1] was an important milestone in developing an energy policy for the European Union (EU). If Europe is to achieve its economic, social and environmental objectives, it has to address major energy-related issues such as its growing dependence on energy imports, volatile oil and gas prices, climate change, increasing demand, and obstacles to a fully competitive internal energy market. The EU must exploit its position as the world's second largest energy market and as world leader in demand management and the promotion of renewable energy sources.[2]

The diagnosis concerning the situation in the European energy sector was based on the following factors:

[1] GREEN PAPER, A European Strategy for Sustainable, Competitive and Secure Energy, Brussels, 8.3.2006; COM(2006) 105 final.

[2] http://europa.eu/legislation_summaries/energy/european_energy_policy/l27062_en.htm

- The need for investments to meet expected energy demand and to replace ageing infrastructure. The EU's import dependency is rising. Unless we can make domestic energy more competitive, in the next 20 to 30 years around 70% of the Union's energy requirements, compared to 50% today, will be met by imported products – some from regions threatened by insecurity. Reserves are concentrated in a few countries. Today, roughly half of the EU's gas consumption comes from only three countries (Russia, Norway, and Algeria). Based on current trends, gas imports would increase to 80 % over the next 25 years. The EU currently imports 82% of its oil and 57% of its gas, making it the world's leading importer of these fuels.
- The increasing global demand for energy. World energy demand is expected to rise by some 60% by 2030, and along with it CO_2 emissions. Global oil consumption has increased by 20% since 1994, and global oil demand is projected to grow by 1.6% per year.[3]

The European Commission oriented its European energy policy on three core objectives:

1. Sustainability - to actively combat climate change by promoting renewable energy sources and energy efficiency;
2. Competitiveness - to improve the efficiency of the European energy grid by creating a truly competitive internal energy market;
3. Security of supply - to better coordinate the EU's supply of and demand for energy within an international context.[4]

Since 1990, the EU has been engaged in an ambitious and successful plan to become a world leader in renewable energy. To take one example, the EU has now installed wind energy capacity equivalent to 50 coal-fired power stations, with costs of such installations halved in the past 15 years. The EU's renewable energy market has an annual turnover of €15 billion (half of the world market), employs some 300,000 people, and is a major exporter. Renewable energy is now starting to compete in price with fossil fuels.[5]

[3] GREEN PAPER, A European Strategy for Sustainable, Competitive and Secure Energy, Brussels, 8.3.2006; COM(2006) 105 final, p.3; Cf. also: Summary report on the analysis of the debate on the green paper "A European Strategy for Sustainable, Competitive and Secure Energy" COMMISSION STAFF WORKING DOCUMENT; Brussels, 16.11.2006 , SEC(2006) 1500, p.1-5.

[4] As above.

[5] GREEN PAPER, A European Strategy for Sustainable, Competitive and Secure Energy, op.cit. p.11.

In the year 2010 Commission proposed a new economic strategy for Europe*: Europe 2020*.[6] This Strategy presented three key drivers for growth, to be implemented through concrete actions at the EU and national levels:

1. Smart growth (fostering knowledge, R+D, innovation, education and the digital society).
2. Sustainable growth (making our production more resource-efficient while boosting R+D and competitiveness).
3. Inclusive growth (increasing participation in the labour market and the acquisition of skills, and winning the fight against poverty).

On 10 November 2010, the European Commission adopted the Communication "Energy 2020 - A strategy for competitive, sustainable and secure energy." This Communication defines the energy priorities for the next ten years and establishes the actions to be taken in order to tackle the challenges of saving energy, achieving a market with competitive prices and secure supplies, boosting technological leadership, and effectively negotiating with our international partners[7]. The three most important objectives in the energy economy to be met in the EU by 2020, known as the "20-20-20" targets, are as follows:

1. 20% of EU energy consumption to come from renewable resources.
2. A 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.
3. A reduction in EU greenhouse gas emissions of at least 20% below 1990 levels.[8]

The EU has even offered to reduce its emissions by 30% if other major economies commit to comparable emission reductions or make adequate contributions. Negotiations on this offer are ongoing within the framework of the United Nations. In the European Commission's "A roadmap for moving to a competitive low-carbon economy in 2050", the Commission also looked at new ways of reducing greenhouse gas emissions by 80 to 95% by the middle of the century.

The Communication "Energy 2020 Strategy" provides also a solid and ambitious European framework for energy policy, defines the energy priorities for the next ten years, and sets out the actions to be taken.

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[6] COM(2010) 2020; Brussels, 3.3.2010.

[7] http://ec.europa.eu/energy/strategies/2010/2020_en.htm, see also: Energy 2020, A strategy for competitive, sustainable and secure energy, {SEC(2010) 1346}, Brussels, 10.11.2010; COM(2010) 639 final.

[8] The EU climate and energy package: http://ec.europa.eu/clima/policies/package/ index_en.htm

1. ***Free movement of energy***

Electricity and gas are transported in grids and pipelines that often cross national borders, thus the energy policy decisions made by one country inevitably impact on other countries.

2. ***A technological shift***

Without a technological shift, the EU will fail in its 2050 ambitions to de-carbonize the electricity and transport sectors.

3. ***Strong International Partnership***

International energy policy must pursue the common goals of security of supply, competitiveness, and sustainability.

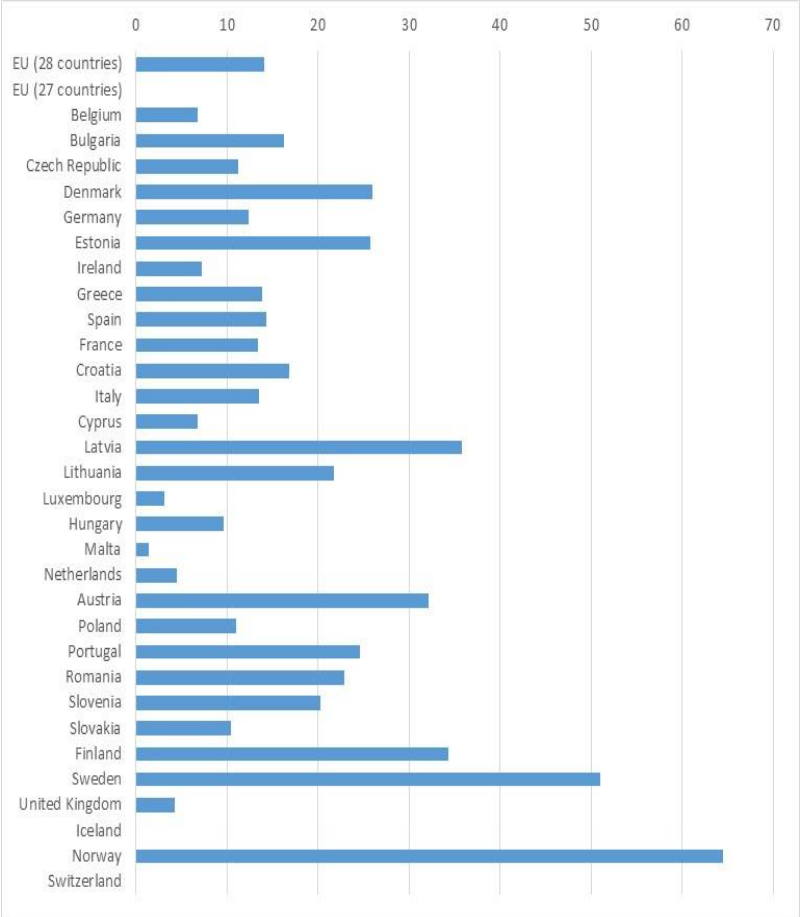
While relations with producing and transit countries are important, relations with large energy-consuming nations, and particularly emerging and developing countries, are of growing significance.[9]

3. Comparison of selected economic results of activities undertaken by the EU Member States in recent years in accordance with the EU Strategies in the area of the development of renewable energy sources

It should be recalled that the goal established by the Communication "Energy 2020" was that 20% of EU energy consumption will come from renewable resources by 2020. According to the results presented in the Table 1., it can be seen that some EU countries, such as Sweden, Finland, Portugal, Holland, France, Slovenia, Latvia, Romania, Estonia, and Latvia set their goals even at a significantly higher level that that aimed at by the EU as a whole and were approaching their established goals already in 2012, and in the cases of Sweden and Estonia had already exceeded them (see Table 1). Those countries which established aimed-for goals lower than that established for the EU as a whole, i.e. lower than the required 20%, include Malta (10%), Lithuania (11%), Belgium, Italy and the Czech Republic (below 13%), Slovakia (14%), Hungary (14.6%), Great Britain (15%), Poland (15.5%), Holland, Ireland and Bulgaria (16%), Italy (17%), and Greece and Germany (18%). Compare also Figure 1.

[9] http://europa.eu/pol/ener/index_en.htm

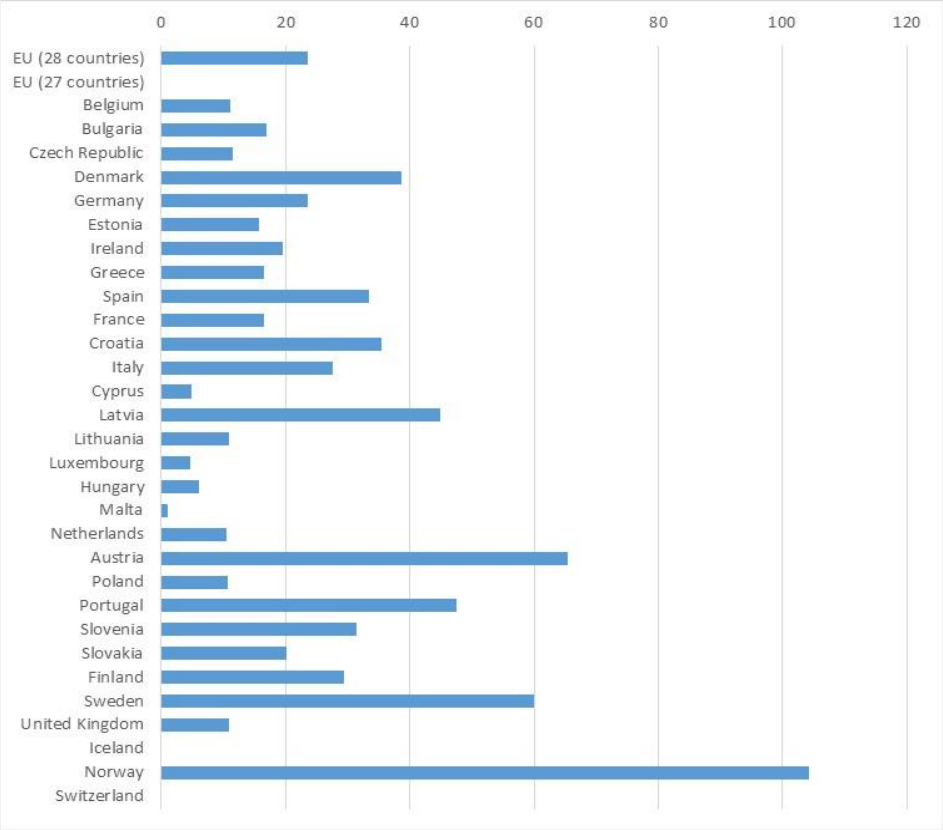
Figure 1. Share of renewable energy in gross final energy consumption in 2012 (%)



Source: own calculations based on *Eurostat Database*

One may compare the above results with the data in Table 2, which shows electricity generated from renewable sources as a percentage of gross electricity consumption. In this field the highest results were achieved by Austria (65%), Sweden (60%), Portugal (48%), Latvia (45%), Denmark (39%), Croatia (35%), Romania (34%), Slovenia (31%), Finland (29%), Italy (27%) and Germany (24%). Comp. also Figure 2.

Figure 2. Electricity generated from renewable sources in 2012 (% of gross electricity consumption)



Source: own calculations based on *Eurostat Database.*

4. Powering Development with Renewable Energy Technologies (RETs)

The role of RETs in the world economy continues to increase. According to the UNCTAD Technology and Innovation Report (2011), two-thirds of the total renewable power capacity (including wind-, biomass-, solar- and geo-thermal power) belonged to the developed market economies, and one-third to the developing countries.[10]

[10] Technology and Innovation Report (2011), *Powering Development with Renewable Energy Technologies* United Nations, New York, Geneva, 2011, p. 8-9.

Technological progress and greater investments and deployment are lowering the costs of production and implementation of RETs. Global Investments in renewable energy and related technologies during the period 2004-2010 increased almost sevenfold, from 33 to 211 billion USD. The average annual growth rate amounted to 38.3%.[11] The green economy and Rio+20 framework should promote even wider use and development of RETs.

National Policy Frameworks for Renewable Energy Technologies (according to UN and EU regulations) are mostly oriented on:

1. Defining policy strategies and goals.
2. Enacting policy incentives for R&D, innovation and production of RETs.
3. Enacting policy incentives for developing greater technology absorptive capacity, which is needed for the adaptation and use of available RETs.
4. Promoting domestic resource mobilization for RETs in national contexts.
5. Exploring new means of improving innovation capacity in RETs, including North-South and South-South collaboration.

5. Liberalization of markets for energy products should be one of the most important objectives of the WTO

Much of today's energy supply — particularly fossil fuels and natural gas- is geographically concentrated, fixed in terms of location, and prominent in the production and trade of the countries that possess the resource(s). Thus, trade patterns on the supply side are largely pre-determined and change only slowly, in contrast to the shifting comparative advantage we associate with economies that are less resource-endowed in this respect.

In contrast to the geographical concentration that characterizes the supply side of energy markets, demand is very widely spread because all countries need energy to run their economies. This relationship between supply and demand has important implications for the economic and political conditions under which trade takes place. In the world economy we can observe some significant changes occurring in energy markets, which some argue fortifies the case for closer attention on the part of the WTO to the energy sector. Over time, a larger number of players have entered the field on the supply side. In no small part this is the result of technological advances and the diversification of energy sources.

[11] As above, p.10.

Fossil fuels and natural gas increasingly compete with alternative energy sources such as nuclear power and renewable energy, including bio-fuels, wind, water and solar power.

6. Detoxifying Finance and De-carbonization of the Economy: Opportunities for Clean and Sustainable Growth in Developing and Transition Economies - Main Problems

The transition to a low-carbon and more resource–efficient economy provides promising prospects. Promoting sustainable agriculture, enhancing energy efficiency and harnessing renewable energy for sustainable rural development are but three illustrative poles that could yield a triple win: economic growth, creation of jobs and, with them, increased income, as well as environmental sustainability.

Despite the fact that such investments are strategic and can be lucrative, the greening of the avenue for economic and social development in many economies requires the elimination of anachronistic policy frameworks, as well as the availability of public finance where public investment is deficient. It will also require the emergence of the necessary public awareness, skills, capabilities and vision to mobilize the private sector, governments, and society as a whole.[12]

In the context of the current global and financial crisis, "new economic growth" can only emerge if inspired leadership is manifest among a critical mass of countries. Policy measures that undermine change must be reformed or eliminated, such as, e.g. subsidies to agriculture or energy, domestic energy policy (energy pricing), as well as misguided national investment policies.[13]

The liberalization of climate–friendly technologies, goods and services would contribute not only to increasing the choices available to importing countries, but also to lowering the costs of those choices, thus making it easier to mitigate climate change. However, finding a viable negotiating strategy for the liberalization of these goods has proved difficult in the WTO.[14]

Agriculture accounts for 13 percent of global greenhouse gas (GHG) emissions. This rises to almost 30 per cent if land clearance for farming, agrochemical production, and trade in agricultural and food products are attributed

[12] Trade and Environment Review 2009/2010, United Nations, New York, Geneva, 2010, p. 3.

[13] As above, p. 23.

[14] As above, p. 178.

to the sector.[15] Innovative management options, such as organic farming, offer promising opportunities to reconcile the objectives of feeding a rapidly growing human population with minimal adverse impacts on the environment.[16]

Methane is a significant contributor to climate change, and the bulk of methane emissions, i.e. 52%, are emitted by the agricultural sector. While methane emissions in the OECD countries as well as in the CIS have declined over the past decade, methane emissions have been increasing in many developing countries and regions. With continuing growth in the demand for livestock products, methane will constitute a large proportion of future GHG emissions, particularly in developing countries.[17]

The report entitled "Climate Change 2014: Mitigation of Climate Change" is the third of three Working Group reports which constitute the *Fifth Assessment Report on Climate Change of the Intergovernmental Panel on Climate Changes* (IPCC). Projected scenarios demonstrate that in order to attain the goal of limiting the increase in the global mean temperature to two degrees Celsius, global GHG emissions must be decreased by mid-century by 40 to 70 percent compared with 2010, and to near-zero by the end of this century. Ambitious mitigation may even require removing carbon dioxide from the atmosphere.[18]

7. Implications of EU- and global strategies for Poland

Polish energy sector is facing a number of serious challenges. Commitments of Poland in the field of environmental protection, including mitigation of the negative aspects of the climate change, significant dependence on external supplies of natural gas and almost full dependence on external supplies of crude oil, high demand for energy, inadequate fuel and energy generation and transmission infrastructure, compel Polish administration to take decisive actions preventing the deterioration of the situation of fuel and energy customers.

The main directions of energy policy until the year 2030 for Poland as the Member State of the European Union as the response for the EU and global requirements in this field are as follows:

[15] As above, p. 67.

[16] As above., p.112.

[17] As above, p. 124.

[18] IPCC: Greenhouse gas emissions accelerate despite reduction efforts. Many pathways to substantial emissions reductions are available, 13. April 2014: http://www.cpcc.ch/pdf/ar5/pr_wg3/20140413_pr_pc_wg3_en,pdf; comp. also http://ec.europa.eu/clima/news/articles/news-2014041401-en.htm

- To improve energy efficiency;
- To enhance security of fuel and energy supplies;
- To diversify the electricity generation structure by introducing nuclear energy;
- To develop the use of renewable energy sources, including biofuels; To develop competitive fuel and energy markets;
- To reduce the environment impact of the power industry.[19]

8. Conclusions

The main objectives in both the world and in the European economy involve promoting poles of clean growth to foster the transition to a more sustainable economy. Sustainable development and a ”green economy” are the most important objectives of economic and social development for the upcoming decade, not only in the European but also in the world economy.

Europe, as a leader in environment-related technologies, must promote sustainable growth and standards for integrated environmental goods and services within its new industrial policy and new strategy, both of which are oriented on cooperation with developing world.

The role of Renewable Energy Technologies (RETs) in the world economy continues to increase. Energy efficiency, sustainable agriculture, and renewable energies for rural development belong to the main poles of sustainable development in the world economy and its regions.

As of 2013, the Member States of the EU have made crucial progress in the development of the renewable energy sector and in the reduction of greenhouse gases in the atmosphere, which generally augurs well for its ability to achieve its strategic aims set forth in the Communication “Energy 2020 - A strategy for competitive, sustainable and secure energy.”

Some EU countries, such as Sweden, Finland, Portugal, Netherlands, France, Slovenia, Latvia, Romania, Estonia, and Latvia set the goals resulting from the Communication “Energy 2020” (to achieve the index of 20% of EU energy consumption from renewable resources by 2020) even at a significantly higher level that that aimed at by the EU as a whole and were approaching their established goals already in 2012, and in the cases of Sweden and Estonia had already exceeded them.

[19] Polityka energetyczna Polski do roku 2030, (Energy policy of Poland until the year 2030) Załącznik do uchwały nr. 157/2010 RM, z dnia 29.09.2010; Warsaw, September 2010., p.4-5.

Comparison among the EU countries of the share of electricity generated from renewable sources as a percentage of gross electricity consumption shows that the best results in this field have been obtained by Austria, Sweden Portugal, Latvia, Denmark, Croatia, Slovenia, Finland, Italy, and Germany.

Table 1. Share of renewable energy in gross final energy consumption (%)

geo\time	2005	2009	2010	2011	2012	TARGET
EU (28 countries)	8.7	11.9	12.5	12.9	14.1	20
EU (27 countries)	:	:	:	:	:	20
Belgium	2.3	4.6	5	5.2	6.8	13
Bulgaria	9.5	12.4	14.4	14.6	16.3	16
Czech Republic	6	8.5	9.3	9.3	11.2	13
Denmark	15.6	20.4	22.6	24	26	30
Germany	6.7	9.9	10.7	11.6	12.4	18
Estonia	17.5	23	24.6	25.6	25.8	25
Ireland	2.8	5.2	5.6	6.6	7.2	16
Greece	7	8.5	9.8	10.9	13.8	18
Spain	8.4	13	13.8	13.2	14.3	20
France	9.5	12.2	12.7	11.3	13.4	23
Croatia	12.8	13.1	14.3	15.4	16.8	20
Italy	5.9	9.3	10.6	12.3	13.5	17
Cyprus	3.1	5.6	6	6	6.8	13
Latvia	32.3	34.3	32.5	33.5	35.8	40
Lithuania	17	20	19.8	20.2	21.7	23
Luxembourg	1.4	2.9	2.9	2.9	3.1	11
Hungary	4.5	8	8.6	9.1	9.6	14.65
Malta	0.3	0.4	0.4	0.7	1.4	10
Netherlands	2.3	4.1	3.7	4.3	4.5	16
Austria	24	30.4	30.8	30.8	32.1	34
Poland	7	8.8	9.3	10.4	11	15.48
Portugal	19.5	24.5	24.2	24.5	24.6	31
Romania	17.6	22.6	23.2	21.2	22.9	24
Slovenia	16	18.9	19.2	19.4	20.2	25
Slovakia	5.5	9.3	9	10.3	10.4	14
Finland	28.9	31.2	32.4	32.7	34.3	38
Sweden	40.5	48.2	47.2	48.8	51	49
United Kingdom	1.4	3	3.3	3.8	4.2	15
Iceland	:	:	:	:	:	64
Norway	59.8	64.8	61.2	64.6	64.5	67.5
Switzerland	:					

:=not available

Source: own calculations based on *Eurostat Database.*

Table 2. Electricity generated from renewable sources (% of gross electricity consumption)

geo\time	2005	2009	2010	2011	2012
EU (28 countries)	14.8	19	19.7	21.7	23.5
EU (27 countries)	:	:	:	:	:
Belgium	2.4	6.2	7.1	8.8	11.1
Bulgaria	9.8	12.1	13.7	13.9	17
Czech Republic	3.7	6.4	7.5	10.6	11.6
Denmark	24.7	28.3	32.7	35.9	38.7
Germany	10.5	17.4	18.1	20.9	23.6
Estonia	1.1	6.1	10.4	12.3	15.8
Ireland	7.2	13.7	14.9	17.6	19.6
Greece	8.3	11.1	12.5	13.9	16.5
Spain	19.1	27.8	29.7	31.6	33.5
France	13.8	15.1	14.9	16.4	16.6
Croatia	32.8	32.6	34.2	34.2	35.5
Italy	16.4	19	20.2	23.7	27.6
Cyprus	0	0.6	1.4	3.4	4.9
Latvia	43	41.9	42.1	44.7	44.9
Lithuania	3.8	5.9	7.4	9	10.9
Luxembourg	3.2	4.1	3.8	4.1	4.6
Hungary	4.4	7	7.1	6.4	6.1
Malta	0	0	0.1	0.6	1.1
Netherlands	6.3	9.1	9.7	9.8	10.5
Austria	62.5	67.1	64.9	65	65.5
Poland	2.6	5.8	6.6	8.2	10.7
Portugal	27.7	37.6	40.7	45.9	47.6
Romania	28.8	30.9	30.4	31.1	33.6
Slovenia	28.7	33.8	32.1	30.8	31.4
Slovakia	11.6	17.8	17.8	19.3	20.1
Finland	26.9	27.3	27.6	29.4	29.5
Sweden	50.9	58.3	56	59.9	60
United Kingdom	4.1	6.7	7.4	8.8	10.8
Iceland	:	:	:	:	:
Norway	96.8	104.7	97.9	105.5	104.3
Switzerland	:	:	:	:	:

:=not available

Source: own calculations based on *Eurostat Database.*

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Streszczenie

ODPOWIEDŹ KRAJÓW CZŁONKOWSKICH UNII EUROPEJSKIEJ NA ZMIANY KLIMATYCZNE W ŚWIECIE W KONTEKŚCIE POLITYKI I STRATEGII UNIJNEJ

Celem artykułu jest przedstawienie wyników analizy odnoszącej się do krajów członkowskich UE w kontekście założeń strategii globalnych i europejskich w zakresie osiągania wskaźników zwiększenia udziału energii odnawialnych w ogólnym zużyciu energii elektrycznej do co najmniej 20%. Jak wynika z przeprowadzonych badań już do roku 2012 niektóre kraje wskaźniki te znacząco przekroczyły, co wymaga poświęcenia im szczególnej uwagi.

Słowa kluczowe: *odnawialne źródła energii, konsumpcja energii, unijne i globalne strategie energetyczne*

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STEFAN KRAJEWSKI[*]

Innovation Levels In The Economies Of Central And Eastern Europe

Abstract

When the countries of Central and Eastern Europe entered the European Union, they were given the opportunity to become transformed into knowledge-based societies, with modern, innovation-oriented economies which build their strength and competitiveness on the development of native technical solutions and concepts. To achieve this, however, requires a lot of effort and radical and profound changes in comparison with the previous situation. New priorities and strategic objectives and methods of their implementation (including innovation strategies) must be developed, financial and in-kind resources reallocated, and social and technical infrastructure must be expanded and modernized. These are difficult challenges, but their effective implementation is essential so that the CEECs can avoid marginalization and become equal partners within the EU.

The statistical data presented in this paper indicates that the innovative position of the CEECs is still unfavourable and relatively weak, with the exception of Slovenia and Estonia. Poland is in a particularly difficult situation, with many signs of stagnation with respect to innovation, keeping it at a low level (next to Bulgaria and Romania).

***Keywords**: innovation, competitiveness, Central and Eastern Europe, European Union*

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1. Introduction

On 1 May 2004, eight Central and Eastern European countries (CEECs) became members of the European Union - The Czech Republic, Estonia, Lithuania, Latvia, Poland, Slovakia, Slovenia, and Hungary. In 2007, the next two CEE countries joined the group: Bulgaria and Romania, and in 2013 Croatia. In this way, most of the countries of Central and Eastern Europe were incorporated into a community which is one of the main economic and civilization centres of the world, next to North America (the USA) and Far East Asia (Japan).

It is generally accepted that the success of a far-reaching integration process depends on whether countries in the group are characterized by:

- a similar level of economic development (measured primarily by GDP per capita),
- a similar level of labour productivity,
- a similar production structure, with high diversification,
- strong internal ties, expressed by the size and structure of exports, with a high share of intra-industry trade,
- a similar demand structure and a high proportion of highly technical exclusive products.

Although between 2004 and 2012 the differences in the level of GDP per capita in relation to the EU average were generally declining, they still remain relatively high (with the exception of Slovenia). In Bulgaria the GDP per capita was 35% of the EU average in 2004, and 47% in 2012; in Romania, 34% and 50% respectively; in Latvia 47% and 64%; in Hungary 63% and 67%; in Poland 51% and 67%; in Estonia 58% and 71%; in Lithuania 52% and 72%; in Slovakia 57% and 76%; in the Czech Republic 78% and 81%; and in Slovenia 87% and 84% (based on Eurostat).

Similar relationships exist with respect to labour productivity. The level of exports is still low. The structure of demand is characterized by a large share of goods of a basic nature, minimally processed and of a low technical level. The production structure is characterized by a large share of traditional and declining sectors. The degree of diversification of production and exports looks slightly better. It should be noted, however, that there are significant differences within the CEEC group. Slovenia has a different situation and Bulgaria and Romania have other problems (Weresa 2013, 2013 b, Baczko 2013).

However, when trying to identify the characteristic structural features of the CEEC economies, the following characteristics must be noted above all:

A large share of employment in agriculture. This share is exceptionally high in Poland (14.4% in 2011), high in Lithuania (9.3%), Latvia (9%), Estonia (8.7%), Hungary (8.1%), and Romania (8.0%). The share of agriculture is very

low only in Slovenia (0.6%). The typical share of agriculture in the countries of the "old" EU ranges from 1-3%, although there are exceptions, such as Portugal (10.1%) and Greece (9.2%) (Statistical Yearbook of the Republic of Poland, 2013, pp. 818 -819).

The low share of the services sector in GDP. All CEECs rank last in the EU. Poland (63.6%) is ahead only of Romania, the Czech Republic, and Slovakia (Statistical Yearbook of the Republic of Poland, 2013, p. 891). This part of the economy, which by its very nature is characterized by a limited mobility, is relatively small. This situation should encourage the creation and promotion of mechanisms aimed at establishing high competition in the services sectors.

A large share of the so-called declining (or problem) sectors. The countries of the "old" EU have already managed to dramatically reduce the role of declining sectors in the economy and shift to a more advanced technology and higher technological level. This was done with the help of generous state aid, consisting of:

- comprehensive support for the development and dissemination of indigenous technical ideas,
- large subsidies for declining sectors with shrinking demand, due to, e.g., the decline in consumer interest, harm to the environment, and too high costs. The subsidies were primarily aimed at reducing the production potential and restoring the ability to compete on the open market at a lower potential.

Such state-aid activities in the CEECs are not sufficiently widespread and their effectiveness is limited, although the remains of the old, inefficient structures acquired from the previous system still play a large role (e.g., energy based on coal in Poland).

A weak financial sector. This applies mainly to the key element of the sector - banking. Banks are relatively small and rank very low in the world or even in Europe in terms of the size of their capital. Owing to the underdeveloped competition, banks achieve a satisfactory income using traditional methods and instruments, which in the current crisis has produced some positive results, as it reduced the degree of destabilization of their banking systems.

Investment funds, trusts, venture capital, and insurance companies are still underdeveloped. The capital market is still small. Even the biggest securities exchanges in the region - in Warsaw, Prague, and Budapest - do not play a major role across the EU.

Low level of technical infrastructure. Technical infrastructure creates opportunities for the rapid movement of people and goods, and for communication. In most CEECs, (including Poland) infrastructure is still underdeveloped, and the process and pace of eliminating delays is inadequate. This does not create conditions conducive to innovative activity.

Most attention is focused on the construction of highways. According to Eurostat at the end of 2012 across the EU there were 69,300 km of highways, with the most in the following countries: Spain (14,701 km), Germany (12,879 km), and France (11,465 km). The leaders in this respect among the CEECs were Hungary (1,515 km), Poland (1,365 km), Croatia (1,254 km), Slovenia (769 km), and the Czech Republic (751 km). The CEEC countries had more than seven thousand kilometres of motorways, which accounted for about 10% of all motorways in the EU. In relation to the population and the area this is several times less than the EU average. In Poland, this adverse relationship will not improve in the near future. The government has announced a drastic decline in outlays for the construction of motorways.

The underdevelopment of air transport is even more noticeable. In 2012, there were 115,011 thousand air transport passengers in Great Britain, 110,576 thousand in Germany, and 60,158 thousand in France. During this time, the figures were 11,170 thousand in Hungary, 7,170 thousand in Poland, 3,914 thousand in Romania, and 3,595 thousand in the Czech Republic. In comparison to Poland, in 2012 Germany transported more than 15 times more passengers, France 8.5 times more, Spain almost 7 times more, and Portugal almost twice as many.

The real gap between the CEECs and the rest of the EU is the transport of goods by air (calculated in millions of tonne-kilometre or tkm). In 2012, for Germany it was 7,241 million of tkm, Great Britain 6,251 million, Netherlands 5,989 million, France 4,554 million, while in Poland it was only 123 million of tkm. And Poland was the only CEE country in which the goods transported by airplanes had some (albeit minor) importance, because it was followed by the Czech Republic, with only 11.1 million tkm, and Romania with 5.6 million tkm (in comparison to the leaders Romania had hundreds of times less) (Statistical Yearbook of the Republic of Poland 2013, p. 869).

The growth of the Internet in the CEECs is more successful. The CEECs still prevail in the group of countries with a low number of Internet users per 1000 inhabitants, but right next to them are Italy, Greece, Portugal, and Cyprus. It is worse with respect to subscribers of fixed broadband Internet access. The CEE countries rank last, with only Estonia, Slovenia and Hungary having a slightly better, but well below average, position (Statistical Yearbook of the Republic of Poland, 2013, p 872).

2. Measuring innovation

When examining the success of the CEECs during their systemic transformation, it is primarily their quantitative dimensions that are recognized: a generally high rate of growth for GDP, exports, and labour productivity. It should be recognized that even if these quantitative successes continue, it will not ensure the access of the group to the category of the most developed EU countries. In order to achieve this, qualitative successes are needed, resulting from highly-skilled workers, their creative activity, and innovation in the economy.

Only an economy based on knowledge and the type of truly original innovation which is sought after in the market creates attractive jobs with good prospects for career development and high income (wages), together with satisfactory profits for entrepreneurs (owners). This is the right path to take to increase the long-term competitiveness of a country's economy.

It is understandable that in the early stages of economic transformation emphasis was put on qualitative successes and increasing the level of modernity through innovation replacement (transferring solutions already known and used somewhere). After a long period of drastic shortages and primitive consumption, the public in the CEECs waited eagerly for a rapid and tangible improvement in their living conditions In this situation, any increase in supply and/or improvement in quality was a noticeable improvement. But these priorities, which were justifiable several years ago, need to be reviewed and adapted to the changing times. This is also necessary because in many economies (especially the most advanced) such verification processes and such changes take place intensively. Today, the major test for the CEECs (including Poland) for real, effective economic integration into the EU is their ability to radically shift their economies onto innovation, based on the creative activity of their own labour resources and creative solutions using native inventions. Only a full launch of such internal driving forces can put an end to the division of countries into better and worse, high speed and low speed, core and periphery, etc.

The illusory nature of assessments based on selective data (and superficially treated quantitative criteria) can best be seen in the example of Belarus. For nearly 20 years, Belarus has maintained the highest rate of GDP growth (during the last crisis it was a 'green island' too), has one of the highest growth rates in labour productivity, and a very low unemployment rate. It is also the leading European country in terms of number of students, hospital beds, and doctors per capita in the population. And none of the CEE countries has as many subscribers of fixed broadband internet connection per 1000 inhabitants as Belarus (2012) (Statistical Yearbook of the Republic of Poland 2013, p. 872). But are these successes enough to treat this country as a model worthy of emulation?

I assume in this article that in order to obtain a correct picture of innovation two parallel types of measurements should be used. One involves synthetic measures comprehensively covering all the important aspects that make up innovation, and the second approach boils down to a more detailed description of selected aspects of innovation of particular importance for the course of a particular analysed phenomena.

The fullest picture of innovation activity in the EU countries in the synthetic approach is provided by the reports prepared by the European Commission agencies. Particularly useful is the 'Innovation Union Scoreboard (IUS) 2013', containing information relating to the years 2008 to 2012, and the 'European Innovation Scoreboard, 2008: Comparative analysis of innovation performance', which includes information from the years 2004 to 2008.

It should be noted that results for 2008 are contained in both reports. They are not identical however, because the indicators used to calculate the Summary Innovation Index (SII) for the years 2008-2012 are a bit different than the ones used in the calculations for the years 2004 to 2008.

SII for the years 2008-2012 contains three main types of indicators (Enablers, Firm activities, and Outputs) and eight innovation dimensions, in total encompassing 24 indicators. The full list is presented in Table 1 below.

Table 1. Innovation Union Scoreboard indicators

Main type / innovation dimension / indicator
ENABLERS
Human resources
1.1.1 New doctorate graduates (ISCED 6) per 1000 inhabitants aged 25-34
1.1.2 Percentage of population aged 30-34 having completed tertiary education
1.1.3 Percentage of youth aged 20-24 having attained at least upper secondary level education
Open, excellent and attractive research systems
1.2.1 International scientific co-publications per million inhabitants
1.2.2 Scientific publications among the top 10% most cited publications worldwide, as a % of the total scientific publications of the country
1.2.3 Non-EU doctorate students as a % of all doctorate students
Finance and support
1.3.1 R&D expenditure in the public sector as % of GDP
1.3.2 Venture capital investment as % of GDP
FIRM ACTIVITIES
Firm investments
2.1.1 R&D expenditure in the business sector as % of GDP
2.1.2 Non-R&D innovation expenditures as % of turnover

Linkages & entrepreneurship
2.2.1 SMEs innovating in-house as % of SMEs
2.2.2 Innovative SMEs collaborating with others as % of SMEs
2.2.3 Public-private co-publications per million inhabitants

Intellectual assets
2.3.1 PCT patents applications per bln GDP (in PPS€)
2.3.2 PCT patent applications in societal challenges per bln GDP (in PPS€) (environment-related technologies; health)
2.3.3 Community trademarks per bln GDP (in PPS€)
2.3.4 Community designs per bln GDP (in PPS€)
OUTPUTS
Innovators
3.1.1 SMEs introducing product or process innovations as % of SMEs
3.1.2 SMEs introducing marketing or organisational innovations as a % of SMEs
3.1.3 High-growth innovative firms
Economic effects
3.2.1 Employment in knowledge-intensive activities (manufacturing and services) as a % of total employment
3.2.2 Contribution of medium and high-tech product exports to the trade balance
3.2.3 Knowledge-intensive services exports as a % of total service exports
3.2.4 Sales of new to market and new to firm innovations as a % of turnover
3.2.5 License and patent revenues from abroad as a % of GDP

Source: Innovation Union Scoreboard, 2013, p. 9.

The SIIs for the years 2008-2012, calculated on the basis of these data, are listed in Table 2. In addition to the members of the EU other European countries are presented: Switzerland, Norway, Iceland, Macedonia, Serbia, and Turkey. This provides a more comprehensive view of innovation in the region. The exceptionally strong position of Switzerland, with a significantly higher SII than all the countries surveyed, draws particular attention.

Table 2. Summary Innovation Index (SII) time series

	2008	2009	2010	2011	2012	Growth rate
EU-27	0.504	0.516	0.532	0.531	0.544	1.62%
BE	0.594	0.596	0.606	0.612	0.624	1.15%
BG	0.187	0.198	0.231	0.234	0.188	0.60%
CZ	0.365	0.371	0.408	0.413	0.402	2.57%
DK	0.643	0.660	0.698	0.696	0.718	2.67%
DE	0.677	0.694	0.710	0.705	0.720	1.75%
EE	0.415	0.458	0.460	0.484	0.500	7.09%
IE	0.549	0.567	0.544	0.587	0.597	0.66%
EL	0.364	0.338	0.362	0.334	0.340	-1.66%
ES	0.388	0.394	0.390	0.393	0.407	0.87%
FR	0.519	0.531	0.558	0.560	0.568	1.84%
IT	0.397	0.410	0.432	0.432	0.445	2.71%
CY	0.493	0.465	0.494	0.513	0.505	-0.69%
LV	0.188	0.206	0.216	0.225	0.225	4.39%
LT	0.244	0.248	0.255	0.271	0.280	4.95%
LU	0.585	0.615	0.595	0.581	0.626	0.71%
HU	0.301	0.301	0.329	0.335	0.323	1.35%
MT	0.301	0.322	0.338	0.300	0.284	3.31%
NL	0.577	0.585	0.588	0.594	0.648	2.70%
AT	0.582	0.596	0.571	0.584	0.602	0.68%
PL	0.268	0.278	0.273	0.283	0.270	0.45%
PT	0.378	0.400	0.427	0.425	0.406	1.67%
RO	0.234	0.250	0.233	0.252	0.221	1.24%
SI	0.448	0.473	0.489	0.517	0.508	4.09%
SK	0.285	0.295	0.281	0.291	0.337	3.29%
FI	0.657	0.673	0.675	0.681	0.681	1.94%
SE	0.725	0.731	0.733	0.735	0.747	0.65%
UK	0.579	0.588	0.623	0.621	0.622	1.18%
HR	0.275	0.286	0.308	0.317	0.302	2.13%
TR	0.188	0.195	0.201	0.209	0.214	3.56%
IS	0.593	0.609	0.588	0.612	0.622	2.64%
NO	0.449	0.458	0.478	0.470	0.485	0.89%
CH	0.805	0.816	0.826	0.827	0.835	0.50%
RS	0.255	0.248	0.290	0.279	0.365	6.80%
MK	0.191	0.216	0.219	0.220	0.238	2.61%

Source: Innovation Union Scoreboard, 2013, p. 74.

For individual coefficients a grading scale from 0 to 1 was adopted, where 0 is the worst score and 1 the best.

The strong differentiation of SIIs within the EU enables one to distinguish four groups of countries, depending on the level of their SII: innovation leaders, innovation followers, moderate innovators, modest innovators. Twenty seven EU countries were included (excluding Croatia). This is demonstrated in Table 3.

The first group includes innovation leaders: Sweden, Germany, Denmark, and Finland. The performance of innovation leaders is 20% or more above that of the EU 27 average. Innovation followers are in the second group: the Netherlands, Luxembourg, Belgium, Great Britain, Austria, Ireland, France, Slovenia, Cyprus, and Estonia (total 10 countries). Note, that two post-socialist countries; Slovenia and Estonia are in this group. The SII for innovation followers ranges between 20% above and 10% below the EU-27 average. The third group, the moderate innovators, includes: Italy, Spain, Portugal, Czech Republic, Greece, Slovakia, Hungary, Malta, and Lithuania. Four post-socialist countries are in the group. The SII for moderate innovators is less than 10% above but no more than 50% below the EU-27 average. The fourth group (modest innovators), with SIIs more than 50% below the EU-27 average, is comprised of only four post-socialist countries: Poland, Latvia, Romania, and Bulgaria. These are the weakest countries in the EU in terms of innovation.

Between 2008 and 2012, in each of the four distinguished groups processes took place which changed the position of individual countries and their perspectives in the quest to achieve greater innovation and a better competitive position. The fastest rate of positive changes took place in the analysed period in the group of moderate innovators (2.1%), and the lowest rate in the last group, with the lowest innovation (1.7%). While the difference is not very large, it shows that the countries in the EU-27 with average innovation take more effective actions to improve their position than countries with the lowest innovation. This can perpetuate and deepen the process of marginalization of those countries already most vulnerable, including Poland.

It can be seen that each of the four groups has a leader (or in the case of ‘innovation followers’, two leaders) who achieved a much higher rate of positive changes than the others, which strengthens their position and offers the prospect of transition to the next higher group. In three groups post-socialist countries are such leaders: Estonia, Slovenia, Latvia, and Lithuania. These four countries achieved the highest rate of positive changes in the EU-27. In each of these groups there are also countries where progress occurs most slowly (or even negatively). In the group of slow growers this country is Poland, the only CEE country to achieve such a low rating.

Table 3. European innovation Scoreboard 2008 – SII time series

Group	Growth rate 2008-2012	Growth leaders	Moderate growers	Slow growers
Innovation leaders	1.8%	Denmark (2.7%)	Finland (1.9%) Germany (1.8%)	Sweden (0.6%)
Innovation followers	1.9%	Estonia (7.1%) Slovenia (4.1%)	Netherlands (2.7%) France (1.8%) United Kingdom (1.2%) Belgium (1.1%) Luxembourg (0.7%) Austria (0.7%) Ireland (0.7%)	Cyprus (-0.7%)
Moderate innovators	2.1%	Lithuania (5.0%)	Malta (3.3%) Slovakia (3.3%) Italy (2.7%) Czech Republic (2.6%) Portugal (1.7%) Hungary (1.4%) Spain (0.9%)	Greece (-1.7%)
Modest innovators	1.7%	Latvia (4.4%)	Romania (1.2%) Bulgaria (0.6%)	Poland (0.4%)

Average annual growth rates as calculated over a five-year period.

Source: Innovation Union Scoreboard, 2013, p. 12.

It can therefore be concluded that there is a differentiation of the position of individual countries within the CEECs. The most successful are Estonia and Slovenia, and changes are also the quickest in those countries. At the other extreme is Poland, where stagnation continues at a low level. Also alarmingly poor is the position of Romania and Bulgaria. In contrast, the achievements of Latvia create the prospect of transition upward, from the group of modest innovators to moderate innovators, in a few years. However, this means that only three countries would remain in the weakest group: Poland, Romania, and Bulgaria.

Table 4. Performance scores per dimension

	Human resources	Research systems	Finance and support	Firm investments	Linkages &entrepre-neurship	Intellectual assets	Innovators	Economic effects
EU-27	0.557	0.478	0.585	0.406	0.532	0.555	0.571	0.603
BE	0.644	0.737	0.527	0.417	0.809	0.534	0.722	0.585
BG	0.429	0.094	0.085	0.111	0.088	0.231	0.064	0.245
CZ	0.537	0.227	0.343	0.409	0.429	0.275	0.518	0.486
DK	0.605	0.800	0.729	0.569	0.831	0.828	0.632	0.671
DE	0.626	0.553	0.610	0.637	0.731	0.814	1.000	0.728
EE	0.565	0.289	0.760	0.594	0.604	0.483	0.606	0.409
IE	0.758	0.682	0.320	0.305	0.566	0.425	0.702	0.791
EL	0.506	0.294	0.151	0.220	0.485	0.122	0.676	0.347
ES	0.433	0.493	0.436	0.223	0.297	0.399	0.318	0.507
FR	0.669	0.664	0.631	0.347	0.498	0.516	0.532	0.611
IT	0.420	0.354	0.289	0.287	0.404	0.519	0.616	0.535
CY	0.577	0.378	0.198	0.479	0.731	0.427	0.494	0.543
LV	0.451	0.083	0.375	0.111	0.103	0.330	0.123	0.220
LT	0.645	0.144	0.563	0.396	0.229	0.128	0.227	0.214
LU	0.549	0.692	0.636	0.231	0.630	0.666	0.876	0.652

HU	0.452	0.169	0.271	0.244	0.217	0.250	0.131	0.590
MT	0.129	0.224	0.104	0.356	0.220	0.293	0.363	0.419
NL	0.648	0.864	0.720	0.339	0.753	0.649	0.621	0.603
AT	0.597	0.538	0.474	0.473	0.769	0.796	0.636	0.476
PL	0.550	0.094	0.383	0.319	0.094	0.271	0.078	0.324
PT	0.404	0.435	0.414	0.279	0.416	0.312	0.728	0.378
RO	0.421	0.087	0.218	0.137	0.083	0.101	0.124	0.433
SI	0.671	0.385	0.521	0.437	0.623	0.506	0.476	0.479
SK	0.746	0.116	0.302	0.210	0.301	0.155	0.289	0.470
FI	0.827	0.550	0.788	0.621	0.689	0.690	0.628	0.663
SE	0.900	0.775	0.829	0.659	0.802	0.767	0.693	0.612
UK	0.749	0.795	0.730	0.459	0.832	0.452	0.271	0.626

Source: Innovation Union Scoreboard, 2013, p. 75.

In Table 4 the innovation activity is shown in more detail. It is clear that some aspects of the innovation activity are particularly underdeveloped in most CEECs. This concerns, for example, research systems. The indicator for Poland, Romania, and Bulgaria is about 10 times lower than for the Netherlands (with 0.864). Only Slovenia (0.385) and Estonia (0.289) have some 'contact' with the leaders.

A similar diversity is seen in the 'innovators' dimension. Bulgaria's score is more than 15 times lower than Germany's, Poland's is 13 times lower, Latvia's, Romania's, and Hungary's are 8 times lower. Those in the most favourable situation - Estonia, the Czech Republic, and Slovenia - have indicators which reach about half that of Germany.

The smallest differences between the CEECs and the other EU countries relate to the dimension 'Human resources'. Slovakia (0.746), Lithuania (0.645) and Estonia (0.565) have coefficients exceeding the average level of the EU-27 (0.557) and Poland is very close thereto (0.550).

The information presented in Tables 2, 3, and 4 depicts the situation in recent years. The following two Tables contain information showing the state of affairs in the initial period after the accession of the CEECs to the EU. This makes it possible to evaluate the relative changes in the position of the CEECs in the EU in terms of innovative activity.

The SII values for the years 2004-2008 (Table 5) make it possible to distinguish four groups of countries with different innovative achievements (Table 6). The innovation leaders included countries with the highest SIIs, the innovation followers included other countries with SII above the EU-27 average, and the two remaining groups included countries for which the SII was below the EU-27 average (the 'catching up' countries achieved the lowest values of SII). Table 6 includes Switzerland, which does not belong to the EU but is the clear leader in innovation in Europe.

Table 5. European Innovation Scoreboard 2008 – SII time series

	2004	**2005**	**2006**	**2007**	**2008**
EU-27	0.429	0.431	0.447	0.466	0.475
BE	0.467	0.477	0.486	0.498	0.507
BG	0.172	0.174	0.178	0.206	0.221
CZ	0.344	0.346	0.368	0.392	0.404
DK	0.566	0.572	0.605	0.602	0.570
DE	0.538	0.543	0.548	0.569	0.581
EE	0.413	0.409	0.421	0.443	0.454
IE	0.486	0.504	0.513	0.528	0.533
GR	0.271	0.279	0.295	0.332	0.361

ES	0.329	0.344	0.352	0.359	0.366
FR	0.460	0.461	0.465	0.495	0.497
IT	0.314	0.320	0.343	0.361	0.354
CY	0.370	0.363	0.381	0.433	0.471
LV	0.194	0.204	0.215	0.239	0.239
LT	0.264	0.273	0.287	0.294	0.294
LU	0.486	0.486	0.513	0.497	0.524
HU	0.266	0.273	0.287	0.305	0.316
MT	0.274	0.280	0.292	0.315	0.329
NL	0.450	0.447	0.458	0.474	0.484
AT	0.480	0.494	0.509	0.523	0.534
PL	0.264	0.272	0.282	0.293	0.305
PT	0.290	0.317	0.337	0.340	0.364
RO	0.209	0.205	0.223	0.249	0.277
SI	0.388	0.393	0.412	0.429	0.446
SK	0.257	0.273	0.298	0.299	0.314
FI	0.551	0.546	0.541	0.585	0.610
SE	0.607	0.610	0.637	0.630	0.637
UK	0.522	0.534	0.550	0.556	0.547
HR	0.278	0.286	0.282	0.289	0.293
TR	0.192	0.196	0.202	0.206	0.205
IS	0.381	0.389	0.415	0.452	0.467
NO	0.358	0.370	0.371	0.375	0.380
CH	0.612	0.615	0.632	0.661	0.681

Source: Innovation Union Scoreboard, 2013, p. 58.

Upon joining the EU, the innovative position of the CEECs was very unfavourable. A clear majority of these countries were included in the group with the smallest achievements (Malta was their only 'old EU' partner in the group). Slovenia, Estonia, and the Czech Republic were evaluated slightly higher. Although part of the CEECs achieved a relatively high rate of positive changes, none of these countries reached the average SII level for the EU-27. It seems that it is still a distant prospect for Bulgaria, Romania, and Poland. In Bulgaria and Romania a significant acceleration took place only after joining the EU, and it was short-lived, while in Poland stagnation is still visible.

Table 6. Innovation growth leaders

Group	Growth rate	Growth leaders	Moderate growers	Slow growers
Innovation leaders	1.6%	Switzerland	Germany, Finland	Denmark, Sweden, United Kingdom
Innovation followers	2.0%	Ireland, Austria	Belgium	France, Luxembourg, Netherlands
Moderate innovators	3.6%	Cyprus, Portugal	Czech Republic, Estonia, Greece, Slovenia	Italy, Spain
Catching-up countries	4.1%	Bulgaria, Romania	Latvia, Hungary, Malta, Poland , Slovakia	Lithuania

Average annual growth rates as calculated over a five-year period.

Source: Innovation Union Scoreboard, 2013, p. 11.

3. Determinants of innovative activity in the CEECs

The determinants of innovation in an economy are generally well recognized. One should, however, take into account that in different countries, depending on their stage of development, experience, and dominant doctrines, the weight of each factor may vary.

In this article I assume that the following factors are the most important:

1. Expenditure on R & D,
2. Development strategy implemented under the adopted economic policy,
3. The quality of state institutions.

In the CEECs, none of these factors creates favourable conditions for the development of innovation. This is clearly visible when comparing the situation in the CEE countries with that of most countries of the ‘old’ EU.

3.1. Expenditures on R&D

There are good reasons to believe that it is not possible to achieve a high technical level of an economy, based on original (not imitative) innovation, without incurring major financial outlays (at least at the average level incurred by the successful countries). This is also confirmed by observations of foreign experiences. For example J. Sarul (2013) writes that ‘the characteristic feature of all the leading innovative countries in the European Union is a large share of

expenditure on research and development, measured by the share of GDP, while the more innovative is the country the greater is the share of funding from private sector'. A similar opinion is also formulated by S. Marciniak (2013), who lists the scarcity of financial resources as one of the most important reasons for low innovation.

R&D spending as a share of GDP is the basic formula showing the country's real engagement in innovation. In 2012, the EU average was over 2% of GDP, and the leaders (including non-EU countries) spent 3-4% of GDP. Israel was the leader in this area, with 4.3-4.5% (not including spending on defence). (International Statistics Yearbook (2012), p. 284.) A high share of R&D expenditure in relation to GDP could be observed in Slovenia (2.8%) and Estonia (2.2%), which are clear leaders in innovation among the CEECs. In the Czech Republic it was less than 2% and in Hungary over 1%. In other CEECs these values ranged from 0.5% (Bulgaria) to 0.9% (Lithuania), and 0.76% in Poland (Statistical Yearbook of the Republic of Poland (2013), p. 810) Nauka i technika (2013), p. 54). Per capita expenditures in Poland were almost 10 times lower than in the advanced countries. China was already ahead of us by 2011, when it spent US$ 155 on R&D per inhabitant (Statistical Yearbook of the Republic of Poland (2013), p. 810).

The share of institutional sectors in the total expenditure on internal R&D is unusual in most CEECs. The share of the corporate sector is low, and the share of government and higher education sectors is high, indicating a relatively low interest of businesses in innovation activities (Nauka i technika 2013, p. 58). The structure of expenditures on R&D is affected by three main factors:

a) the results of basic research are of little use for economic practice,
b) the solutions transferred from external research institutes and universities to companies are of a small, fragmentary nature, and hence their implementation does not require large expenditures,
c) the companies themselves do not implement large R&D projects.

The scarcity and fragmentation of funds show that large research programs which could be a technical or market success are not implemented in the CEECs (Wróblewski, 2012). There are no such programs even in those segments of the economy which have potential, and for which more modern technologies are very necessary, indeed essential, for example, mining and processing of coal, energy, telecommunications, and pharmaceuticals.

3.2. The development strategy

Based on the experiences of many countries, two types of strategy can be identified (with some simplifications). Both attach high importance (at least declaratively) to innovative activity as an important factor enabling long-term development.

The first type of strategy involves several characteristic elements:

- a relatively high or high tax burden,
- a well-developed technical infrastructure based largely on public investment,
- a very good education system,
- a large role of the state in initiating and supporting (e.g., financially) strategic innovation initiatives,
- large state spending on R&D,
- care for social stability, manifested, inter alia, in the functioning of socially acceptable mechanisms for developing wages and profits.

Such strategies are characteristic of economically developed countries, with high technology and high innovation activity (Krajewski 2009, pp. 267-277). They focus on providing economic entities with external conditions which facilitate and support innovation. The ability to produce goods accepted and sought after in the market (both at home and abroad), and which others are not able to offer, is the basis of competitiveness. Therefore, native (original) innovation plays a key role in this model. Entities operating in such economies achieve an innovation advantage, which allows them to charge high prices, ensuring high profits and wages.

The second type of strategy involves the following characteristic features.

a) Low taxes on:
   - income of enterprises and entrepreneurs,
   - property,
   - inheritance,

b) tolerance of a grey economy,

c) high income and wealth inequality,

d) low activity of the state in initiating and supporting strategic innovation,

e) low state spending on innovation activities and on the creation of favourable conditions for the development of innovation.

In this type of strategy, competitiveness is built on the basis of low wages and low taxes, keeping prices relatively low. But the market offer is mainly based

on products already known, often produced by many other companies, coming mainly from not very modern or traditional sectors of the economy. This is not a strategy to be a leader of innovation. This model is dominated by imitative innovation. Such strategies are implemented fairly often in countries with a low level of development, mostly post-socialist countries (including Poland) in which, owing to recent past experience, there is a large distrust and dislike of the state, and at the same time a probably excessive faith that market entrepreneurship will best cope with problems, including innovation. Hence, under such an approach the main condition to ensure success is to severely reduce state interference and provide businesses with high disposable income, hoping that it will be used to a large extent on innovation activities.

These expectations, however, did not materialize. It turned out that the economic operators in these conditions are able to pursue their economic goals to a satisfactory degree while allocating only slight resources for innovation activities. One cannot blame them if they act in accordance with their particular interests and microeconomic rationality. They have been provided with a set of conditions of operation, and therefore they make use of them. To achieve the objectives the operators usually purchase machinery and equipment of a newer generation (but unprotected by patents) and carry out small R&D works on their own.

Cooperation between companies and individual entities in the R&D base is poor because:

- companies rarely engage in projects that would require such cooperation,
- the R&D base units have few offers that might interest enterprises,
- the ability of the R&D units to collaborate on ambitious project is limited because they have outdated and worn scientific and research apparatuses, they have poor personnel (the best employees often leave, and there is no supply of attractive new young cadres), and small and fragmentary orders dominate and do not promote science (Krajewski 2013).

The domestic market in the CEECs remains, in most segments, undemanding, in part due to the low income of consumers. The export of goods is dominated by outdated goods, with a low degree of processing (high-tech products usually represent only a small percentage of exports).

The grey economy creates large possibilities to obtain easy benefits (especially in small enterprises) and, in practice, goes almost completely unpunished.

The expectations that a significant improvement in innovation activity could be achieved through EU aid have been fulfilled only to a small extent. Firstly, contrary to appearances the size of the aid is not large - its share in the total expenditures on R&D generally does not exceed several percent. Enterprises were acquiring only a small portion of these funds, and the main beneficiaries are

colleges and the government sector. Secondly, the funds are spent primarily on the implementation of small fragmentary projects without any coherent concept and without many features indicative of originality.

The problems which the large differences in development levels of individual countries within the EU pose for the development of a consistent and coherent innovation policy have become more visible in the current crisis. D. Gołębiowska-Tadaj (2013) considers, for example, that '... a source of weakness in combating the crisis was artificial integration of countries with dramatically different indicators of productivity, institutions and different cultures.' And Sarul J. (2013) expresses the view that there has been no success in reducing the innovation gap between the EU countries with different levels of economic development, partly because it is difficult to develop a common innovation policy. In his opinion, 'The experiences of the 'old' European Union, particularly the Scandinavian countries, show that higher taxation, and thus a high level of social protection, a low budget deficit, and the resulting low level of interest rates are conducive to the development of innovation… Blocking the possibility of price competition encourages entrepreneurs to take difficult, but fruitful in the long term, innovative types of competition...' Such peripheral countries as the CEECs, including Poland, pursue a neo-liberal economic policy, and generally provide conditions for competition based on prices, and reproductive innovation. It is therefore necessary to make innovation-oriented changes in their macroeconomic policies.

3.3. The quality of state institutions

In most of the CEECs, innovativeness of the economy is not treated by the state as a priority. A low level of activity and engagement by state institutions can be seen in this field (apart from verbal declarations). These institutions are incapable of setting appropriate goals for the economy and society and properly allocating scarce resources. Consequently, generally there is a severe shortage of funds for R&D.

State institutions have so far failed to create efficient and effective mechanisms to encourage economic entities and R&D entities to engage in highly innovative activities. One cannot blame the entities at the microeconomic level for such a lack of activity. They act rationally from their own point of view and within the conditions and systemic solutions which have been created for them.

The state insufficiently initiates and participates in the implementation of strategic objectives of R&D and large innovation programs, and the microeconomic

level entities are too weak to be able to act in this role. As a consequence, there are an insufficient number of such objectives and programs. One of the consequences of the low activity of state is the insufficient rate of change in the structure of the economy and in the evolution of innovative activity. A unique (in the world, apart from South Africa) example of this is the petrification of energy based on coal in Poland and its inability to reduce CO2 emissions to the extent deemed necessary by the EU.

State and local governments distribute aid from the EU mainly according to formal and bureaucratic criteria. They prefer small programs, because there is less risk that they will end up without achieving the desired objectives, and failures are not so conspicuous. The programs also have short implementation periods, so they are easier to settle. Such programs usually end up with imitating (replacement) innovation, with limited application possibilities.

According to Kleer (2013), it is evident that state institutions prefer imitative innovation which bring some short- and medium-term benefits, but do not ensure long-term economic and civilization development. The long-term development must be strongly supported by native innovation. This support should concern not only the economic sphere, but above all the civilization sphere. 'This is the plane on which the conflict between innovation and imitation takes place. ... How this native innovation will be launched depends mainly on the policy and strategy of the state. The experience of the last several decades, both in Europe and on other continents, proves that in this respect there is an extremely differentiated approach on the part of individual states. At the same time there is no clear correlation between the size of the state, per capita income, and expenditure on research and development sector. It is purely the effect of the professed philosophy of politics and economic theory.' The CEECs clearly prefer the development of imitation innovation.

4. Summary

When the countries of Central and Eastern Europe entered the European Union, they were given the opportunity to become transformed into knowledge-based societies, with modern, innovation-oriented economies which build their strength and competitiveness on the development of native technical solutions and concepts. To achieve this, however, requires a lot of effort and radical and profound changes in comparison with the previous situation. New priorities and strategic objectives and methods of their implementation (including innovation strategies) must be developed, financial and in-kind resources reallocated, and social and technical infrastructure must be expanded and modernized. These are

difficult challenges, but their effective implementation is essential so that the CEECs can avoid marginalization and become equal partners within the EU.

The statistical data presented in this paper indicates that the innovative position of the CEECs is still unfavourable and relatively weak, with the exception of Slovenia and Estonia. Poland is in a particularly difficult situation, with many signs of stagnation with respect to innovation, keeping it at a low level (next to Bulgaria and Romania).

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Streszczenie

INNOWACYJNOŚĆ GOSPODAREK EUROPY ŚRODKOWO-WSCHODNIEJ

Wchodząc do Unii Europejskiej, kraje Europy Środkowo-Wschodniej (CEEC) uzyskały szanse na przyspieszone przekształcenie się w społeczeństwa oparte na wiedzy, mające nowoczesne, proinnowacyjne gospodarki, które swoją siłę i konkurencyjność budzą na rozwoju rodzimej myśli technicznej. Osiągnięcie tego wymaga jednak dużego wysiłku i radykalnych oraz głębokich zmian w porównaniu ze stanem dotychczasowym: sformułowania nowych priorytetów oraz celów strategicznych i sposobów ich realizacji (w tym strategii innowacyjnych), dokonania realokacji zasobów finansowych i rzeczowych, rozbudowy i unowocześnienia infrastruktury społecznej i technicznej. Są to wyzwania trudne, ale ich skuteczna realizacja jest niezbędna, aby CEEC uniknęły marginalizacji i stały się równoprawną częścią UE.

Dane statystyczne przedstawione w artykule wskazują, że pozycja innowacyjna CEEC jest ciągle niekorzystna i relatywnie słaba, z wyjątkiem Słowenii i Estonii. W szczególnie trudnej sytuacji jest Polska, w której występuje najwięcej (obok Bułgarii i Rumunii) oznak stagnacji innowacyjnej na niskim poziomie.

Słowa kluczowe: *innowacyjność, konkurencyjność, Europa Środkowo-Wschodnia, Unia Europejska*

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Transformations And Reforms Of European Health Care Systems: The Case Of Estonia

Abstract

The purpose of this article is to present the main directions of changes in the Estonian health care system following the transformation of the national economy and the accession of Estonia to the European Union. Special attention has been paid to the ways of sourcing, and the collection and redistribution of financial resources allocated to health care in different periods of the transformation. The initial changes introduced far-reaching decentralization of the health system, while further reforms led to his re-centralization. The intensity of the re-centralization of finance and health management processes was accelerated after 2008, when the impact of the global financial crisis on the condition of the economy of Estonia was significant. As a result of the introduced changes, Bismarck's mixed system – a hybrid system – has been formed.

***Keywords**: transformation of the system, hybrid model, co-payments, health insurance*

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1. Introduction

The observed changes in the modern health systems in European countries, especially intensive in Central and Eastern Europe, may be characterized by two words: transformations and reforms. These processes are seen as an evolutionary, gradual and long-term transformation of the components of the system.

Transformation of the health systems in Central and in some Eastern European countries was launched in the late 1990s as a result of the democratic and economic transformation which swept through the region. It should be pointed out that the economic transformation is an element of economic policy and includes actions aimed at creating operating conditions for market members. These conditions should transcend beyond the realm of human attitudes and behaviors caused by these attitudes (Bałtowski, Miszewski 2006, pp. 23-24).

Changes occurring within the political system of each country were related mainly to the change of the system, but also to the changes in the quality of governance. The essence of the political transformation in Central Europe was well defined by Jan Szczepański (Szczepański 1999, p. 73), according to whom political transformation is a sequence of changes taking place in various fields, leading to a significant change for the entire social system. The transformation of the social reality can be brought about by reform, revolution or transformation.

Transformations of the health systems in European countries result from reforms, and in accordance with their substantive assumptions should be of an evolutionary character. The evolution of these systems indicates that reforms would be continued aiming at a higher quality of the organization and improvement of the health system (Golimowska, Włodarczyk et al. 2005, p. 3).

The health system consists of multiple elements, including those related to both the organizational and financing system, subordinated to meeting the health needs of the society and its individual members while at the same time complying of the principles of economic effectiveness, rationality and efficiency. Striving to meet these objectives means that the modern health systems are subject to constant reforms, in accordance with the transformations of the Central and Eastern European countries.

The economic effectiveness of the transformed or reformed health care system depends primarily on the intensity of creating common funds and on methods of collecting and disbursing the funds, as well as on determining the principles of equality in the financing of services provided under the new conditions. It follows that while analyzing health care systems it is crucial to distinguish between the financial and organizational functions, which have been assigned to different frames of the health sector model.

The proper relationship between the financing of the health services and the appropriate organizational system can be attained by:

- establishing the rules for the health care units' collection of income and the creation of the common funds;
- defining the role of the health services purchaser;
- outlining the safety conditions for the availability of medical services (Suchecka 2010, pp. 45-69).

Collection of revenues is a process of activating various sources of health care financing. The creation of common funds is aimed at spreading the financial risk over the entire population, or selected groups, by collecting advance payments to cover the operating costs of the health care institutions. On the other hand, the potential individual health services purchasers should contribute to achieving solidarity through, for instance, the appropriate level of funding irrespective of their economic status.

In sum, the efficiency of modern health systems depends on the intensity of creating common funds and their collection and disbursement.

In different countries, changes are introduced gradually by the adoption of new model solutions for health care systems (Depta 2011, pp. 47-59). Currently, national governments propose further modifications of health systems, which result mainly from the instability of the financial system and the economic slowdown arising from the financial crisis.

The countries of Central and Eastern Europe are subject to the strongest transformation processes (Rogoś, Skrzypczak 2006, pp. 47-61). Since the beginning of the transformation period, these processes have been and still are primarily directed at the following elements (Golinowska 2006, p. 23):

- changing the financing from budgetary planning to funding from contributions of employers and/or employees – mandatory health insurance, nowadays including additional private health insurance and co-payment;
- increasing the autonomy of the health sector at the local level, as well as the public sector health care facilities;
- privatization of certain types of health care;
- implementation of methods of financing which enable achievement of appropriate remuneration for the medical staff and personnel.

A characteristic feature of the reforms introduced in the 1990s was the focus on four areas:

- decentralization and privatization;
- devoting more resources to health care, mainly through the introduction of health insurance plans;

- planned reduction in "capacity" of health care;
- introduction of compulsory health insurance.[1]

The implementation of these principles involved the promotion of planned changes to the organization of the health sector and the modernization of its management.

An overall change in the organization of the health sector consisted of introducing the position of 'family doctor' and opting out of polyclinics, isolating facilities for specialist treatment, care and hospices, and the creating of health institutions.

In contrast, changes in the management of health care institutions were dominated by creating health manager positions, launching information systems for evaluating health benefits and their costs, and at the same time preparing various analyses and forecasts. These analyses also included conducting patients' satisfaction surveys and using the results of the studies in improving the management style and the overall quality of health services.

In some countries of Central and Eastern Europe, principles of co-payment for some medical services were introduced. This form of an additional source of health care financing was also introduced in Estonia.

The process of transformation of the health system of Estonia, as in other countries of Central and Eastern Europe, began in the early 1990s. The changes were introduced gradually. Each stage of the reform allowed for making adjustments to the system in line with the changing economic, social and demographic conditions. The financing of health services has also been modified by relevant legal acts.

The aim of this article is to characterize, against the background of the centrally planned system (Siemaszko's health care model), the most important changes which have taken place in the functioning of the Estonian health care system in the years 1990-2013. The principles of revenue collection and the creation of common funds for the financing of health care are also emphasized in this paper.

[1] The health insurance system based on compulsory contributions came into force the latest in Poland (in 1999), while in other countries that introduced changes in the financing of health care, this process started much earlier, e.g. in 1992 in the Czech Republic, in 1991 in Lithuania, in 1993 in Russia, in 1994 in Slovakia, in 1990 in Hungary and in 1992 in Estonia.

2. General characteristics of European health care systems

The evolution of health care systems is a dynamic process, changing together with the modifications of the institutional and organizational environment, political and economic conditions of the country, its health needs, and the expectations of the society. An analysis of the evolution of the health care systems must take into account many concepts with different assumptions with respect to the functions that should be met and the structure of the health care system. However, the main reasons for introducing reforms are the aging of populations and the rising costs of medical procedures (Strzelecka 2011, p. 190). Hence, all kinds of changes are intended to create the conditions to achieve greater medical effectiveness and economic efficiency.

From the point of view of the reforms introduced in health care, it is crucial to evaluate the effectiveness of different ways of financing health services, conditioned on the legal and economic organization of the health system model.

Depending on the degree of state intervention in the financing of health care and the type of insurance systems functioning, as well as in accordance with the duties of the state in the field of public health, there are various classifications of health care systems models.

One of the most advanced classifications of models of health care systems is the classification proposed by the World Health Organization (WHO), which characterizes the following types of these models:

- based on the principle of public assistance;
- based on a system of health insurance (Bismarck's model);
- based on the financing of health care from the state budget (Beveridge's model);
- based on central planning of health care (Siemaszko's model);
- market, residual model.

In developing countries, (Latin America, Africa and Asia) the typical model is based on the principle of public assistance. The main assumptions of this model are focused on ensuring health care for the majority of society at the necessary minimum level, which usually means providing medical assistance in life-threatening conditions. Preventive health care and compulsory vaccinations are not included in this model. The allocation of medical resources concentrates in urban areas and involves the provision of hospital care and the access to health care services for certain privileged social groups.

In Bismarck's model, health care is financed by a compulsory insurance fund derived from premiums paid by the employer and the employee, managed by institutions independent from the government. The health benefits are provided

by public and private providers, while the responsibility for contracting services rests with the managing authorities. A characteristic features of this system is the presence of the "patient's own share" regardless of payable contributions and the wide scope of benefits (hospital and ambulatory services, and supply of medicines and medical items).

Universal and equal access to medical care, financed from the state budget, is the main assumption of Beveridge's model. This model is also called the National Health Care model (NHC). Health benefits for the entire population are financed from general taxation. The State guarantees full accessibility to medical care, however the patient participates in the cost of treatment – there exists a possibility of additional private insurance to guarantee quicker access to health services.

In the centrally planned system, which operated in the Soviet system, (Siemaszko's model), the primary objective is to finance health care through the state budget. The government provides full accessibility to health services and has full control over the system. The adoption of this type of solution precluded the functioning of private health care and at the same time assumed the absence of autonomy of health care entities.

The last of the aforementioned types of models is a residual one, based solely on individual's responsibility for their own health, while financing medical care from private health insurance. The state is only responsible for the provision of care to vulnerable groups.[2]

In European countries, two financial models of health care are used: a mixed Bismarck's model and Beveridge's model.

General characteristics of the classical models of health care systems demonstrate show that two sources of financing health services are assumed – financing from the state budget or the insurance premium, while the possibility of mixed systems should be emphasized. The adoption of a financing system should ensure its stability. This is extremely important when expenditures on health care grow rapidly and the expectations of society in terms of access to health care also increase.

In most European countries the primary source of financing health services is public funding, subject to the direct or indirect control by the state. With the use of central and regional budgets, the government also finances and controls investments into hospitals, as well as finances or subsidizes health care for the poor with no income and those socially excluded for various reasons (Suchecka 2010, p. 56).

[2] For more detailed characteristics of these health care systems models, see: J. Suchecka, (2010), Economics of health and health care, Wolters Kluwer Publishing, Warsaw, pp.49-50.

Public funding is usually carried out by social security contribution systems, while the amount of generated funds sometimes varies as a result of the different systemic solutions adopted.

Supplementary sources of financing health services include funds from voluntary private insurance and direct payments made by patients, introduced by various systems in a variety of scopes and sizes.

Private health insurance can also take the form of a supplementary payment, additional in relation to the social security system, or involve the same package of health benefits as social insurance.

The second source of supplementary health care financing is direct fees paid by the patient, so-called 'co-payment'. Co-financing often involves payment for drugs, and partial payments for the services of specialist doctors and for hospital services.

In each of these systems, the supply and the demand for health services and methods for the collection and disbursement of funds are defined by the existing regulations, which also include assumptions on the extent of income redistribution. Income redistribution financial instruments, which should be characterized by high fiscal efficiency and economic effectiveness, play a crucial role. The adopted financial instruments are the tools which affect the efficient use of health care resources and the rationality in providers' and patients' behavior.

Establishing the effective instruments of financing health services belongs, on one hand, to the tasks of public health policy, and on the other to the tasks created by the financial policy of the government.

In the literature, depending on the conditions of adopted organizational and institutional health system, such financial instruments are listed (Sobiech 2004, p. 443) as:

- contributions to public health insurance characterized by fiscal performance and economic effectiveness – fiscal, redistributive and allocative relevance;
- additional voluntary contributions for health insurance – redistributive and allocative relevance;
- co-payment as a direct payment for the provision of health care – fiscal and regulatory function.

Summarizing, it should be noted that in countries undergoing transformations or changes to the current health care system, the assigned financial mechanisms play an extremely important role.

3. The directions in health care system transformations in Central and Eastern Europe

By the end of the 1980s, the health care systems in the countries of Central and Eastern Europe were based on a centralized Siemaszko's model. This structure was built 50 years earlier in accordance with the concept of a National Health Service financed from taxes. The functioning of the system put the responsibility for public health on the state and at the same time guaranteed access to a wide range of health benefits. Currently, in most post-socialist countries this system has been changed, through transformation and reforms, into the German system based on the classic Bismarck's model (called the insurance model) and on a hybrid subsystem.

Over the years, Bismarck's health care model has been subjected to many modifications that led to the emergence of two subsystems:

- monopolistic health insurance, which is considered as a classic Bismarck's model;
- a pluralistic insurance subsystem, called hybrid (this system is characterized by the presence of co-payment and state interventions).

The processes of transformation of the health care systems in the countries of Central and Eastern Europe focused initially on the most important issue – determining the sources of funding and appropriate instruments for collecting funds. Implementation of new financial instruments should also affect the effectiveness of the use of health care resources and the rationality in providers' and patients' behavior.

Changes in the methods of the financing of health services should be included in a health policy created by the government of a country. The relationship between financing functions and health policy are presented in the following Table.

Table 1. Financing function and health policy goals

Financing function	Health policy goals (determinants)
Fundraising	How much and from whom should resources be gathered? To whom and for what kind of activity should resources be allocated?
Buyers' fund	From what sources should funds be raised? How should resources be allocated among providers?
Providing benefits	From whom to buy and how? At what price to buy?

Source: J. Figueras, M. Mecca, J. Cain, S. Lessof, (2006), Heath System in Transition: Learning from Experience, WHO Regional Office for Europe, p. 53.

The transformation processes initiated were accompanied by numerous reforms introducing suitable organizational and institutional systems. The reforms were focused on (Golimowska 2006, p. 23):

- organization of the sector – the introduction of a family doctor function, moving away from polyclinics, and separation of specialists, hospices and care facilities, building health institutions;
- ownership privatization – private clinics in primary care and specialized private health care, private hospital services, rehabilitation, care services and hospices;
- financial privatization – additional and/or alternative insurance, co-payment in the public system;
- decentralization/centralization – decentralization of the ownership functions, a national network of hospitals, decentralization of payment functions;
- management modernization – the introduction of the profession of the manager of health services and costs system information, carrying out econometric analyses and forecasts, patient's satisfaction studies and their implementation in the management process;
- changes in the financing of institutions – in primary care: from charges for service to capitation; in the hospitals: from charges per person per day to DRG (Diagnosis Related Groups).

It should be noted that in reformed health systems the key task for national governments is to ensure the economic effectiveness of the modern system and to guarantee financial stability by achieving the right balance between the health system and public health and safety.

4. Health care system reforms in Estonia

Estonia was the first country of the Soviet's bloc since 1988 to start working on health care system reform, and in 1998 it signaled its will to accede to the European Union. Starting with that year, the government has consistently harmonized its legislation and the economy in accordance with the principles of the EU. Adjustments in health care systems, which by the end of the 20th century were subordinated to strong political influence, were also included in the transformation.

The first reform introducing fundamental changes in the existing, centrally planned system began in 1990. Siemaszko's health system model operated from 1940 to 1990. The approach assumed total health care financing from the state budget and provided free access to a wide range of benefits, which

were provided by employees remunerated by the government. This system can be characterized by five main indicators (Suchecka 2010, pp. 49-50):

- the idea of creating a system – the State is fully responsible for ensuring the health services of citizens of indicated nationality;
- the financing of the health care services – the total health care financing comes from the State budget, and the amounts of funds are irrespective of the financial possibilities of the budget and the real health needs of the population;
- the role of the State – the State has complete control over the health care system;
- patients' privileges – strict zoning of health care providers, patients are completely secured by health care provided by the State;
- the right to benefits – citizens of indicated nationality have equal access to health benefits free of charge, and the government has a monopoly on employment and setting wages for workers. All legal acts determining the health needs of the society and the organizational structure of the planned system, as well as the development of guidelines regarding the number of referenced clinics and hospitals, were centrally established by the government.

The idea underlying the creation of this system was associated with the full responsibility of the State for the health of citizens and the ensuring that all citizens of indicated nationality, regardless of whether they were employed or not, had a constitutionally guaranteed right to free health care services. This meant that the total health care financing came from the State budget, and funds allocation was dependent on the financial possibilities of the budget and their amounts were not correlated with the real health needs of the population.

Another characteristic feature of Siemaszko's health system model was the fact that the State possessed complete control over the system. The government was also responsible for patients' equal access to health benefits and had a monopoly on employment and setting wages for workers. All legal acts determining the health needs of the society and the organizational structure of a planned system, as well as the development of guidelines regarding the number of referenced clinics and hospitals, were centrally established by the government.

A centrally planned system also has limited the patients' privileges. This could be observed in health care zoning, the existence of occupational and school clinics, however patients were fully health secured by the State.

Persons over 50 years of age – the validity of this system resulted in the ineffectiveness of its operation and financial instability and induced efforts to complete transformation.

In the beginning, i.e. after 1990, two basic tasks were adopted: firstly, to suggest the method of transition from a centralized to a decentralized system; and secondly, to establish criteria for the transition from state funding to

a decentralized system of health insurance. These concepts emphasized the growing importance of primary care and public health. As a result of the changes gradually introduced beginning in 1990, the first licenses for private medical practice were granted, and two hospitals and five pharmacies have been privatized.

Fundamental problems occurred during the decentralization process, involving the lack of proper preparation of the relevant institutions to implement the reforms and the lack of responsibility for implementing the principles of sustainable development. This has contributed to further changes in the functioning of the new system, based on a mixed Bismarck's model.

The introduction of the compulsory health insurance scheme required the elimination of 15 regional offices responsible for health care planning, and resulted in the creation of 17 smaller health insurance funds instead (the German model).

The functioning of the health insurance funds caused a significant increase in transaction costs associated with the emergence of unpredictable, severe cases requiring extensive and expensive medical procedures.

The financing system based on an insurance premium was approved by the Estonian Parliament in July 1991 and went into effect on 1 January 1992.

Under this legislation, the transition led to the decentralization of health care finances and their autonomy, introducing the principle of determining the relationship between health care expenditures and the country's economic performance, while at the same time putting responsibility on society for generating the actual costs of health care.

Under the Insurance Law, compulsory health insurance was introduced and included in its scope all employed, self-employed, unemployed spouses of insured persons, children under the age of 18, students, pensioners, pregnant women and other clearly defined groups. In contrast, health benefits for the unemployed, military and three small groups mentioned in the Act were financed from the State budget. Among the main reasons for the Estonian government to take measures aimed at improving the functioning of the health care sector in the new economic and political system, three essential reasons should be mentioned:

1. health care resources exceeding the health needs of the population – a high dispersion and number of hospitals and medical specialists;
2. a poorly developed primary health care system and redundancy in second and third reference level health care services (including specialized health care);
3. not taking into account the actual costs of health care benefits for free medical services.

The above-specified reasons for the inefficiency and financial instability of the health sector required the elaboration of new aims for planned changes in

the organization and functioning of the scheme. Eventually, the new objectives of the reform were:

- strengthening activities for quality and effectiveness of health care;
- ensuring the financial stability of health care;
- public participation in health care;
- increasing the importance of health care in inter-sectoral decision-making policy concerning health services.

Discussions about the new shape of the health system led to the identification of directions for the system's decentralization. This decentralization was based on transferring the relevant competences and responsibilities for providing health care to district governments. The program has been formulated in accordance with applicable Law for Health Care Organization, adopted in April 1994. However, during its implementation some weaknesses were revealed, especially the lack of precision in defining the methods for licensing health care entities to conduct private service activities.

The main change in health care was related to primary care and involved the establishment of the function of the family doctor. In 1991 The Medical University of Tartu was entrusted with educating physicians in this specialty, and first GPs received nominations two years later. The scope of activities of a family physician included providing primary care and nursing services, and was under supervision of the State in terms of licensing and financing.

Further reform of the Estonian health care system proceeded in stages. Major changes were introduced in three consecutive stages, covering the years 2000-2004 (pre-accession period, introducing changes in Estonian health care systems consistent with EU law); 2004-2008 (the period of harmonizing law and the functioning of the health care system in accordance with the arrangements introduced by the EU); and after the year 2008 (taking into account the impact of the global economic crisis on the effectiveness of health care entities).

The contemporary health system in Estonia has been shaped by the implementation of a number of laws which changed the principles for the collection and the redistribution of funds. Among these laws, three should be mentioned, and relate to:

- health insurance (The Health Insurance Act);
- health services (Health Services Organization Act, The Law of Primary Health Care, The Family Practice Law);
- public health (The Public Health Act).

The main source of funding for health care after the year 1992 has been mandatory health insurance. Under the new laws, the changes introduced in the

financing of medical services (Health Care System in Transition. Estonia 2000, p. 15) have included:

- establishing autonomous finances for health care services;
- decentralizing the financing of health care;
- establishing a basis for increasing personal responsibility for health care;
- establishing an explicit link between health care expenditure and national economic performance.

As a result of the organizational changes, the collection of funds and their redistribution have been entrusted to the Estonian Health Insurance Fund (EHIF) and its four regional offices. Such a structure of funds was established as a result of the centralization of regionally distributed health insurance schemes.

Initially, the health insurance contribution was paid by the employer. This rate amounted to 13% of the employee's salary, and in 1994 this contribution was incorporated into social security deductions, according to which 20% accounted for pensions and 13% for health insurance. Further organizational changes led to isolating the health care contributions, and on this basis in 1994 Central Sickness Funds were created. In 1999, the accumulation of health care contributions was attributed to the Taxation Agency.

The process of centralization was aimed at improving the planning and redistribution of income between regions in order to ensure regional equity for the financing of the following health care components (Hit 2000, p. 49):

1. health care services (separate allocations for treatment, health promotion, disease prevention, rehabilitation, medical aids);
2. sickness cash benefits;
3. pharmaceuticals (compensations to the insured, centrally purchased pharmaceuticals);
4. high-technology equipment;
5. administrative costs of the Central Sickness Fund and regional sickness funds;
6. sickness fund information technology;
7. capital investments in sickness funds.

In the initial period, compulsory health insurance covered only 68.3% of the total expenditures on health care; 9.9% of these expenditures were supplemented from the State budget and 2.5% from city budget. Medical emergencies, medical prostheses and aids for the disabled were financed from the State budget. However, the health insurance excluded aesthetic surgery, alternative therapies and optics (Hit 2000, p. 50).

The list of benefits financed from health insurance was supplemented with new procedures, following an analysis of their medical effectiveness and economic efficiency. With the advances in medicine (as in other health systems) society's demand for expensive health services and modern pharmaceuticals has increased.

The limited financial health system resources contributed to the increase in the share of direct patients' payments (out-of-pocket payments). The method of co-payment as a form of additional resources to finance health benefits has both pros and cons. It was believed that the advantages of this form of payment were (Suchecka, Jewczak 2010, p. 53):

- more efficient usage of scarce systems by stimulating health demand;
- strengthening the principles of solidarity and subsidiarity;
- generating additional financial resources;
- significant improvement in the quality of services and the health of the population;
- numerous mechanisms for contracting services;
- limiting the moral hazard.

In contrast, the disadvantages of co-payment include:

- the emergence of barriers in access to services;
- postponement or cancellations of treatment adverse to health;
- the additional financial burden decreased the level of disposable income.

This unfavorable financial situation, threatening the balance of the system, influenced the decision of the Estonian government to introduce, as in western countries, the National Health Accounts system (NHA). The implementation of this tool was launched in 1999.[3] The assumption underlying NHA is based on data presented concerning the economic aspects of the health care system. It is a versatile tool for comparing expenditures on health (Strzelecka 2012).

Finally, the search for resources pointed toward patients' direct payments, voluntary health insurance, and external financing as a required complement to the public funds transferred to the health care system.

Direct patient surcharges may not, by statute, exceed 50% of the officially fixed price, and cover:

[3] By comparison, in Poland work on the introduction of National Health Accounts was launched in 2001. See, System of Health Accounts in Poland. Development and implementation of NHA in Poland. Project IBRD Development of Health Services in Poland, Warsaw, 2001, project manager: Markus Schneider. The detailed methodology for the purpose of international comparisons was developed by OCED in 2000.

- outpatient care – small fees for medical consultations and advice (pensioners, the handicapped, and children are exempt from charges);
- subsidies to private doctors' consultation visits (with the exception of family doctors) not included in guaranteed health services' basket;
- payment for abortion in equal parts by the Sickness Fund and the patient.

The importance of this form of health care financing indicates the currently increasing tendency, and nowadays it is estimated that it amounts to more than ¼ of the total expenditures on health (Domagała 2012).

The Health Insurance Act included additional voluntary health insurance schemes to cover the costs of complementary medical services. This type of insurance may be offered only by commercial, private insurance companies. Most tourist trips are covered using this form of insurance.

With respect to the external sources of financing, it should be noted that their participation in the financing of the total health care expenditures amounts toabout 1%. These funds were most frequently collected from external sources and used on investments in the health sector.

The World Bank has played a significant role in the external financing of the health sector. Thanks to its loans it was possible to launch initiatives that introduced the system of compulsory health insurance. The supervision of the health reform programs was also guaranteed and the reform of the hospital services sector was made possible. All these changes allowed for constructing a modern hospital, and completing the transition is scheduled for the end of 2015.

After 2000, some steps were taken in order to clarify the scope of activities and responsibilities of family physicians. The access to basic health care services had to be ensured as well. It was agreed in 2003 that residents, both insured and uninsured, should subscribe to a certain family physician. Ensuring common access to basic outpatient care has become a prerequisite for the centralization of specialized care and the creation of the hospitals system.

Further reforms adopted after 2002 tended to centralize EHIF (reduction from seven regional departments to four), introduced further regulation of the health insurance system, and created and updated lists of reimbursed drugs. The legal status of health benefit providers was also clarified – all hospitals were obliged to act as joint stock companies or foundations.

The deteriorating financial situation of the health sector has prompted policy makers to introduce the funding of hospital services according to strictly defined DRGs and payment systems for primary health care services – this direction of changes is also common for Western countries. Estonia's accession to the EU accelerated its works of adapting the domestic law to EU standards, especially the law on the functioning of public health care.

Within the framework of public health policy, a variety of programs such as HIV/AIDS and cancer prevention, tobacco control by prohibiting smoking in public places, and combating civilization and chronic diseases prevention were implemented.

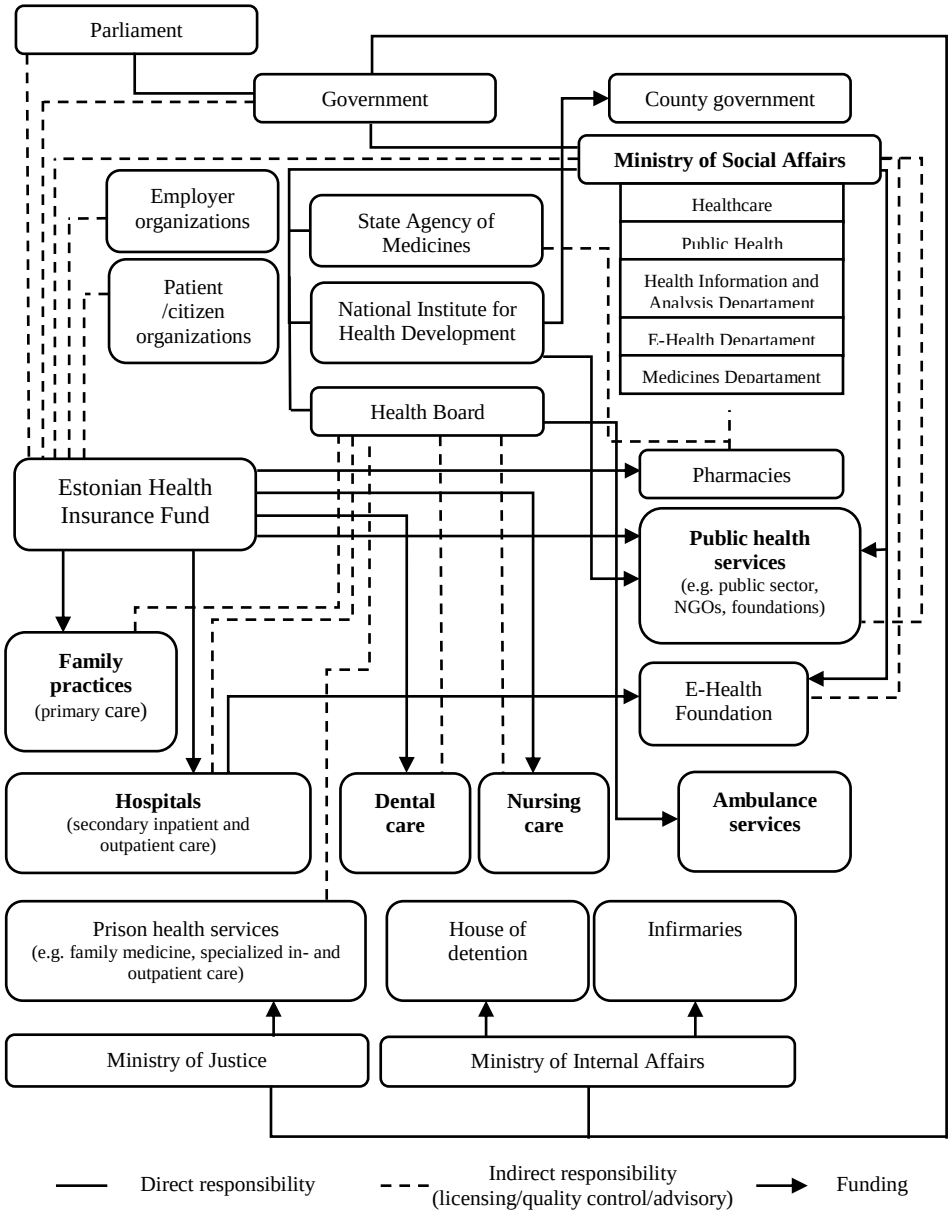
The financial crisis, which struck Estonia in 2008 also, had an impact on the efficiency and effectiveness of the health care system. During the crisis, the main objective of reforms implemented was to maintain the principles of health care financing without compromising the overall accessibility to health services. It was necessary to introduce an austerity package, which involved the exclusion of certain benefits from the health insurance package and keeping the drug prices at stable levels (mainly due to increases in the VAT level), and focused on primary health care, with limiting access to specialists. The introduction of these solutions has led to changes in the structure of certain medical services costs and lengthened the waiting time for the receipt of health benefits. The increase in the use of structural funds for financing the health sector is also noticeable.

The implementation of the savings program led in 2012 to a strike by the medical staff. They mainly expressed dissatisfaction with the lack of significant structural reforms and low medical personnel salaries. The condition of the health care system deteriorated further with the migration of nurses and specialists. By the end of 2012, negotiations between the government and the medical staff were undertaken. Compromises were reached that should lead to a greater stability in the health care system (Hit 2013).

In 2012, a re-centralization of primary health care and health statistics was launched. The changes introduced should gradually result in increased efficiency of the health system and the improved qualifications of the medical staff, while at the same time significantly reducing administrative costs. Many managerial functions concerning IT planning and the HR management have been centralized. As a result of the reforms introduced, in 2013 a new organizational structure of the health system has been formed (see Fig. 1).

In 2013, as a result of the consolidation of transformation and reforms, the new organizational structure of the health system in Estonia was established. Many actor–participants have been grouped according to their basic functions in the system: manager/owner, provider of medical services, financing and public health. Taking into account the directions of the country's socio-economic policy and the conditions of the economic growth determined by the global financial crisis, the Estonian government has introduced significant modifications of the Estonian health care system, paying particular attention to the sources of the income and cash flow.

Figure 1. Organizational structure of the Estonian health care system



Source: T. Lai, T. Habicht, K. Kahur, M. Reinap, R. Kiivet, E. van Ginneken, Estonia: Health system review. Health Systems in Transition, 2013; 15(6), p 19.

5. Conclusions and discussion

Similar as in other countries of Central and Eastern Europe, a number of initiatives to ensure the stability of the financial system and to guarantee public health and safety have been undertaken in the Estonian health care system. These changes have proceeded with varying intensity and efficiency and have been closely related to the processes of political and economic transformation of the entire country. Reforms in the health care system in Estonia have allowed (Liseckien 2007, pp. 105-113) for the:

- functioning of the system of social health insurances with the decentralization and re-centralization of services; and the implementation of regulations for creating and updating reimbursement lists;
- combining of public and private medical practice;
- provision of basic medical services and nursing care performed by family physicians;
- establishment of a specialization in family medicine and public health;
- implementation of new specialized programs;
- creation of a legal basis for the introduction of additional (commercial) health insurance;
- introduction of appropriate remuneration systems for medical and professional practices;
- financing of primary health care services on the basis of capitation and fee-for-service, and by DRG for hospital services;
- co-payment for certain health benefits specified in the relevant acts.

Currently, further changes in the organization and financing of health care are being introduced, which take into account the impact of the financial crisis and the changing demographic and health conditions of the Estonian society and the principles of sustainable development.

Summing up it should be stated that in countries introducing transformations or changes in their health care systems, an extremely important role has been assigned to the financial mechanisms. In the current Estonian organisational and institutional health system, complementary sources of financing health services operate alongside the mandated contributions to health insurance.

In Poland, despite the ongoing discussions on changes to the current health care system, it has proved impossible to introduce instruments such as additional voluntary contributions for health insurance (in the redistributive and allocative sense) and co-payment (a form of direct payment for health care services in the fiscal and regulatory function sense). This observation also applies to

the creation of a network of hospitals in order to improve the economic efficiency of their operation. The lack of appropriate legal regulations contributes to their financial instability and the deterioration in their economic efficiency, which in consequence leads to an imbalance in the health sector.

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Streszczenie

TRANSFORMACJE I REFORMY EUROPEJSKICH SYSTEMÓW ZDROWOTNYCH PRZYPADEK ESTONII

Celem artykułu jest prezentacja głównych kierunków zmian wprowadzanych w estońskim systemie zdrowia po transformacji systemowej gospodarki narodowej i przystąpieniu Estonii do Unii Europejskiej. Szczególna uwaga została zwrócona na sposoby pozyskiwania, gromadzenia i redystrybucji środków finansowych przeznaczonych na opiekę zdrowotną w poszczególnych okresach wprowadzania zmian. Początkowe zmiany wprowadzały daleko idącą decentralizację systemu zdrowotnego, natomiast kolejne reformy doprowadziły do ponownej jego centralizacji. Nasilenie się procesów ponownej centralizacji finansowania i zarządzania ochroną zdrowia nastąpiło po roku 2008, w którym zaobserwowano znaczny wpływ światowego kryzysu finansowego na kondycję gospodarki Estonii. W rezultacie wprowadzanych zmian ukształtował się mieszany system Bismarcka, zwany również hybrydowym.

***Słowa kluczowe**: transformacja systemu, model hybrydowy, współpłacenie, ubezpieczenie zdrowotne*

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Important Structural Linkages In The Process Of Income Circulation Defined By SAMs

Abstract

The main aim of this paper is to present the analytical possibilities offered by Social Accounting Matrices as regards economic policy. These matrices are synthetic presentations of income flows in the economy, described by the international statistical system - System of National Accounts (SNA). Comparative analyses presented in the paper are based on the structure of transactions observed in SNA for three years (2002, 2007, 2012) for selected countries (Germany, Spain, Poland, Bulgaria). The analysis includes a comparative study of the expenditure and income structure of individual institutional sectors, SAM multipliers as an important analytical tool, and the importance of SNA transactions, evaluated by how their changes influence multipliers.

Keywords*: national accounts, structural similarity coefficients, input-output methods, multipliers*

1. Introduction

In today's information society and global world, the amount of information describing social and economic phenomena is rapidly increasing. The role of statistics has grown significantly, both as a science concerning mass phenomena research methods and as a methodology of collecting and presenting data.

There is no doubt that any international comparisons must be based on data of the same analytical-cognitive value, regardless of the country. Collecting

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comparable data is guaranteed by the System of National Accounts, which complies with international statistical norms (SNA, *System of National*… 2009), applied in market or similar economies, and mandatory in all UN member countries. The obligatory system for EU states is the European System of National and Regional Accounts ESA'95 (see e.g. *Europejski System*… 2000). The linkages between individual accounts, presented as a system of national accounts, can take on the matrix form. The Social Accounting Matrix (SAM), also known as the national accounts matrix, is a synthetic presentation of income flows in the economy.

The main aim of this paper is to present the analytical possibilities offered by SAMs, and by the multipliers based on them, mostly as regards economic policy (Round 2003). An attempt has been made to show those linkages of institutional sectors in the process of income distribution whose changes significantly affect the multiplier values. Important linkages in selected countries have been compared for selected years, considering impulses coming from arbitrarily chosen accounts. In addition, changes in the expenditure and income structure were compared, i.e. the share of certain forms of transactions in the overall number of transactions in a given sector. Comparative analysis is based on the shares observed for three years in selected countries. Therefore, it may be treated merely as a certain signal for evaluating the changeability of these coefficients in a given country, while a more thorough study, which we conduct here, must be based on matrix time series. The examination of important linkages is also only an illustration of the problem, as it refers to three selected years and a chosen set of accounts, called exogenous accounts, where changes of expenditures cause changes on the remaining accounts, described as endogenous.

The main objective of the paper does not refer to specific areas of economic policy. Such a task would require building a SAM, which would make it possible to run specific analyses. SAM is a very flexible tool as regards the range of object and subject accounts, as well as their sequence, which means that its construction (assuming that suitable statistical data is provided) is subordinated to a particular purpose of an analysis. It usually involves disaggregation of some forms of resources and uses with reference to either a more detailed examination of institutional sectors accounts, or a more detailed description of objective accounts. In this paper, the standard, basic form of SAM has been adopted, most often used in multiplier analysis with exogenous accounts, including current government and foreign accounts, as well as capital accounts of all sectors (e.g. Pyatt, Round 1985, Cohen 1993).

The choice of the countries selected was in a way arbitrary, but it was determined by the order in which they joined the EU, i.e. the duration of economic linkages with the EU, as well as the development of the market economy. The analysis includes Germany, Spain, Poland and Bulgaria.

In order to reach the objectives that were set, the paper has been divided in the following way. Section 2 contains a short description of the social accounting system from the point of view of the circulation of institutional sectors' income in a national economy, presented in the form of a social accounting matrix. This matrix is then further used in the analysis. Section 3 contains a comparison of expenditure structures on accounts in the studied countries in 2002, 2007 and 2012. The comparison is based on the structural similarity coefficient. Section 4 presents multipliers for selected countries as an important analytical tool, especially as regards economic policy. Moreover, in Section 4 attention is drawn to the importance of SNA transactions, evaluated taking into account the influence of their changes on the SAM multipliers. The final part contains conclusions and presents a short summary of the obtained results.

2. SNA as a system of data describing the income circulation of institutional sectors

The System of National Accounts is a coherent set of macro-economic accounts, balance sheets and tables, based on established conceptual standards, definitions, classifications and accounting rules. The basic classifications include: classification by transaction subjects – institutional sectors (households and non-profit institutions serving households (NPISH), non-financial corporations, general government, financial corporations, and the rest of the world), as well as by transaction objects - first of all product accounts - CPA (Classification of Products by Activity) or activity accounts – NACE (Nomenclature statistique des Activités économiques).

The basic principle is posting each transaction on the uses side of the given account and on the resources side of another account.

SNA forms a conceptual and analytical scheme for economic and social studies from the point of view of income circulation. Statistical information about an economy includes a description of the processes of the generation, primary distribution and redistribution of income, as well as its use for consumption and accumulation.

Social Accounting Matrix reflects the principle of double entry of every transaction in the system of national accounts, which ensures the balance between rows and columns, where the elements of each row are the resources on a given account, and the columns represent the uses (expenditures). This means that the expenditures of every institutional sector are equal to its resources gained over a given period of time, and at the same time each expenditure of one entity is a resource of another. A similar balance occurs on accounts by kind (object accounts).

The order of accounts in SAM corresponds to the sequence of income flows in an economy, i.e. the first are the product accounts, which are followed by value added accounts, then current institutional accounts, showing the allocation and reallocation of primary income and use of disposable income, and, finally, capital institutional accounts, showing property growth in individual sectors.

The essential part of SAM usually consists of input-output tables[1]; the symmetric input-output table is used most often. The columns show the costs of production, according to the adopted product classification, i.e. production expenditures, and the rows – the incomings from selling the products for intermediate (production) use and final use.

In the SAMs presented below, the products account is an aggregate, which does not include the division into individual products. Production costs thus regard the whole aggregate; total resources on this account are approached in a similar way.

The first stage of income circulation is the process of production, the effects of which are shown in the form of goods and services for intermediate consumption (1.1) and final use (1.3 and 1.4). The costs of domestic production are shown in 1.1 and 2.1. Domestic production is supplemented with imports (3.1). The primary income of an economy is the value added (2.1), entered on the generation of primary income account. It is, at the same time, the cost of production entered on the products account.

A social accounting matrix and its structure is presented in Fig.1.

Figure 1. Basic structure of SAM

Account	Products	Generation of primary income (production factors) (VA)	Current accounts of institutional sectors	Capital accounts of institutional sectors	Net borrowing / net lending
Products	1.1		1.3	1.4	
Generation of primary income (production factors)	2.1		↑ 2.3		
Current accounts of institutional sectors	3.1 ↓	3.2	3.3		
Capital accounts of institutional sectors			4.3	4.4	4.5
Net borrowing / net lending				5.4	

Source: see Miller, Blair (2009), Pyatt (1991), Tomaszewicz (2001).

[1] For EU countries supply and use tables (activity by product) are prepared every year. Every five years with 5-year delay symmetric input-output tables(product by product) are also published.

The allocation of primary incomes and secondary distribution of incomes are presented by sectoral current and capital accounts. The process of the allocation of primary incomes reflects the fact that the institutional sectors, e.g. households or corporations, receive income from their involvement in the activity of primary production factors – labour and capital (3.2). This is income in the form of compensation of employees and profits (operating surplus). The primary incomes (mainly the compensation of employees), which are the costs of the rest of the world, is presented in (2.3). The allocation of primary incomes also includes property incomes (bank deposit interest, dividends, rents). The secondary distribution of incomes shows the result of income redistribution, in the form of disposable income (3.3). Redistribution takes place primarily between the general government and the remaining sectors. Spending disposable incomes creates demand for consumption (1.3) and investment goods (1.4), which are at the same time the resources on the product account. These categories are the categories of use of disposable incomes. This in turn creates the need for goods and services, which closes the circulation loop. Capital expenditure is usually financed not only from saving (4.3), but also from capital transfers (4.4). The system of non-financial accounts is closed by net borrowing (4.5) or net lending (5.4), which are the categories of financial accounts divided by financial instruments.

This paper deals only with non-financial accounts. The role of the financial accounts of institutional sectors in selected European countries is presented in, e.g., Tomaszewicz, Trębska (2012), (2013).

3. Some remarks on changes in SAM coefficients

For each SAM column, it is possible to calculate the share of a given expenditure in the total expenditures on a given account, thus:

$$a_{ij} = \frac{x_{ij}}{X_j} \tag{1}$$

where:

x_{ij} - is expenditure on account j entered as receipt on account i,

X_j - is total expenditure on account j ,

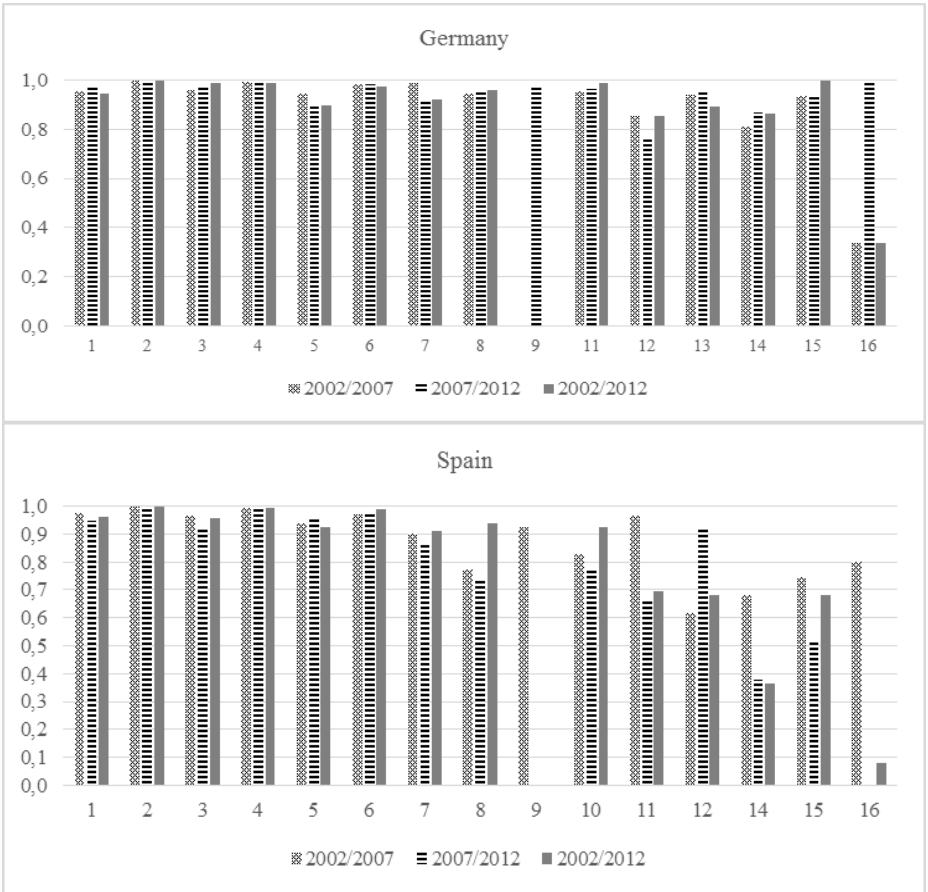
The matrix of such shares will then be a square matrix with a dimension corresponding to the number of accounts in SAM, based on a general assumption that $i,j = 1, \ldots, n$ the matrix of coefficients a_{ij} ($\mathbf{A} = [a_{ij}]$) is $n \times n$.

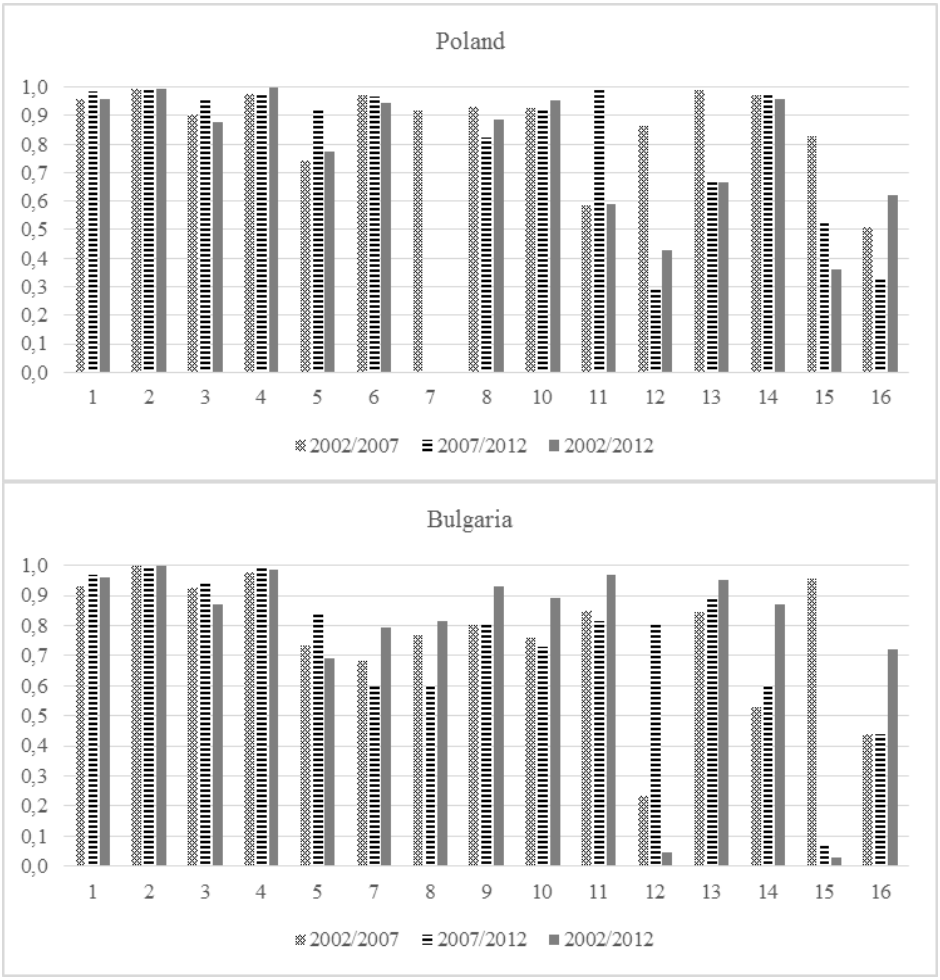
Matrix **A** was calculated for Germany, Spain, Poland and the Bulgaria in 2002, 2007 and 2012. The chosen years were periods of relatively stable economic situations in all the countries.

In order to analyse the changes of the elements of matrix **A**, a simple structural similarity coefficient was used, with a value ranging from 0 to 1. The closer it is to 1, the more similar the expenditure structures in individual years/countries are to one another.

Fig.3 shows structural similarity coefficients for individual countries in the years mentioned above. It should be noted that in the case of negative value transactions, the structure coefficients (and structural similarity coefficients) cannot be calculated. These cases may concern a negative stream of saving in institutional sectors, as well as the negative values of capital transfers entered in SNA. These cases are visible by their lack of or incomplete information regarding the structural similarity coefficients for some accounts.

Figure 3. Similarity coefficients of expenditure structures in SAMs

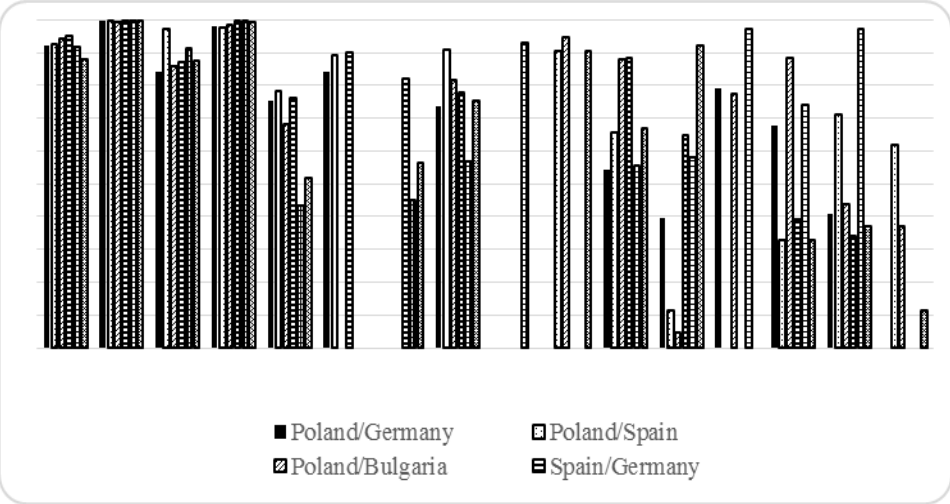




Note: 1 – products account, 2-4 – primary income accounts: 2 - compensation of employees; 3 - operating surplus; 4 – taxes; 5 – property income, 6-10 – current accounts of institutional sectors: 6 - households & NPISH; 7 –financial corporations; 8 –non-financial corporations; 9 –general government; 10 –the rest of the world sector, 11-15 – capital accounts of institutional sectors: 11 - households & NPISH; 12 –financial corporations; 13 – non-financial corporations; 14 –general government; 15 –the rest of the world sector, 16 – net borrowing.

Source: author's own compilation based on Eurostat data.

Figure 4. Similarity coefficients of expenditure structures in SAMs in 2012 for the studied countries



Source: author's own compilation based on Eurostat data.

In analysing the obtained structural similarity coefficients (Fig. 3), one can formulate three general remarks. Firstly, if the structures are similar for 2002/2007 and for 2007/2012, then a similarity between them will obviously be visible for 2002/2012. A similar regularity will be observed if the structures for 2002/2007 and 2007/2012 are not similar. Secondly, changes in the structure of uses on a given account will at the same time mean changes in the structure of resources on other accounts. In the analysis presented below, we are trying to refer to the changes in the structure of resources in the accounts in which resources significantly changed with regard to the change of the uses structure on other accounts. Thirdly, it seems that larger changes of uses structures of institutional sectors, which means smaller values of the structural similarity coefficient, should be observed for the years 2007/2012, because the financial crisis which began in 2008 affected the expenditures structure in 2012 more than the previous crisis from the turn of the twentieth and twenty-first centuries. This will mainly concern the changes of uses on capital accounts, reflecting to a great extent the changes of the financial assets of institutional sectors.

In general, the analysis of the obtained results (Fig. 3) points to the fact that in all the countries, stability in the studied years is shown by the structures of uses on product account, i.e. the structures of production costs (Cf. also Fig.4). Thus, the structure of labour costs, which are the expenditures on the value added accounts, including only two items – compensation of domestic and foreign employees, is also stable. Production cost structure, including the components of the value added, can hardly be expected to change significantly over a period of 5-10 years. However, a slightly larger changeability is characteristic

of the sectoral structure of the operating surplus, which can be particularly affected by mixed incomes of households, which also includes the operating surplus of micro-enterprises. The latter usually fluctuates, both as regards their number and the profits they make. The structural similarity coefficients on product and value added accounts (accounts number 1-4 in Fig.3) are high – their values range from 0.85 to nearly 1 in all studied countries.

In the group of the sectoral current accounts (accounts 6-10), expenditure structures in the compared years are, as expected, less similar for the years 2007/2012 than for 2002/2007 and 2002/2012. For example, in the case of Spain the similarity coefficient of the general government expenditure structures for years 2007/2012 was only slightly higher than 0.7, while for 2002/2007 it was 0.93. In other sectors, the differences are smaller, but they also occur. A similar situation was observed in Bulgaria. Particular differences occurred between the structures of the financial and non-financial corporations' expenditures in 2007 and 2012. Moreover, the structure in 2012 neared that from 2002. A similar regularity was observed for the above-mentioned sectors in Poland. Such a "comeback" of expenditure structures to those observed in 2002 can be noticed on practically all current accounts of institutional sectors, not only in Bulgaria and Poland, but also in Spain. Both 2012 and 2002 marked the beginning of economic recovery. It is worth mentioning that in all the countries included in the study, the structures of current uses (and resources) of households in the compared years are stable. The similarity of expenditure structures' coefficients ranges from 0.95 in Poland to 0.98 in Germany and Spain. The structural similarity coefficients for Bulgarian households could not be calculated due to the negative streams of saving (account 6). For the same reason, it was not possible to establish the structures of the general government expenditures in Poland in 2002 and 2012, in Germany in 2012 (account 9), or of financial corporations in Poland in 2012 (account 7).

Analysing the effect of the changes in the expenditure structure on capital accounts, it has to be first of all noted that they depend mostly on the possibility to finance these expenditures (with saving, capital transfers and liabilities), i.e. on the changes of the relations between lending and borrowing. The difference between these categories in SNA sequence is the balancing item - net lending/net borrowing (Cf. Fig.1 and the annex, with an example of SAM for Poland).[2] The structures of capital uses are relatively stable, if in all the studied years the given sector is a net lender (e.g. non-financial corporations in Germany) or a net borrower (e.g. non-financial corporations in Spain, general government in Poland).

Capital expenditure structures clearly show that, as regards net borrowing (which also means net lending), they are changeable in the studied years,

[2] If net lending is higher than net borrowing, then net borrowing on the account is entered as 0 (a corresponding coefficient of matrix A equals 0) for a given sector.

because in different years a given sector might have been a net lender or a net borrower. With the generally small similarity of structures for the above mentioned reason, the smallest similarity is observed when the years 2007/2012 are compared, because the changes of the capital expenditure structure in 2012 were larger due to the crisis. It is easy to observe, for example, that the change of the structure of capital expenditure of general government in Spain in 2012 as compared to 2007 (the similarity coefficient – 0.38) was the result of capitalizing financial corporations, which significantly changed the structure of resources of the latter (for years 2007/2012 the similarity coefficient was 0.48). Another example is Poland, where after joining the EU the structure of capital expenditures of the rest of the world sector changed in 2012 compared to 2002. The reason was the pronounced increase in capital transfers in the form of investment grants for non-financial corporations and the general government. The similarity coefficient for 2002/2012 is 0.36, whereas for 2002/2007 it was 0.83.

4. Important structural linkages

Studies of important structural linkages are based on the analysis of SAM multipliers, which enable measuring the effects, which take the form of a growth of resources in given accounts (endogenous accounts), resulting from an increase of expenditures in other accounts (exogenous accounts) (e.g. Miller, Blair 2009). Studying the importance of the coefficients showing the share of particular expenditure to the total expenditures in a given endogenous account boils down to analysing the impact of these coefficients' changes on the changes in multipliers. Classical multipliers, established on the basis of the product account in its disaggregated form (input-output symmetric table), point to how much gross output will increase (resources on the product endogenous account) if the final demand (expenditure on exogenous account) grows by a unit[3] (e.g. Tomaszewicz 2001).

Like in the case of input-output production multipliers, using this methodology in analyses based on SAM requires distinguishing between endogenous and exogenous accounts and, as was mentioned above, this division (presented schematically in Table 2) depends on the purpose of the multiplier analyses.

[3] The value of this unit is expressed in national currency unit (1 euro, 1 PLN, 1 Bulgarian Lev).

Table 2. SAM in the classification into endogenous and exogenous accounts

		Uses		Total
		Endogenous accounts	Exogenous accounts	
Resources	Endogenous accounts	$\mathbf{Z} = \mathbf{A}_z\hat{\mathbf{x}} = [x_{ij,z}]$	**Y**	x_1 … x_z
	Exogenous accounts	**R**	**W**	x_{z+1} … x_n
Total		$x_1 \ldots x_z$	$x_{z+1} \ldots x_n$	

Source: Based on Pyatt, Round (1985), Tomaszewicz (2001).

Table 2 shows that the whole SAM was divided into z endogenous accounts and $s = n - z$ ($s=z+1,\ldots,n$) exogenous accounts.

The $z \times z$ matrix **Z** shows transactions between endogenous accounts. It is the product of matrix $\mathbf{A}_z = [a_{ij,z}]$ and vector of total uses (resources) $-\mathbf{x}_z$ on these accounts presented in the diagonal matrix $\hat{\mathbf{x}}_z$, where $a_{ij,z}$ is the coefficient showing the share of a given expenditure (being simultaneously the resource on endogenous account *i)* in the total value of expenditures on endogenous account *j* (*i,j*= 1,*…z)*. Hence:

$$\mathbf{A}_z = \mathbf{Z} \cdot \hat{\mathbf{x}}^{-1} \tag{2}$$

The $s \times z$ matrix **R** shows expenditures on endogenous accounts, entered as resources on exogenous accounts.

The columns of $z \times s$ matrix **Y** show the expenditures on exogenous accounts. The changes of the values of matrix **Y** are treated as impulses causing changes on endogenous accounts.

The $s \times s$ matrix **W** shows the transactions between exogenous accounts. Taking a vector $\mathbf{y} = \mathbf{Y} \cdot \mathbf{i}$ of exogenous values, where **i** is a vector $(z \times 1)$ consisted of values 1, the following relation is obtained:

$$\mathbf{x}_z = \mathbf{A}_z\mathbf{x}_z + \mathbf{y}. \tag{3}$$

On condition that there is a matrix inverse to $(\mathbf{I} - \mathbf{A}_z)$, after introducing suitable transformations, it can be written:

$$\mathbf{x}_z = (\mathbf{I} - \mathbf{A}_z)^{-1}\mathbf{y} \tag{4}$$

denoting matrix $(\mathbf{I}-\mathbf{A}_z)^{-1}$ as $\mathbf{M}_z$:

$$\mathbf{x}_z = \mathbf{M}_z\mathbf{y}. \tag{5}$$

Elements of matrix $\mathbf{M}_z = [m_{ij,z}]$ are interpreted as multipliers; they give information about how resources on account $i=1,\ldots,z$ will change under the influence of a unit increase in exogenous expenditures concerning account $j=1,\ldots,z$. Appropriate matrix operations make it possible to decompose matrix $\mathbf{M}_z$. This decomposition allows the interpretation of matrix $\mathbf{M}_z$ elements to be more detailed (Cf. e.g. Stone, 1985).

The SAMs used for the purpose of the multiplier analysis presented below reflect the integrated form of the SNA data published in Eurostat. The choice of exogenous accounts corresponds to standard solutions, in which the exogenous accounts are: the current account of general government and the rest of the world, as well as the capital accounts of all the institutional sectors. As has been mentioned, the construction of SAM will depend on the aim of multiplier analyses, but also on the possibility to obtain appropriate statistical data, including that which is not provided by the SNA. For instance, a detailed analysis of the households' reaction to certain exogenous impulses usually involves a deeper division of this sector, e.g. into decile groups. Also the choice of the exogenous accounts depends on the aim of the multiplier analysis, e.g. the choice of only some of the government expenditures as exogenous, presented in a sufficiently detailed way as regards the special economic policy objectives. Depending on the structure of expenditures on exogenous accounts, some impulses may be defined precisely, while others will be an aggregate of impulses. For instance, in the SAM presented in the annex, an illustration of the first case is one unit impulse, which is the increase in the expenditure of the rest of the world in the form of compensation of employees (which influences the resources on all the accounts of the country to which these incomes are allocated). An illustration of the other case is an aggregate impulse in the form of a one unit increase in the government and the rest of the world consumption demand, together with the investment demand of all the sectors.

Due to the space limitations of this paper, only the multipliers for 2012 are presented. Moreover, the observed regularities for the studied countries practically do not change when compared to the years 2002 and 2007. One can notice a basic regularity – the sum of changes of resources on endogenous accounts, caused by particular expenditures on exogenous accounts, are usually from over 2 to over 5 times larger than the original impulse. For instance, a unit

increase in the expenditures on products on the exogenous accounts results in an increase in resources on all the endogenous accounts in total 4.7 times larger in Germany, 5.2 times in Spain, 4.8 in Poland and 4.1 in Bulgaria (sum of column 1 in the multipliers tables 3a-3d). In particular, resources on the product account will increase 2.4 times in Germany, 2.6 times in Spain, 2.7 times in Poland and 2.5 times in Bulgaria, while primary income will grow by approximately 1 in Germany (0.498+0.368+0.11), also by 1 in Poland, by 1.2 in Spain and 0.8 in Bulgaria. Another example - the impulse coming from the compensation of employees paid by the rest of the world causes nearly a five-fold (4.956 times) increase of resources on all endogenous accounts in Germany, in comparison to the primary impulse by a unit (1.477 of which is the increase in the current household incomes), and respectively a 5.6-fold increase in Poland and Bulgaria, and 5.5-fold increase in Spain (sum in column 2 in tables 3a-3d). In turn, a unit increase in the expenditures in the form of government and the rest of the world transfers to households will cause an increase in the current incomes of households (the sixth element of the sixth columnin tables 3a-3d):1.4 (1.418) times in Bulgaria, 1.6 times in Spain, 1.5 times in Poland and Germany. The global effect of this impulse is the sum in column 6.

Table 3a. Multipliers matrix for Germany in 2012

	Endogenous accounts							
	Products account	Production factors			Property income	Current accounts		
		Compensation of employees	Operating surplus +mixed income	Taxes on production -subsidies		households +NPISH	Financial corporations	Non-financial corporations
	1	2	3	4	5	6	7	8
1	2.390	1.393	0.836	0.000	0.949	1.402	0.985	0.554
2	0.498	1.290	0.174	0.000	0.198	0.292	0.205	0.115
3	0.368	0.214	1.129	0.000	0.146	0.216	0.152	0.085
4	0.110	0.064	0.039	1.000	0.044	0.065	0.045	0.026
5	0.227	0.209	0.592	0.000	1.555	0.211	1.127	0.841
6	0.748	1.477	0.887	0.000	1.007	1.487	1.045	0.587
7	0.114	0.135	0.256	0.000	0.536	0.136	1.405	0.304
8	0.258	0.173	0.760	0.000	0.324	0.174	0.282	1.180
Total	4.713	4.956	4.671	1.000	4.759	3.982	5.247	3.691

Source: author's own compilation based on Eurostat data.

Table 3b. Multipliers matrix for Spain in 2012

[a]	1	2	3	4	5	6	7	8
1	2.556	1.667	0.933	0.000	0.620	1.672	0.604	0.299
2	0.540	1.352	0.197	0.000	0.131	0.353	0.128	0.063
3	0.506	0.330	1.185	0.000	0.123	0.331	0.120	0.059
4	0.123	0.080	0.045	1.000	0.030	0.081	0.029	0.014
5	0.178	0.174	0.353	0.000	1.547	0.175	0.972	0.524
6	0.868	1.620	0.907	0.000	0.603	1.625	0.587	0.291
7	0.125	0.131	0.238	0.000	0.743	0.132	1.474	0.279
8	0.264	0.190	0.599	0.000	0.269	0.190	0.217	1.101
Total	5.160	5.545	4.458	1.000	4.067	4.560	4.131	2.630

[a]headarrayof Table3a

Source: author's own compilation based on Eurostat data.

Table 3c. Multipliers matrix for Poland in 2012

[a]	1	2	3	4	5	6	7	8
1	2.675	1.958	1.131	0.000	0.893	1.974	1.353	0.287
2	0.366	1.268	0.155	0.000	0.122	0.270	0.185	0.039
3	0.522	0.382	1.221	0.000	0.174	0.385	0.264	0.056
4	0.130	0.095	0.055	1.000	0.043	0.096	0.066	0.014
5	0.128	0.136	0.270	0.000	1.283	0.137	0.749	0.396
6	0.683	1.522	0.879	0.000	0.694	1.535	1.052	0.223
7	0.088	0.111	0.175	0.000	0.417	0.112	1.283	0.143
8	0.235	0.177	0.547	0.000	0.182	0.178	0.212	1.058
Total	4.827	5.648	4.431	1.000	3.809	4.687	5.164	2.215

[a]headarrayof Table3a

Source: author's own compilation based on Eurostat data.

Table 3d. Multipliers matrix for Bulgaria in 2012

[a]	1	2	3	4	5	6	7	8
1	2.478	2.191	0.879	0.000	0.406	2.193	0.517	0.106
2	0.305	1.270	0.108	0.000	0.050	0.270	0.064	0.013
3	0.404	0.357	1.143	0.000	0.066	0.357	0.084	0.017
4	0.126	0.111	0.045	1.000	0.021	0.111	0.026	0.005
5	0.045	0.057	0.115	0.000	1.031	0.057	0.203	0.143
6	0.468	1.417	0.568	0.000	0.263	1.418	0.334	0.069
7	0.054	0.052	0.148	0.000	0.082	0.052	1.030	0.036
8	0.213	0.189	0.602	0.000	0.093	0.190	0.143	1.019
Total	4.093	5.644	3.608	1.000	2.011	4.649	2.402	1.409

[a]headarrayof Table3a

Source: author's own compilation based on Eurostat data.

The examples discussed above show the role of multipliers in different kinds of analyses, especially as regards economic policy. From this point of view, it also seems important to study the significance of matrix A_z coefficients, considering the influence of the their changes on multiplier values. In the literature on the subject, special formulas have been established which show the percentage change of multipliers due to percentage changes of the individual element $a_{ij,z}$ of matrix $\mathbf{A}_z$, It was also confirmed that each change of the coefficient $a_{ij,z}$ exerts the largest influence on the corresponding multiplier $m_{ij,z}$ (Cf. Miller Blair 2009). In this paper a 10% change of every matrix $\mathbf{A}_z$ coefficient was assumed, and it was determined how each change of the individual coefficient, with the other coefficients unchanged, influences the percentage changes of multipliers. Table 4 shows these coefficients of matrix A_z the 10% change of which caused the largest changes of the multipliers, exceeding 10%, in all the studied countries. Therefore, for all the countries these coefficients may be considered as important.

Table 4. Important structural coefficients $a_{ij,z}$

Country	a_{16}	a_{57}	a_{21}, a_{62}	a_{75}	a_{58}	a_{31}	a_{11}	a_{83}	a_{63}
	percentage change of corresponding multipliers								
Germany	14.81	13.75	13.29	13.20	11.73	11.43	10.76	10.34	<10
Spain	16.24	14.84	14.01	14.95	10.41	12.07	11.34	<10	<10
Poland	15.65	11.70	13.03	11.96	10.35	12.48	13.45	10.10	10.39
Bulgaria	14.74	<10	13.05	<10	<10	11.60	11.93	<10	<10

Source: author's own compilation based on Eurostat data.

From Table 4 it follows that important transactions are transactions on the product account. Namely, on the resources side there are the revenues coming from households consumption (a_{16}), being simultaneously the expenditures on households account, and the use of goods and services in the form of intermediate consumption (a_{11}). In turn, on the uses side, expenditures on compensation of employees (a_{21}) and operating surplus (a_{31}) as the cost of primary factors involved in the production process, being revenues on those primary incomes accounts, are important. At the same time, the importance of the transactions which are an expenditure on the operating surplus account and the revenues of non-financial corporations (a_{83}) and households (a_{63}) is visible. These are the sectors in which the operating surplus plays a significant role in their primary incomes. As regards households, this is the result of the inclusion of micro-enterprises in this sector. It was also revealed that the important transactions are those on the property income account, especially property income which is the expenditure of financial corporations (a_{57}) and resource of financial corporations (a_{75}), as well as property income being the expenditure of non-financial corporations (a_{58}).

5. Conclusions

From the analysis of structural similarity coefficients it follows that there was a big similarity of expenditures structures on product and value added accounts. The values of structural similarity coefficients ranged from 0.85 to nearly 1 in all studied countries in the compared years. Smaller similarity was observed in the structures of current expenditures of institutional sectors. As expected, the structures were less similar for years 2007/2012 than for 2002/2007. Moreover, the structure in 2012 neared that from 2002. Such a reversion of expenditure structures in 2012 to those observed in 2002 is visible on practically all current accounts of institutional sectors.

The changes of the expenditures structure on capital accounts depend mostly on the possibility to finance these expenditures (with savings, capital transfers and liabilities), i.e. on the changes of the relations between lending and borrowing. The balancing item - net lending/net borrowing was significantly changeable in the studied years, which meant generally a small similarity of expenditures structures on capital account. The smallest similarity is observed when the years 2007/2012 are compared, because the changes of the capital expenditures structure in 2012 were larger due to the crisis.

When ranking the countries according to the stability of expenditures of institutional sectors in the compared years, the highest coefficients of similarity of expenditures structures, practically on all the accounts, are observed in Germany. It seems that the lowest stability of expenditures structure among the studied countries, especially on capital accounts, is characteristic for Bulgaria.

As was mentioned above, due to the limited space available in this paper, the SAM multipliers are presented only for 2012, but the observed regularities do not change compared to the years 2002 and 2007 for the studied countries. Generally, the sum of changes of resources on endogenous accounts, caused by particular expenditures on exogenous accounts, are usually from over two to over five times larger than the original impulse.

The sample analysis of multipliers shows their role as a tool for various economic policy analyses, especially as regards government expenditures. Results of the examination of the importance of structural linkages in the process of income circulation under given exogenous impulses depend on the division of accounts into endogenous and exogenous. With the adopted division, transactions relating to the products account, the generation and allocation of primary incomes, property income and households consumption expenditures on goods and services, proved important.

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Annex. SAM for Poland in 2012

SAM 2012 POLAND (mln PLN)		Endogenous accounts								Exogenous accounts								Total
			Production factors				Current accounts			Current accounts		Capital accounts						
		Products accounts	Compensation of employees	Operating surplus +mixed income	Taxes - subsidies	Property income	Households +NPISH	Financial corporations	Non-financial corporations	General government	Rest of the world	Households +NPISH	Financial corporations	Non-financial corporations	General government	Rest of the world	Net lending/net borrowing	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Endogenous accounts	1	1862717	0	0	0	0	980 362	0	0	287645	744748	80 427	6 051	165735	73 475			4 201 160
	2	575 343	0	0	0	0	0	0	0	0	11 400	0	0	0	0	0	0	586 743
	3	819 722	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	819 722
	4	203 431	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	203 431
	5	0	0	0	0	0	22 877	91 990	117013	45 275	15 318	0	0	0	0	0	0	292 473
	6	0	581879	392269	0	69 803	730	77 528	0	226384	20 926	0	0	0	0	0	0	1 369 519
	7	0	0	38 545	0	86 660	43 989	1 653	5 400	515	0	0	0	0	0	0	0	176 762
	8	0	0	349874	0	21 190	0	6 202	0	12 463	0	0	0	0	0	0	0	389 729
Exogenous accounts	9	0	0	39 034	203431	21 119	271 751	6 305	32 657	0	1 197	0	0	0	0	0	0	575 494
	10	739 947	4 864	0	0	93 701	730	0	0	7 681	0	0	0	0	0	0	0	846 923
	11	0	0	0	0	0	49 080	0	0	0	0	0	0	0	4 514	1 050	26 150	80 794
	12	0	0	0	0	0	0	-6 916	0	0	0	0	0	0	0	716	12 251	6 051
	13	0	0	0	0	0	0	0	234659	0	0	0	0	0	2 995	11 959	0	249 613
	14	0	0	0	0	0	0	0	0	-4 468	0	293	0	0	0	22 702	62 458	80 985
	15	0	0	0	0	0	0	0	0	0	53 334	74	0	2 473	0	0	0	55 881
	16	0	0	0	0	0	0	0	0	0	0	0	0	81 405	0	19 454	0	100 859
Total		4201160	586743	819722	203431	292473	1369519	176762	389729	575495	846923	80 794	6 051	249613	80 984	55 881	100859	

Source: contructed on the basis of series of SAMs proposed in Ph.D. thesis – Trębska (2012).

Streszczenie

WAŻNE POWIĄZANIA STRUKTURALNE W PROCESIE CYRKULACJI DOCHODÓW W SAM

Głównym celem artykułu jest przestawienie wybranych możliwości analitycznych – w szczególności w zakresie polityki ekonomicznej – jakie stwarzają macierze rachunkowości społecznej (SAM). Macierze te są syntetycznym opisem cyrkulacji dochodów w gospodarce prezentowanym przez system międzynarodowej sprawozdawczości statystycznej – System Rachunków Narodowych. Przedstawiona w artykule analiza porównawcza opiera się na strukturach transakcji obserwowanych w SRN w trzech latach (2002, 2007, 2012) w wybranych krajach (w Niemczech, Hiszpanii, Polsce i Bułgarii). Analiza zawiera badanie porównawcze struktury wydatków i dochodów poszczególnych sektorów instytucjonalnych oraz mnożników SAM jako ważnego narzędzia analitycznego, a także ocenę ważności transakcji w SRN poprzez badanie wpływu ich zmian na zmiany mnożników.

***Słowa kluczowe**: rachunki narodowe, współczynniki podobieństwa struktur, metody analizyinput-output, mnożniki*

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Franchising As A Way Of Creating Entrepreneurship And Innovation

Abstract

*The article analyses **franchising** as a business model based on an economic relationship between the parties. The discussion of the early forms of franchising and of factors stimulating its development in Poland and the world is followed by the presentation of data showing franchise growth trends in Poland for, respectively, domestic and foreign brands. The article highlights the advantages of franchising, which allow it to resist economic crises, stimulate entrepreneurship and innovativeness, and minimise business risks. It also offers a number of comments, observations and conclusions on the synergies that both firms and the Polish economy as a whole can derive from franchising.*

Keywords: *franchising, franchise, franchise system, know-how, entrepreneurship, knowledge, innovation, competitiveness, standardization, business risk*

1. Introduction

J. Schumpeter's theory of economic development provided, among other things, a new perspective on the role of an enterprise and an entrepreneur in the age of a dynamically expanding world economy. Enterprises seek competitive advantages, based on their key competencies, which allow them to become

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strong enough to compete in the global market. This means that only innovative firms with substantial resources of intellectual and financial capital can stand up to global competition and contribute to economic growth.

Risks involved in innovative projects make them difficult to fund. Polish entrepreneurs consider that the main problem hindering entrepreneurial activity is the unavailability of funding necessary to develop and commercialise ideas, rather than a lack of business ideas themselves. Insufficient funding also prevents entrepreneurs from participating in fairs and economic missions, not to mention promotion of their brands. Financial shortages are the most painful for young, aspiring entrepreneurs who do not have a track record in business and thereby stand no realistic chance of raising capital.

Despite the wide range of unconventional sources of funding that are theoretically addressed to entrepreneurs, the terms on which they can be accessed are rather restrictive, as both investors and entrepreneurs tend to minimise their exposure. Creative destruction[1] of the existing production methods, taking the form of subsequent innovations, changes interpersonal relations as well as the structure of business organisations, thus constantly increasing entrepreneurs' demand for funding. According to J. Schumpeter, entrepreneurship may not exist without external capital. As the development of civilisation has entered its hyper-innovative phase, today the demand for financial capital is even greater. In fact, capital is still available despite the crisis, but investors have become more cautious in granting access to their resources. However, they are still ready to support ambitious projects as long as they can bring the expected rates of return. All business projects, including the commencement of one's own business activity, need an adequate amount of funding to be launched. To be eligible for external funding, new entrepreneurs are expected be able to cover at least 20% of the project's costs from their own resources. But even those who are willing and able to do so face the following question: how can I raise the other 80%?

Compared with well-established businesses, the situation of aspiring or new entrepreneurs trying to raise the necessary capital is dramatically worse. One solution to their problems is a **franchise arrangement,** which allows one party (the franchisor) to expand its business and the other party (the franchisee) to have its own firm. Franchises are affordable for almost everyone, because franchise fees (paid upfront to enter a network) range from as little as several hundred PLN to around 170,000 PLN (depending on the industry and brand).

[1] For some, creative destruction is a controversial issue. The tactics employed in present-day capitalism is also called the shock doctrine. See N. Klein, *Doktryna szoku*, Warszawskie Wydawnictwo Literackie MUZA S.A., Warszawa 2008.

Royalties, which are paid once a franchise is up and running, range from several thousand zlotys for the least expensive systems to several million euros for the most expensive ones. In many countries, the prospective franchisees' proposals are evaluated against a well-known reasonable price criterion developed by Prof. Robert Aumann, a Noble Prize winner in economics, drawing on the game theory (the lowest and highest bids are rejected, which discourages the bidders from offering unrealistic prices and makes their bankruptcy less probable). In return for the franchise fees and other profits that franchise agreements grant to franchisors, franchisees are entitled to franchisor's know-how, brand, training, managerial support, advertising services, and access to fairs. Franchising is a modern model of doing business that provides a franchisee with standardised and proven know-how, developed by the franchisor.

Franchising offers franchisors growth opportunities through the "multiplication" of their business, while franchisees benefit from substantial financial support (this is a special mode of financing small businesses). Franchisees receive:

- a successful business model that the franchisor has developed and tested,
- "know-how", which is available for the duration of the agreement,
- training in all aspects of the new business model,
- franchisor's assistance and advice,
- a share in the franchisor's reputation,
- franchisor's trademark (brand),
- access to network-wide advertising programmes;
- other services (e.g. group negotiations on deliveries, financial and logistic services, etc.).

Franchising allows young and educated people without financial capital and business experience to become economically active. A potential franchisee obtains not only a tested business concept, but also the opportunity to avoid mistakes and run a business that is almost risk free.

The franchise market in Poland has been expanding since 1995. At the same time, changes in both the world economy and Poland strengthen the position of franchisees. Tough competition and the growing number of franchise systems make franchisors develop increasingly attractive forms of cooperation to attract new franchisees. The Polish franchise market is becoming more and more similar to the fully-fledged franchise markets in Western Europe, where franchise as a business option is used with particular frequency in the private sector.

The domestic franchise systems in Poland account for around 80% of all franchise firms. The potential of this market has been also appreciated by 191

foreign systems. A noteworthy fact is that over 70 Polish franchisors have expanded into foreign markets, which constitutes solid proof that entrepreneurship is developing in the country.[2]

The expansion of franchise systems in the seventeen EU Member States selected for analysis (see Table 3) is comparable to the biggest markets in the world. The leader is France, with almost 1,400 franchise systems (out of 10,000 in the sampled countries). In the USA, where the first systems of this type were established, the 2007-2009 estimates pointed to 2,200 systems. The European Franchise Federation reports that franchise units in the selected EU-17 employ nearly 4 million people (almost 11% have jobs in SMEs, which account for 4.6% of franchisees).[3]

Franchising derives its popularity not only from its ability to address the mutual interests of franchisors, franchisees, and the micro and macro-economic environment, but also from its usefulness in promoting the spill over of innovations. Owing to its characteristics and results, franchising offers synergies to both the immediate partners and the entire economy.

2. The concept of franchise

The English words ‘franchising’ and ‘franchise’ come from the Old French verbs “franc” or “francher” (affranchir in present-day French), that mea respectively ‘to free’ or ‘to exempt’. In the early period they denoted a privilege or a special right, such as exemption from a tax, customs duties or vassalage, or freedom from feudal power. The term ‘franchise’ entered official use in the 12th c. because of the Chartes de franchise, on the strength of which Church and secular rulers granted their subjects the right to use forests in return for payments in cash or services. Towns and guilds were granted privileges that limited the power of feudal lords over them, and merchants and craftsmen were authorised to hold markets and fairs.

In England, franchising started with the Norman conquest in 1066, after which the new rulers allowed their trusted secular and clerical subjects to collect local taxes in return for payments in cash or political support (the right was

[2] Having visited the USA, A. Tocqueville (1805-1859), a French sociologist, historian and politician stated, that what impressed him most was not the huge scale of some projects, but the multitude of the small ones. According to Tocqueville, Americans were making tremendous progress in business, because everyone was involved in it. Their approach to doing business has not changed to date.

[3] http://franchising.pl/artykul/6325/rozwoj-franczyzy-w-europie (accessed on 7 March 2014).

called „franchiso"). The system ended in 1562, after the Council of Trent demanded a reform of the tax system. Franchising was also known in English real property law, where it was defined as exemption from restrictions on the use of land: the 'franchilanus' was a free tenant. In later times, the word franchise was applied to various rights and privileges. In the 16th and 17th centuries it also meant the permission to use a patent for commercial purposes (Fuchs 1998, pp. 17-23). A form of a franchise agreement that appeared in the 18th c. and is still used today was known as "tied house" contracts concluded between producers and suppliers, and between breweries and landowners. The contracts included licences for the sale of specified amounts of beer and spirits. The fast rising value of the licensed pubs and the declining number of customers caused breweries to take over the licensed pubs and lease them out. The lease contract prevented the new innkeeper from selling any other beer but that made by the brewery that owned the inn (Banachowicz, Nowak, Starkowski 1995).

The literature points to Isaac Merritt Singer, a manufacturer of sewing machines in the 19th century, as the precursor of modern-day franchising. It was, however, not until the 20th century that this business model expanded into all parts of the world. Today it is used to run dealerships in the automotive, petrol, food (restaurants) and soft drinks industries (in 1900, only four years after he invented Coca Cola, John S. Pemberton offered a licence to bottlers buying his syrup concentrate that allowed them to use the Coca Cola brand and logo). Over time, but particularly after World War II, franchising was absorbed into almost all industries, mainly in the USA and Western Europe.

In Poland, franchising appeared along with the French company Yves Rocher and its first franchised store, which opened in 1989. Yves Rocher was soon followed by franchisors from the food-serving industry. The ranks of franchisors were shortly joined by the big players, as they concluded that the franchise market offered them an opportunity for rapid expansion and increase in sales. The pioneers of Polish franchising are the owners of the Mr Hamburger restaurant and of the A. Blikle cake shop.

In the Polish literature on franchising, '**franczyza'**, a polonised version of the English words **franchising** and **franchise**, is starting to be used more and more often as a legitimate equivalent. The word appeared following a request submitted by the Polish Franchise Organisation to the Council for the Polish Language at the Polish Academy of Sciences. The Council developed the following franchise-related definitions:[4]

- **franchise** – the rights and obligations of the franchisor and franchisee arising from a franchise agreement,

[4] www.franchising.info.pl – Portal Pomysłów na Biznes.

- **franchising** – a process whereby the rights and obligations of the franchisor and franchisee are respectively granted and assumed,
- **a franchise agreement** – an agreement setting out the rights and obligations of the franchisor and the franchisee,
- **a franchisee** – the party that receives rights and obligations under a franchise agreement;
- **a franchisor** – the party that grants rights and obligations under a franchise agreement.

A franchise is an economic relationship by which the owner of a product, process, or a trademark (the franchisor) grants the other party (the franchisee) a right to use them commercially for a fee or an agreed benefit (Lewandowska 1999, p. 65).

The European Code of Ethics for Franchising defines a franchise as a system for marketing goods, services and technologies involving close and regular cooperation between legally and financially separate entities, the franchisor and franchisees, where the latter have a right but also an obligation to run the business in compliance with the format developed by the franchisor.[5]

An advantage of a franchise agreement is that it opens up new business opportunities and takes care of the franchise's positive market image. Weak firms are thus given a new chance, because the franchisor protects them, in their best interest, from bankruptcy. The franchisors' profits and operational costs place a franchise among the most successful marketing concepts in the world. Business expansion through "multiplication", a basic feature of franchising, is recognised as one of the most effective methods that can be adopted to develop economies and win the targeted market segments.

Polish legislation does not have laws that apply specifically to the formation of franchise relationships. Since neither the Civil Code nor any other normative document regulates the nature of franchise agreements, they are classified as innominate contracts (*contractus innominatus*). These contracts can be created and concluded under the freedom of contract principle provided in art. 353^1 of the Civil Code, according to which the parties to a contract may form their legal relationship at their own discretion, as long as the contents of the contract or its purpose does not contradict the nature of the relationship, the statute or the principles of social coexistence. Because direct regulations of franchise agreements do not exist, other pertinent laws are used in drawing them up.

A franchise agreement must specify the type and amount of goods or services to which the franchisee will have an exclusive right of sale, the market,

[5] http://franczyza.org.pl

and the manner of financial settlements. In return, the franchisee must pay an agreed amount of money, either as a one-off payment or periodically. In the second case, the amount is calculated as a percentage of the sales and usually ranges between 2 and 20% of the franchisee's annual turnover. In addition to this **direct** payment, a franchisor may also be required to make **indirect** payments, following from the purchase of intermediate goods, products or services from the franchisor. Because franchising is essentially based on quality, franchisors make sure that their franchisees comply with **strictly defined standards**.

Franchise agreements differ from other, similar contracts in that they must contain certain fundamental provisions:

- **permission** that allows the franchisee to use goods protected under industrial and intellectual property laws (trademarks, commercial names, shop signs, registered designs, copyrights or patents, etc.) for commercial purposes, but strictly within the scope of the permission granted,
- **a clause** which grants the franchisee the right and obligation to act in its own name and on its own account,
- **a clause** according to which the network organiser must assist and support the franchisee,
- **payments** for the franchisor.

A franchise agreement is a mutually beneficial relationship. It enables **the franchisor** to expand into new markets without having to invest much of its own capital in the enlargement of the existing facilities or in the construction of new ones. The main advantage for **the franchisee** is a minimal business risk, because having a renowned partner should improve their competitiveness almost immediately. A franchise agreement is frequently a springboard to prosperity, because by entering a network the franchisee benefits from its successes and the network's reputation becomes its own.

In order to support the expansion of franchising and to promote it in Poland, the **Polish Franchise Organisation** (PFO) was founded by the Polish franchise industry in 2000, which 10 years later became a member of the **European Franchise Federation**. In the last twenty five years the following innovative and distinctive forms of franchise have gained in popularity in the world: a turnkey franchise, a banking franchise, and a cooperative franchise (Lewandowska 1999, pp. 69-75 as quoted in Stecki 1994):

- **a turnkey franchise**: the franchisor builds, starts up and transfers a facility to a franchisee;
- **a banking franchise**: the franchisor (a bank) delivers its services through a franchisee or entrusts their delivery to them;

- **a cooperative franchise**: independent firms decide to start cooperation to create complementary solutions in the business segment they have chosen.

Analysed according to the **type of business**, the following categories of franchise appear to be the most frequent:

- **a retail franchise** that specifies the type of business, area/territory and the period in which the franchisee is permitted operate as such. Its exemplification is a franchisor running a wholesale business and supplying retail shops in the network (franchisees) with some brand of goods. The partners are independent of each other. This approach allows the franchisor to grow faster and the franchisees to have a share in its success. The retail franchise is behind the worldwide expansion of McDonald's restaurants (in the 1940s the McDonald brothers, Richard and Maurice, started a hamburger stand that was subsequently replaced by the first self-service restaurant with hamburgers and fries). Realising that the franchise's success depends on **standardization,** the McDonald's corporation founded Hamburger University to ensure that all their hamburgers taste the same wherever they are sold;
- **a distribution franchise**, where the franchisee is granted a right to sell products delivered by the franchisor, but the manner of selling and the structure of the franchisee's company are different from franchisor's. The franchisee is obligated to display the franchisor' name next to theirs, and at the same has a right to use the franchisor's trademark. The distribution of any other products but those made by the franchisor and signed as such is prohibited. The relationships between the parties are less rigid than under a retail franchise;
- **a franchise for the use of a trademark** (or a name of a public person) serves the purpose of boosting turnover through the strengthening of positive associations. Customers equate the franchisee with the franchisor; both partners use the same symbols and logo to indicate that they are equal in reputation;
- **a franchise for the manufacture of a product or for product manufacture limited to a designated territory and a specific period.** The franchisee receives a complete and obligatory specification that details how products must be made and distributed in the specified market and time frame.

Other classifications can be created using, for instance, geographical, economic, social and cultural criteria. Franchising is used to operate real estate agencies, travel agencies, coffee shops, restaurants, brand stores, personal service establishments (providing hairdressing, dental, cosmetic, medical, and photo services, etc.), hotels, petrol stations, law offices, apothecaries, language

schools, and others. Some franchise brands, such as McDonald's, Kentucky Fried Chicken (KFC), Coca Cola, Pizza Hut, KODAK, SHELL or Statoil petrol stations, the British School, Levi Straus & Co. or Big Star have become global players.

The most expensive global brands are Google, Microsoft, Coca Cola, IBM, and McDonald's, with some of them are valued at over US$ 100 billion. By entering an international network, a franchisee benefits from its economies of scale. The best franchise in the 2010 Franchise 500 ranking was the fast food company Subway, which won it for the 9th time in the last ten years of its history on account of its growth strategy built on low franchise fees, small-sized establishments, low-priced special breakfast menus and unique salads. All these elements comprise know-how, unpatented but well-protected knowledge that the franchisor develops through trial and error and improves with new experiences. The main components of a franchise package are the following:[6]

- **a trademark** – a legally protected sign that distinguishes its owner from other organisations,
- **know-how** – confidential technical and technological knowledge of how products are made or services delivered,
- **an operations manual** – a detailed description of how the franchise should be run,
- **services that are due to the franchisees –** services provided by the franchisor during the start-up phase as well as during regular business activity,
- **fees** – the amounts that the franchisee should pay to the franchisor (the franchise fee accounts for around 10% of the franchisee's total expenses, royalties stand at 2-5% of the franchisee's net turnover and marketing fees range within 1-3% of the sales).

The reputation of a franchisor, as with any other firm, depends on their financial status, which can be determined using documents and information from banks, suppliers and franchisees in the network. Other useful information that can help a firm decide whether to join a network includes the franchisor's track record, the status of the network managers, financial indicators, and the number of franchisees comprising the network. Potential franchisees must also know upfront what business concept underlies the functioning of the network (they should be aware of their future business), whether the franchisor has been listed on the Companies Register, whether they have ever filed for bankruptcy, whether the agreement includes a geographical exclusivity clause, and whether the expected turnover is realistic.

[6] Pakiet franczyzowy, http://franchising.pl (11 January 2013) and Pakiet franczyzowy, http://msp.nf.pl

The above list of issues that need to be considered in relation to a franchise agreement is, however, much longer, because franchise networks have an effect also on third persons – the customers. The early franchise agreements were not regulated by law, but over time governments realised that some kind of legislative intervention was necessary. This conclusion was based on the fact that some franchisors would build various practices into franchise agreements that disadvantaged their franchisees, other networks and customers and were likely to obstruct the development of healthy competition. The regulatory process started with EEC regulation 4087/88 of 30 Nov. 1988 concerning the application of art. 85 § 3 of the Treaty establishing the European Economic Community to franchise agreements. The regulation explained that while franchising was a desirable business model, it had to be regulated to protect competition. It also led to the adoption of the same definition of a franchise agreement across the Member States.

The regulation sets franchise agreements in a general legal framework. It concerns vertical arrangements in the distribution business and provides guidelines that explain in detail how aspects of franchising should be interpreted (Wojtaszek-Mik 2001, p. 27).

As the economy never stops changing, the various concepts of franchising evolve too. The presentation of franchise agreements would not be complete without a short description of the rules applying to their termination and of the most common reasons for their termination. These include:

- a franchisor's decision to leave the system,
- a franchisor's decision to go back on the agreement,
- a franchisee's decision to withdraw from their business.

The most frequent causes of **withdrawals from franchise systems** are the following (Stawicka 2009, p. 50):

- financial considerations,
- wrong geographical location of franchise unit(s),
- increases in rent,
- notice from the landlord to leave the premises,
- the franchisee(s) failing to comply with the terms of the franchise agreement,
- problems in the management of a group of independent entrepreneurs in the network.

Franchisees usually terminate an agreement because of a change to its terms and conditions. Most franchise agreements are rather specific in describing the consequences of various situations that may occur between the franchisor and the franchisee. The franchisor may, for instance, attempt to revise the

original franchise agreement. If the franchisee concludes that the change hurts their business (a good example would be an increase in royalties), they usually leave the network. All franchise agreements have clauses explaining how and when an agreement can be dissolved. If both parties decide that their agreement should be dissolved, they make identical declarations that they intend to do so. Franchise agreements must also provide for a one-sided termination of the relationship, either after a notice period or immediately. A precise indication of when this action is legitimate protects the parties from legal disputes. There must also be a clause allowing both parties to go back on the agreement. Clauses setting out the reasons for ending an agreement are of crucial importance, because they help avoid many ambiguities as to the parties' rights and obligations and facilitate mutual settlements following the termination of an agreement (Stecki 1994, p. 197). A franchise agreement must address various situations, such as the franchisee deciding to withdraw from the network following the sale of the company, etc., as well as indicating the conditions which must be met for their continued functioning in the network. The franchisor must have the right to decide whether a franchise will be maintained or ended, as well as a pre-emption right to a unit. An agreement may also grant the franchisor a right to repurchase the items that the franchisee bought from them. However, the pre-emption right and the repurchase right become exercisable only when the franchisor gives up on cooperation with the new owner of the franchised company (Stecki 1994, p. 193).

Franchise networks generally perform very well in Poland, although some of them have been disbanded. Their success should be attributed in part to the general improvement in entrepreneurship in Poland, but mainly to the efficacy of this business model, which has been confirmed by the steady increase in the number of franchise networks in Poland after 1989.

3. Franchising in Poland and European Union

The expansion of franchising as we know it today started in Poland with the return of economic freedom in 1989, but a licence-based model of doing business appeared as early as the 1950s, with Bank PKO BP and Poczta Polska (Polish public postal service) establishing their first „ajencje" (agent-operated offices). In addition Orbis (a Polish travel agency) chose franchising in the 1970s, first cooperating with foreign hotels to create a hotel network and a reservation system in Poland, and then using it to privatise the company. For several years travel agencies with the "Orbis" logo were operated by private franchisees (former Orbis employees) who established their own firms. "Hortex",

a frozen foods and branded juice company, also adopted franchising as a business model following changes in its ownership structure.

Franchising came to Poland in 1989 with the French company Yves Rocher and its first perfume shop being opened by a franchisee. Other foreign operators (e.g. McDonald's) that came afterwards were setting up networks to test the market, because investment risk in Poland at the time was rather high. The ranks of franchisors were soon joined by Polish entrepreneurs. The pioneers were the owners of the A. Blikle cake shops, of the coffee shop "Pożegnanie z Afryką" (Ziółkowska 2011, p. 22) and of the restaurant Mr Hamburger. The next one was the Silesian fast-food company "Pakt". The consolidation of the franchise market was brought about by the establishment of the PROFIT System consulting company (specialising in the compilation of franchise packages), the creation of the first Polish portal on franchising (Franchising.pl), and the publication of the Franchising Info magazine. The first All-Poland Franchise Fair (Ogólnopolskie Targi Franczyzy) was held in Warsaw in 2003 and has turned into an annual event. The fact that 100 new systems are established in Poland every year leaves no doubt that the business model continues to gain in popularity.

Between 1989 and 2010 the number of franchise systems in Poland rose from only 2 to 660[7] (or 739, according to the same source). In 2013, there were already 930 franchise systems. It is estimated that after 1989 their number was growing at an annual rate of ca. 20%, naturally much faster in first years of that period. The systems' turnover has increased by around 15% a year. The number of franchised companies doubled between 2002 and 2007, as a result of which their 2007 sales amounted to as much as 72 billion PLN, 45% more than a year earlier. Table 1 below illustrates the expansion of franchise systems in Poland.

Table 1. Franchise systems in Poland between 1989 and 2013

Year	No. of systems	Year	No. of systems (2nd version)
1989	2	**2001**	142
1990	4	**2002**	173
1991	7	**2003**	213 (216)
1992	13	**2004**	251 (256)
1993	17	**2005**	298 (309)
1994	23	**2006**	312 (328)
1995	31	**2007**	382 (402)

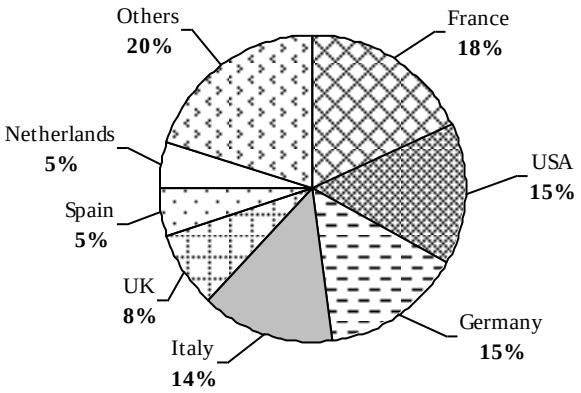
[7] Prepared based on a Profit System's publication www.profitsystem.pl and Raporty o rynku franczyzy w Polsce 2011, 2012 and 2013, Profit System.

1996	43	**2008**	480 (512)
1997	60	**2009**	565 (618)
1998	77	**2010**	660 (739)
1999	95	**2011**	805
2000	119	**2012**	864
		2013 Forecast	930

Source: developed by the author based on www.profitsystem.pl and Raporty o rynku franczyzy w Polsce 2011, 2012, 2013, Profit System.

The fact that the number of franchise systems in Poland has doubled in the last five years implies that franchised companies have successfully resisted the impacts of the financial crisis. The domestic franchise systems, too, have shown a satisfactory growth trend. In 2002 they outnumbered foreign systems for the first time, and now they account for over 80% of all franchise networks in Poland. The number of franchise units increased as well. Between 2005 and 2010 it more than doubled and the 2013 estimates point to almost 55,000 units. Foreign franchise systems representing 19 different countries account for 20% of networks in Poland. Most of them (19) come from France, and their main area of operation is the cosmetics industry (Yves Rocher, Jean Louis David, Camille Albane, Franck Provost, Eric Stipa or Frederic Moreno), however other industries are represented too (Intermarché, Bricomarché, E. Leclerc, Cache Cache, etc.). The US, German, and Italian franchisors have also organised strong networks in Poland. The US systems provide business services (e.g. the training provided by the company Leadership Management International) or frequently serve food (the McDonald's network is the largest). The German brands can be found in the clothing industry (Triumph), car repair services (Bosh Car Service) and travel industry (TUI and Neckermann). The Italian franchise systems focus on the production of clothing and footwear. The most important in the structure of foreign systems in Poland are franchise concepts developed in seven countries. Fig. 1 shows foreign franchise systems in Poland by country of origin.

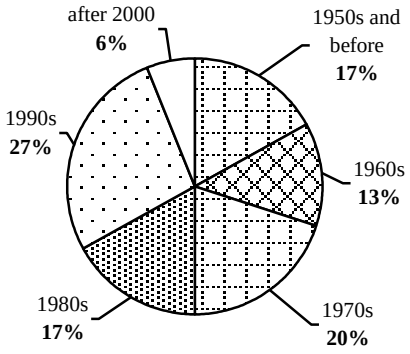
Figure 1. The geographical origin of foreign franchise networks in Poland - 2013



Source: http://www.arss.com.pl/pl/publikacje/257-raport-zagraniczne-sieci-franczyzowe-w-polsce-cz-1 (7 March 2014).

More than half of over 110 foreign franchise networks present in Poland have a history of worldwide operations spanning the last 30 years, which means that they are both well-known and proven. Some of them, for instance Spanish Telepizza and British Vision Express, a retailer in spectacles and contact lenses, chose Poland as one of the first locations for their expansion. Figure 2 presents the structure of foreign brands running franchise systems in Poland by time of establishment.

Figure 2. The time of establishment of foreign franchisors operating in Poland



Source: http://www.arss.com.pl/pl/publikacje/257-raport-zagraniczne-sieci-franczyzowe-w-polsce-cz-1 (7 March 2014).

In terms of industry, the most foreign brands in Poland have franchise systems in the clothing industry (27%), the food-service industry (14%), the cosmetics and jewellery industries (10%), business services (7%), and the automotive industry (6%). A foreign brand is considered to be successful if it has at least 50 locations in a country. In the case of Poland, this criterion is met by 30 foreign brands. At the same time, Polish brands are attracting more and more interest from foreign franchisees. More than 70 of them have successfully expanded into markets in Austria, the Czech Republic, Estonia, Lithuania, Latvia, Germany, Russia, Slovakia, Ukraine and Hungary.[8] Despite the relatively fast growth of franchise networks in Poland (more than 100 new systems are established every year) there is an increasing need for education in this business model, particularly for new franchisees. The necessity to protect franchisors' interests at home and abroad led to the establishment of the Polish Franchise Organisation (PFO) in 2000, which ten years later became a member of the European Franchise Federation, thus gaining the right to participate in decision-making at the European level. Table 2 shows the increase in the number franchise systems in Poland between 2003 and 2013.

Table 2. The expansion of franchise systems in Poland, 2003-2013

Year	No. of franchise systems	No. of franchise units
2003	216	11,882
2004	256	15,962
2005	309	18,811
2006	328	20,831
2007	402	22,784
2008	512	27,229
2009	618	34,047
2010	739	40,760
2011	805	48,201
2012	864	51,209
2013*	930	54,750

(* – forecast)

Source: PROFIT system, Raporty o franczyzie w Polsce http://franchising.pl/abc-franczyzy/24/ franczyza-w-polsce-rozwoj-rok-roku (7 March 2014).

As can be seen from the data in Table 2, the Polish franchise market steadily expanded in the analysed decade. Because of a more rapidly growing number of **systems in the services industry**, in recent years the market has

[8] Raport o franczyzie w Polsce 2012, www.franchising.pl

become similar to the majority of mature markets in Europe.[9] Franchisees in Poland can choose today from a range of 930 brands, the most popular of which have been for years those related to food-service, foodstuffs and clothing industries. The Polish franchise market is different, however, from the markets in the 17 Member States chosen for analysis on account of its strong growth trend (See Table 3 below).

Table 3. Franchise systems in 17 selected EU Member States

Member State	No. of franchise systems			Percentage increase between 2007 and 2009
	2007	2008	2009	
Austria	390	411	435	11.5
Belgium	200	240	320	60.0
Czech R.	131	137	150	14.5
Denmark	180	185	188	4.4
Finland	220	255	265	20.4
France	1,137	1,229	1,369	20.4
Greece	544	560	563	3.5
Spain	850	875	919	8.1
Netherlands	676	669	679	0.4
Germany	910	950	960	5.5
Poland	**383**	**480**	**565**	**47.5**
Portugal	501	521	524	4.6
Slovenia	103	106	107	3.9
Sweden	350	400	550	57.1
Hungary	320	350	341	6.6
Italy	827	852	869	2.6
UK	809	835	842	4.1
Total	**9,102**	**9,687**	**10,176**	**16.2**

Source: developed by the author based on http://franczyza.org.pl/rozwoj-franczyzy-w-europie.

In the ranking of franchise systems in the 17 selected EU countries that the European Franchise Federation developed, according to their growth rates Poland was third, behind Belgium and Sweden, which confirms its important position.

[9] Franczyza&Biznes, Własna firma na licencji no 2 (6) 2014, a publication by franczyzawpolsce.pl

4. Conclusions

The above analysis of franchising as a business model stimulating the creation of innovative economic activities in an age marked by a highly competitive environment and very demanding customers leads to the following observations and conclusions:

- **A franchise** is a business relationship based on cooperation between the franchisor and franchisees, which allows the parties to achieve their respective strategic goals in a competitive environment. This capability of franchises is confirmed by their steady expansion despite the economic crisis. A franchise can therefore be understood as an organisational innovation (a modern business model).
- **Franchising is considered the most successful marketing concept** worldwide. It is also recognised as one of the most effective methods for driving economic growth in a country and for expanding into new markets.
- **The popularity of franchising** is growing worldwide, and in Poland as well. The number of franchise brands and franchise units increases every year.
- **The growth in the number of franchise systems** and competition forces franchisors into the development of increasingly attractive offers for potential franchisees. According to the art of economics, a business relationship should be beneficial to everyone and franchising is capable of doing so.
- **The franchise market in Poland** has expanded in the last 25 years at an impressive rate, leaving behind 14 of the 17 analysed EU countries (in terms of growth of franchising, Poland ranks third behind Belgium and Sweden).
- **Domestic brands** account for around 80% of the Polish franchise market. The remaining ca. 20% belongs to 110 foreign systems with over 5,500 units that represent 19 countries. The predominance of domestic systems shows that franchising has become entrenched in the Polish market as a solution enabling expansion through "multiplication".
- **The maturity of Polish franchise brands** is confirmed by their expansion into other markets in Europe (over 70 Polish brands can be found in Austria, the Czech Republic, Estonia, Lithuania, Latvia, Germany, Russia, Slovakia, Ukraine and Hungary).
- **Franchising may also help reduce unemployment, stimulate entrepreneurship and innovation,** and **minimise business risks**.
- Educational, logistic and price **cooperation between franchisors and franchisees (competitors)** that builds on the strong points of both the big firm and the small firm creates unique growth opportunities for the network, in large part because of the franchisor's reputation.

- **The future success of franchising** in Poland will depend on the franchise models' innovativeness and ability to innovate, regardless of the type of the industry, its size or location. Education is also necessary, particularly for potential franchisees that need to understand the mechanics of this business concept.

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Streszczenie

FRANCZYZA W KREOWANIU PRZEDSIĘBIORCZOŚCI I INNOWACJI

Artykuł traktuje o franczyzie jako koncepcji prowadzenia działalności gospodarczej na podstawie uzgodnionego przez strony układu ekonomicznego. Dostarcza informacji o genezie franczyzy, uwarunkowaniach jej rozwoju w świecie i Polsce. Prezentuje udokumentowane tendencje wzrostu polskiego rynku franczyzowego z uwzględnieniem rodzimych i zagranicznych marek franczyzowych. Zwraca uwagę na atuty franczyzy pozwalające jej oprzeć się kryzysom gospodarczym, stymulować rozwój przedsiębiorczości i innowacyjności oraz minimalizować ryzyko biznesowe. Zawiera również komentarze, spostrzeżenia, sugestie i konstatacje na temat efektów synergicznych uzyskiwanych w firmach i całej polskiej gospodarce z tytułu zastosowań franczyzy.

Słowa kluczowe: *franchising, franczyza, system franczyzowy, know-how, przedsiębiorczość, wiedza, innowacje, konkurencyjność, standaryzacja, ryzyko biznesowe*

Contents