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ANNA KRAJEWSKA*

The Effect of the Financial Crisis on the Taxation of Consumption, Labour, and Capital in the European Union

Abstract

The impact of the current financial crisis on changes in the taxation of consumption, labour, and capital in the European Union.

The responses reflected in the tax policies pursued in the EU countries to the current crisis will be analysed in three ways:

1. *Distribution of total tax burden by economic function, i.e. assessment of the share of taxes on consumption, labour, and capital in relation to GDP and total tax revenues. Therefore, the analysis will cover backward-looking tax burden indicators;*
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 tax burdens levied on different activities to total revenue from this activity. The ITR takes into account the legislation and the resulting tax burden(s) which may affect the behaviour of various entities and their decisions. This approach is described as forward-looking effective tax rate;*
3. *Trends in the EU countries are compared with the changes taking place in Poland. This includes an explanation of the specificity of the fiscal policy pursued in Poland.*
4. *For the purpose of this paper we used statistics prepared according to the methodology adopted by the European Commission, published in "Taxation trends in the European Union", Eurostat 2012.*

* PhD., Full Professor at the University of Łódź, Faculty of Economics and Sociology, Department of Macroeconomics

1. Introduction

The economic and financial crisis that began in 2008 significantly changed fiscal policies in the EU countries. The increased public expenditures caused by anti-cyclical policies pursued in these countries resulted in an increase in budget deficits and the public debt. This required changes in tax policy aimed at balancing the budget and stimulating economic growth.

The response reflected in the fiscal policy pursued in the European Union to the current crisis will be analysed in three ways:

1. Distribution of total tax burden by economic function, i.e., the share of taxes on consumption, labour, and capital in total tax revenues. This analysis will cover backward-looking tax burden indicators.
2. Analysisof trends in the implicit tax rate (ITR) on consumption, labour and capital. Such an approach is described as a forward-looking effective tax rate.
3. Tendencies observed in the EU countries will be compared with the changes taking place in Poland. This includes an explanation of the specifics of the fiscal policy pursued in Poland.

For the purpose of the paper, the statistics processed by the methodology adopted by the European Commission, published in 'Taxation trends in the European Union, Luxembourg 2011 and 2012' were used.

2. The influence of the crisis on budgetary revenues from taxes

In the 1980s and 1990s, in the countries of Western Europe, due to the extensively developed public finance sector budget revenues from taxes accounted for an average of about 40% of GDP, while in some countries the revenues exceeded even 50% of GDP (Sweden, Denmark). One of the objectives of the EMU (Economic and Monetary Union) was to discipline the budgetary policy of its members, which would allow for reducing the tax burden. Analysis of the statistics indicates that the adopted disciplinary measures began to have an effect; budget expenditures began to fall. In 2008 this trend was halted. Due to the recession, public spending began to increase while at the same time budget revenues from taxes began to decline. Nonetheless, in 2010 the total budgetary revenues from taxes still exceeded 40% of GDP in seven of 27 European Union member states: Denmark - 47.6%, Sweden - 45.8%, Belgium - 43.9%, France - 42.5%, Finland and Italy - 42.1 %, and Austria - 42.0%. At the same time in six EU member states the share of taxes in relation to GDP ratio was lower than 30%: Latvia - 27.3%, Romania - 27.2%, Ireland - 28.2%, Bulgaria - 27.4%, Lithuania - 27.1%, and Slovakia - 28.1% (Taxation trends in the European Union, p. 180).

Statistical data on the EU-27, EU-17 and Poland (Table 1) indicates that fiscal policy in Poland is clearly different from the policies pursued in other European Union countries. Some basic differences are as follows:

1. Under the counter-cyclical policy pursued in 2008 and 2009, a major increase in public expenditures in the European Union countries took place, by 5 percentage points in both the EU-27 and EU-17. Public expenditure in Poland increased to a lesser degree at that time (by 3.2 percentage points).
2. Due to the decline in GDP, the budget revenues from taxes decreased in the EU-27 countries by 1.5 percentage points, while in the EU-17 the decrease was 0.9 percentage points. In Poland, the decline in budget revenues was significantly worse (3.0 percentage points). This decline was caused less by the recession than by previous decisions on tax cuts (the transition from 2009 onwards to a two-bracket system for personal income tax (18% and 32%), replacing the previous three tax brackets of 19%, 30%, and 40%, together with a reduction in pension contributions, in 2006 and 2007; from 13% to 6%) (Krajewska et al 2011, pp. 91-93)
3. The tax burden in the Polish economy is much lower than the EU average, and moreover the difference has been deepening in recent years.

Table 1. GDP growth rate and public spending and tax revenues (in relation to GDP)

Specification	**2005**	**2007**	**2008**	**2009**	**2010**
EU -27					
GDP growth rate (%)	3.7	3.0	0.5	-4.2	2.3
Public expenditure (% of GDP)	46.9	45.6	47.1	51.1	50.6
Budget revenues from taxes (% of GDP)	36.6	37.1	36.6	35.8	35.6
EU -17					
GDP growth rate (%)	2.6	3.9	1.5	-5.2	2.1
Public expenditure (% of GDP)	46.0	46.0	47.1	51.2	51.0
Budget revenues from taxes (% of GDP)	37.0	37.3	36.9	36.5	36.4
Poland					
GDP growth rate (%)	3.6	6.8	5.1	1.7	3.8
Public expenditure (% of GDP)	43.3	42.2	43.2	44.4	45.4
Budget revenues from taxes (% of GDP)	32.8	34.8	34.3	31.8	31.8

Source: GDP growth rate and public spending: Eurostat; Taxes: *Taxation Trends in European Union*, EC, 2012, pp. 180, 220, 224, 234, 238, and 242.

3. Distribution of tax burden by economic function

Taking into account the tax base, three types of taxes can be distinguished: tax on consumption, tax on labour, and tax on capital.

Taxes on consumption involve indirect taxes, i.e. VAT, excise, and other taxes levied on goods and services purchased by households.

Taxes on labour include income tax on the employed, social security contributions paid by employers and employees, and other tax burdens on labour.

Tax on capital combines various taxes, such as corporate income tax (CIT), personal income tax (PIT) on business, tax on the income of the self-employed, on income from capital, and income from the wealth and savings of households.

The decrease in tax revenues in relation to GDP leads to changes in the structure of the tax burden on different types of activity (Hemmelgarn, Nicodeme 2010). The share of taxes on consumption has remained relatively stable, although in Poland a slight decrease was noted. The revenues from taxes levied on labour (PIT and social security contributions) are increasing, although in Poland this trend is less pronounced compared with the EU-27 and EU-17 averages (Table 2). The recession in the EU has led to a decrease in the share of taxes on capital in the budget revenues in relation to total GDP. In Poland, the share of this tax category in overall budget revenues remains at the same level, but is higher than in the EU.

Table 2. Taxes on Consumption, Labour, and Capital as % of Total Taxation

Taxes on	2005	2007	2008	2009	2010
EU -27					
Consumption	34.6	33.5	33.2	33.4	33.4
Labour	45.6	45.0	46.4	48.0	47.3
Capital of which CIT	19.6 8.7	21.5 9.9	20.5 9.5	18.8 8.0	18.4 7.7
EU -17					
Consumption	33.2	31.7	31.7	31.7	32.3
Labour	45.6	44.6	46.5	48.2	48.0
Capital of which CIT	21.3 9.0	23.4 10.3	22.0 9.8	20.3 8.4	19.9 8.4
Poland					
Consumption	37.6	37.0	37.6	36.2	36.6
Labour	39.0	37.3	38.1	38.6	36.3
Capital of which CIT	24.4 7.6	26.0 7.9	24.6 7.9	25.4 7.2	25.4 6.3

[a] Arithmetic average

Source: Calculations based on: *Taxation Trends in European Union* 2012, European Commission, Brussels 2012, pp. 221, 225, 235 and 259.

4. Implicit tax rate

The implicit tax rates (ITR) on consumption, labour and capital are presented in Table 3. ITR is an indicator expressing the relation of the tax burden imposed on various types of activities in relation to the total revenue from this activity (Devereux et. al. 2002). The ITR on consumption measures the percentage of all consumption taxes to the overall expenditures on consumption incurred in a country, the ITR on labour measures the share of taxes levied on labour (income taxes and social security contributions) in the total gross wages earned in a given economy. The ITR takes into account existing legislation and the tax burden resulting therefrom, which may affect the behaviour of different actors and their decisions. There are no distinct differences between the average rates for the EU 27, EU-17, and Poland. It is also significant that the tax burden on consumption and capital went down during the study period. The ITR on labour rose however, although the trend in Poland was opposite (due to decreased PIT and pension contribution).

Table 3. Implicit Tax Rates on Consumption, Labour and Capital

ITR on:	**2005**	**2007**	**2008**	**2009**	**2010**
EU -27					
Consumption	21.7	22.0	21.4	20.9	21.3
Labour	34.2	34.1	33.8	32.2	33.4
Capital [a)] (of which CIT)[a)]	27.0 24.0	26.7 22.8	25.7 21.7	24.4 18.7	21.5 16.7
EU -17					
Consumption	21.3	21.5	20.8	20.5	20.7
Labour	33.7	33.8	34.0	33.5	34.0
Capital (of which CIT)	24.9 22.0	27.0 24.5	25.9 23.0	24.8 19.9	23.4 18.7
Poland					
Consumption	19.7	21.4	21.1	19.0	20.2
Labour	33.8	34.1	32.5	30.9	30.1
Capital (of which CIT)	20.7 21.0	23.4 20.3	22.6 20.3	20.2 14.9	20.5 12.8

[a)] Arithmetic means

Source: *Taxation Trends in the European Union* 2012…, op. cit., pp. 256, 257, 258 and 260.

5. Tax on consumption

While the average EU-27 consumption taxes account for about one third of total tax revenues, their share in the budgets of individual countries is very much diversified. In the 1980s, during a successive extension of the Common Market, the historical nature of these differences was clearly emphasized and countries with “southern” and “northern” tax mentalities observed (Hansmeyer, Mackscheidt, p. 570). In countries with the “southern” tax mentality the share of the informal economy is high and the efficiency of tax administration is low. In this situation the expansion of consumption taxes, and especially excise taxes, makes it possible to provide the budget with tax revenues which “escape” direct taxes. In countries with “northern” mentality, tax collection is higher and the state budget may be based more on income taxes. The first group includes Greece, Italy, Portugal, and Spain, while the second includes Sweden, Denmark, Germany, Austria, and Belgium.

The EU measures to harmonize VAT and selected excise products were designed both to create better conditions for the free flow of goods and services in the common market, and to achieve a better balance between direct and indirect taxes.

After the EU was enlarged by 12 new members there again emerged large differences in the structure of budget revenues. The new member states have a clearly “southern” structure of budgetary revenues (Table 4).

Table 4. The share of consumption taxes in the total budget revenue from taxes (in %) Selected countries

Country	**Total consumption taxes**					
	2005	**2006**	**2007**	**2008**	**2009**	**2010**
EU -27	34.6	34.2	33.6	33.3	33.2	34.4
EU -17	33.2	32.8	32.2	31.7	31.7	32.3
Austria	28.7	28.1	27.7	27.2	28.2	28.1
Belgium	24.7	25.1	24.7	24.0	24.4	24.7
France	25.8	25.3	25.2	25.0	25.6	25.6
Greece	35.0	36.5	36.4	36.0	35.5	38.9
Poland	37.6	37.3	37.1	37.6	36.2	38.6
Estonia	41.8	42.3	41.3	36.8	40.6	39.8
Lithuania	37.9	36.9	38.4	37.8	38.2	42.5
Romania	44.2	42.3	40.7	40.1	38.4	42.4
Bulgaria	50.7	53.9	49.3	53.2	50.8	53.0

Source: *Taxation Trends*…, op. cit., pp. 221, 222.

Table 5. The share of excise duties on tobacco and alcohol in overall budget tax revenue (in %)

Country	2005	2006	2007	2008	2009	2010
EU -27	3.3	3.3	3.3	3.2	3.6	3.6
EU -17	3.1	2.9	2.9	2.7	3.0	3.0
Austria	1.6	1.6	1.6	1.4	1.5	1.5
Belgium	1.7	1.7	1.6	1.5	1.6	1.6
France	1.3	1.6	1.6	1.5	1.7	1.7
Greece	4.2	4.1	4.1	3.6	4.5	4.7
Estonia	5.7	5.2	5.7	4.2	7.0	5.0
Lithuania	4.3	4.5	4.4	4.8	5.3	5.5
Romania	4.4	4.3	4.4	4.4	5.6	5.5
Poland	**6.1**	**5.6**	**5.3**	**6.4**	**5.1**	**6.3**
Bulgaria	6.3	7.2	8.0	8.8	9.5	9.1

Source: *Taxation Trends*…, op. cit., pp. 221, 222.

In 2010, consumption taxes in Bulgaria accounted for 53.0% of total tax revenues, while the same share in Belgium was 24.7%. There are also serious differences in the share of taxes on tobacco and alcohol (VAT + excise tax) in total tax revenues (Table 5), ranging from 9.1% in Bulgaria to 1.5% in Austria.

Revenues from these taxes comprise a fairly significant share of the budgets of several countries: Estonia (5.0%), Romania (5.5%), Lithuania (5.3%) and Poland (6.3%) (*Taxation trends*…, pp. 323, 325).

During the crisis, consumption falls, which leads to a decrease in revenues from indirect taxes (Boeter 2006). In this situation, the state may respond in two ways: reduce consumption tax rates to stimulate aggregate demand, or increase the rate of VAT and excise duty in order to ‘save’ the state budget. During the current crisis, the first measure has been used very rarely (Table 6).

In 2008, Portugal reduced the standard VAT rate by 1 per cent. In 2009, the VAT rate in the United Kingdom was temporarily raised by 2.5 percentage points (but in the next year returned to the previous rate), and in 2010, the VAT rate was raised in Ireland by 0.5 percentage points. A reduction in excise duties on energy products in the years 2009–2011 took place in four countries. On the other hand, a widespread practice has been to increase the standard VAT rate and excise duties on fuel, tobacco, and alcohol (Table 7).

Table 6. Changes in the standard VAT rate in the EU countries in 2008-2012 (in percentage points)

2008	2009	2010	2011	2012
Portugal (-1)	Estonia (+2)	Czech Republic (+1)	Latvia	Cyprus (+2)
	Ireland (+0,5)	Finland (+1)	Poland (+1)	Ireland (+2)
	Latvia (+3)	Greece (+4)	Portugal(+2)	Hungary (+2)
	Lithuania (+1)	Spain (+2)	Slovakia (+1)	Italy (+1)
	Hungary (+5)	Lithuania (+2)	Great Britain (+2,5)	
	Great Britain (-2,5)	Portugal (+1)		
		Romania (+5)		
		Great Britain (+2,5)		

Source: Own compilation based on: *Taxation trends…*op. cit.”.

The fiscal effects of these actions are not clear. Statistical data for the years 2007–2010 shows that although the consumption tax rates increase, this is not reflected in the level of implicit tax rates on consumption (which measures the relationship between the amount of indirect taxes and the total domestic households’ consumption expenditure). In 2010, in 18 countries in the EU-27 the ITR on consumption was lower than in 2007, in remaining countries it increased slightly, less than 1 percentage point), and only in Estonia was the increase higher by 2 percentage points (due to a marked increase in VAT rates and excise duties).

The downward trend in the ITR on consumption was the result of two factors:

- A change in the consumption structure, consisting of an increase in the consumption of basic goods covered by lower rates.
- An increase in inventory levels at various stages of production in late 2008 due to the economic downturn, and a significant increase in VAT refunds.
- It is also worth noting the wide variation of ITR on consumption in different EU countries ranging from 31.5% (Denmark) to 14.6% in Spain in 2010 (and even 12.6% in 2009) and 15.8 % in Greece. In 2010, the ITR was the highest in countries with the highest VAT rate, (25% VAT) rate in Denmark (31.5%), Sweden (28.1%) and Hungary (27.2%). The lowest burden on consumer spending was recorded in Spain (12.3%), where the standard rate for 2009 was 16% (and then increased to 18%) and Greece (14.0%), where the VAT rate was 19% (and only in 2010 rose to 23%) (*Taxation trends*…, p. 358). The level of ITR on consumption is affected (apart from the standard VAT rate) by many factors, including the amounts of preferential rates and scope of their use, the amount of excise duties, and the structure of

consumption of products subject to different rates An example is Luxembourg, which in terms of the ITR ranked fourth (27.3%), slightly behind Sweden, and also has the lowest standard rate of VAT (15%) and three preferential rates: 3%, 6% and 12%, while the share of indirect taxes in relation to GDP (11.9%) is lower than the EU-27 average of 13.4%.

Table 7. Changes in excise duties in EU countries in 2009-2011

Direction of changes	Fuel and energy	Tobacco and alcohol
	2009	
Increase	Estonia, Greece, Hungary, Latvia, Lithuania, Romania, Slovenia, Spain	Finland, Hungary, Latvia, Lithuania, Romania, Slovenia, Spain
Decrease	Italy, Lithuania	
	2010	
Increase	Bulgaria, Czech Republic, Denmark, Estonia, Greece, Hungary, Latvia, Slovenia	Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Latvia, Lithuania, Poland, Slovenia
Decrease	Lithuania, Poland, Slovakia	
	2011	
Increase	Poland, Lithuania	Bulgaria, Cyprus, Czech Republic, Estonia, Lithuania, Latvia, Hungary, Romania, Slovakia, Poland
Decrease	--	--

Source: Taxation trends in the European Union. Focus on the crisis: The main impacts on EU tax systems, European Commission, Eurostat 2011, p. 22.

6. Taxes on labour

Taxes on labour, i.e. taxes on individuals who receive their income from employment (Personal Income Taxes, or PIT), together with mandatory social security and health contributions[1] account for about half of total tax revenues in the EU-27 (47.3% in 2010, representing 17.5% of GDP).

In the past few decades, the tax burden on labour has undergone a significant evolution because a lot of pressure was put on governments to increase public expenditures. Tax progression and inflationary increases in income were used to this end and “pushed” the taxpayers into higher tax

[1] The payroll tax, found in some countries, is also classified as a tax on labour.

brackets, supplying the budget with more income. It was only at the end of the last century, when attention was paid to the negative effects of an excessive burden on labour, that initiatives were started designed to increase the demand for labour, especially among low-paid and unskilled workers, and to boost incentives to work (Carone, Salomaki, No. 160/2011). The changes in personal income tax and compulsory social security contributions were aimed at lowering the taxes and contributions for the lowest earners, thus increasing their amount of tax-free income, and introducing allowances for low paid workers.

The structure of tax revenues in the EU-27 is diverse, which is reflected in the share of taxes on labour in total tax revenue (Table 8).

The lowest share of taxes on labour was recorded in Malta (32.2%) and Bulgaria (32.9%), while in as many as 14 countries it accounted for over 50% of the total tax revenue: Sweden (56.4%), Germany (56.2%), Austria (55.0%), Denmark (51.7%), Finland (53.4%), Spain (55.0%), France (54.9%), Netherlands (55.0%), Belgium (54.1%), Estonia (53.9%), Slovenia (52.2%), the Czech Republic (52.3), and Italy (51.6%). In Poland the share of labour-related taxes accounted for 36.3%, so it was much lower (by 11 percentage points) than the average in EU-27 (Carone, Salomaki p. 327).

Taxes on labour burden both employees (PIT + contributions) and employers (contributions + payroll taxes in some countries). In 2009 and 2010, these relations were in the EU-27 as follows: the burdens on employees comprised 55.6% of the overall tax on labour, and on employers, 44.4%. In Poland the relation was similar: (56.7% and 43.3%). The highest relative tax burdens are levied on employees in Denmark (97.0%), Britain (71%) and Ireland (72.5%) (Carone, Salomaki, pp. 329, 333).

Table 8. Taxes on Labour as % of Total Taxation

Country	**1995**	**2005**	**2007**	**2008**	**2009**	**2010**
EU -27	**48.1**	**45.9**	**45.0**	**46.4**	**48.0**	**47.3**
EU -17	**47.8**	**45.6**	**45.0**	**46.5**	**48.2**	**48.0**
Malta	36.1	32.7	29.9	30.4	31.0	32.2
Bulgaria	42.1	37.0	31.1	30.2	33.7	32.9
Cyprus	37.0	32.4	27.0	28.8	34.8	35.5
Poland	**45.9**	**39.0**	**37.3**	**38.1**	**38.6**	**36.3**
Belgium	55.5	52.9	52.4	53.3	55.0	54.1
France	53.2	52.8	52.0	52.7	55.4	54.3
Sweden	62.1	59.5	57.6	59.7	58.7	56.4

Source: Taxation Trends in the European Union 2012, op. cit., pp. 225.

Table 9. Implicit tax rate on labour in the EU in 2007-2010 (in %)

Country	2005	2007	2008	2009	2010
EU -27	**34,2**	**34,1**	**33,8**	**32,9**	**33,4**
EU -17	**33,7**	**33,8**	**34,0**	**33,5**	**34,0**
Italy	41,1	42,4	43,0	42,6	42,6
Belgium	43,6	42,4	42,5	41,9	42,5
France	41,7	41,4	41,5	41,1	41,0
Austria	40,8	41,0	41,3	40,3	40,5
Hungary	38,4	41,0	42,1	41,0	39,4
Poland	**33,8**	**34,1**	**32,6**	**30,7**	**30,1**
Romania	28,1	30,2	27,3	28,6	27,4
Ireland	25,4	25,7	25,3	25,5	26,1
Bulgaria	33,2	30,4	27,4	25,5	24,4
Portugal	22,4	23,7	23,3	23,1	23,4

Source: years 2007-2009: *Taxation trends*… 2011, op. cit., p. 97; 2010 – *Taxation trends*… 2012, p. 257.

The implicit tax rate on labour (ITR) is an important measure of the tax burden on labour considered as a share of tax burdens imposed on the employees and employers in the total gross wages paid to all employees in the economy. The European Commission data (Table 9) shows that the total burden on labour costs in EU-27 decreased slightly during the crisis: from 34.1% (in 2007) to 32.9% in 2009, and slightly rose to 32.4 (in 2010). In 2010, (compared to 2007), the ITR increased slightly only in a few countries. In Poland, the ITR on labour decreased from 34.1% in 2007 to 30.1% in 2010, reflecting both a reduction in personal income tax rates in 2009, and earlier reductions in pension contributions.

During the crisis, a trend was observed to lower the tax burden on labour, which was beneficial for both employees and entrepreneurs. Employees received a greater part of their wages in the form of disposable income, which stimulated consumer demand. Lower taxes also result in lower labour costs, which may encourage employers to increase employment and/or make new investments.

7. Taxes on capital

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 businesses and self-employment;
- Taxes on wealth, capital and savings held by households and enterprises;
- Taxes on capital transactions.

Taxes on capital are very sensitive to economic trends (Możdzierz 2011, pp. 63-64). This is demonstrated by the declining share of these taxes in relation to GDP in the EU countries, from 8% in 2007 to 7.4% in 2008 and to 6.7% in 2009. The share of this tax in the total budget revenues is also varied. The lowest is in the Baltic States (Latvia - 2.5% of GDP, Estonia - 2.6% of GDP, Lithuania - 3.3% of GDP), while in four EU countries it exceeds 10% of GDP (Luxembourg and the UK - 10.5% of GDP, Malta - 10.9% of GDP and Italy (11.2% of GDP). The sharpest declines in the share of this tax in relation to GDP took place mainly in the countries where the tax burden of this tax was the highest (*Taxation trends*…, p. 336).

Among the taxes on capital, the CIT provides the largest revenues. The revenues from this tax are affected by the statutory tax rate on corporate income, tax base, and especially the method of calculating deductible costs, the scope of tax deductions, exemptions, and the extent of their use, and the level of corporate profits. In recent years the share of corporate income tax revenue is falling, mainly due to declining corporate profits[2].

Nonetheless, revenues from this tax represent more than 40% of budgetary revenues from capital taxes (Table 10). In Poland, the share of revenues from corporate income taxes in revenues from capital income is much lower and the pace of decline is faster, from 36.5% in 1995 to 24.7% in 2010 (compared to 41.7% in EU-27). It is worth noting that the decline in revenues from CIT in Poland was taking place at a time when Poland had a lower decline in GDP than in other countries, and net profits in the business sector grew from 3.3% in 2008 to 4.1% in 2009. The profitability indicators in the private sector were somewhat higher - 3.4% and 4.2% respectively, and therefore there was no substantive reason for such a large decline in the share of CIT in budget revenues.

[2] In earlier years, especially since 2004, the statutory tax rate on corporate income was lowered at a rapid pace in many countries. This process was referred to as “unfair competition” and was launched by the new member states, which wanted to attract foreign investment to their countries by lowering the corporate income tax rates. The recession brought an end to the substantial cuts in corporate income tax rates, (the so-called “race to the bottom”). (A. Krajewska, *Podatki w Unii Europejskiej*,[*Taxation in the European Union*], PWE, Warsaw 2010, pp. 128–146).

Table 10. Structure of revenue from all capital taxes (in %)

Taxes on capital	1995	2005	2007	2008	2009	2010
EU -27						
Taxes on corporate income	43.5	45.3	46.0	46.8	42.8	41.7
Taxes on household income	10.0	10.4	10.7	9.8	9.6	9.2
Taxes on self-employed income	21.1	19.0	18.1	19.7	21.4	21.6
Taxes on capital/wealth	25.4	25,3	25.2	23.7	26.2	27.6
EU -17						
Taxes on corporate income	40.	43.1	44.2	45.0	41.6	42.3
Taxes on household income	9.2	10.1	11.3	11.0	10.4	8.1
Taxes on self-employed income	23.5	20.8	19.0	19.7	22.2	23.3
Taxes on capital/wealth	26.5	26.0	25.5	24.3	25.8	26.2
Poland						
Taxes on corporate income	36.5	34.1	30.3	32.1	27.9	24.7
Taxes on household income	0.5	5.0	5.4	4.1	3.1	9.7
Taxes on self-employed income	35.5	38.6	43.7	41.9	46.9	43.3
Taxes on capital/wealth	27.5	22.3	20.6	21.9	22.1	22.3

Source: Calculation based on: *Taxation Trends in European Union* 2011…, op. cit., pp. 341, 343, 345, 347, *Taxation Trends*...2012, op. cit., pp. 235-245.

The tax on capital resources, assets and savings (stocks of capital/wealth) is another item in the group of capital taxes. This tax accounts for 5–6% of GDP and 20–25% of revenues from capital taxes. There are no significant differences between the tax burdens on this account in the EU countries and Poland. However, the budget revenues from taxes on capital and household savings are in Poland lower (by a factor of almost two) than in other countries. However, this can be considered as typical of transition economies.

Another source of budgetary revenues from capital tax is taxation of self-employed income. These revenues account for 4% of budgetary revenues from taxes and for as much as 26.4% of revenues from capital taxation. In the EU-17 it is just the same (4.5% and 23.3% respectively). In Poland the situation is clearly different. Taxes paid by the self-employed constitute 12.1% of budgetary revenues from taxes, which accounts for as much as 43.3% of the total revenues from capital taxes. These statistics cause one to ponder the methodology of calculating the tax burden adopted by the European Commission, which recognizes self-employment income as capital income. The income of the self-employed is influenced both by the capital necessary to run a business and by income, which should be recognized as income from labour. Even assuming that half of the income from self-employment is income from labour would substantially decrease the tax burden on capital and would increase the tax burden on labour.

Tax burden on capital can be measured using the ITR on capital. This indicator demonstrates what percentage of income coming from capital is assigned to wealth, investment, and savings. The weakening of economic activity resulting from the crisis has decreased the ITR on capital in the EU-27 from 26.7% in 2007 to 21.5% in 2010 and in the EU-17 from 27.0% to 23.4%. In Poland, the decrease was relatively higher - from 23.4% to 20.5% although the recession in Poland was much milder.

The data on the tax burden on capital by economic function (Table 11) shows that:

1. The corporate ITR is higher in the EU-25 and EU-17 than the ITR on business income of households and self-employed;
2. During the study period the changes in the corporate ITR are multidirectional. In 11 countries we can observe a decrease (sometimes even very large, e.g. in Spain, from 63.1% to 24.5%), but simultaneously in six countries the tax burden was significantly increased;
3. The decline in corporate ITR in Poland (from 20.4% to 12.8%) was greater than the EU average;
4. The average EU-25 ITR indicators for other capital incomes (capital and business income, capital and business income of financial corporations and self-employed) are slightly lower than the corporate income tax and have exhibited a lower rate of decline during the recession.

Table 11. Implicit tax rate on capital* (in %)

ITR on capital	**1995**	**2005**	**2007**	**2008**	**2009**	**2010**
EU-25**	**23.6**	**27.0**	**26.7**	**25.7**	**24.4**	**21.5**
of which						
- ITR on corporate income (CIT)	27.0	24.0	22.3	20.8	18.4	16.7
- ITR on capital and business income	17.0	17.9	19.6	18.7	17.1	15.6
- ITR on self-employed income	10.5	13.4	14.3	12.7	12.3	11.7

EU -17	**24.8**	**24.9**	**27.0**	**25.9**	**24.8**	**23.4**
of which						
- ITR on corporate income (CIT)	22.4	22.0	23.8	21.7	19.2	18.7
- ITR on capital and business income	18.2	17.6	19.9	19.2	17.8	16.9
- ITR on self-employed income	12.4	12.0	14.4	13.2	13.0	12.8
Poland	**20.9**	**20.7**	**23.4**	**22.6**	**20.2**	**20.5**
of which						
- ITR on corporate income (CIT)	46.8	21.0	20.4	20.3	14.7	12.8
- ITR on capital and business income	14.9	15.9	18.6	17.6	15.9	15.9
- ITR on self-employed income	8.1	12.6	16.2	14.9	14.8	16.5

* Arithmetic means

** without Bulgaria and Romania

Source: Years 1995, 2007-2009 - *Taxation Trends*…2011, op. cit., pp. 360, 361, 362, 363, 2010– *Taxation Trends*…2012, op. cit., pp. 258-261.

8. Conclusions

The following conclusions arise from the analysis of the structure of budget revenues in 2007–2010:

1. The crisis has contributed to a decline in budgetary revenues from taxes. At the same time, stabilization measures have led to increased public spending. In this situation the role of the fiscal function of taxes is increasing;
2. The majority of budget revenues come from taxes on labour. And this is the only tax whose share in the overall tax revenues grew in the years 2007–2009;
3. The share of income from taxation of consumption is fairly stable - it accounts for about 33% of budgetary revenues from taxes, despite an increase in VAT and excise duties;
4. The revenues from taxation of capital have decreased significantly, especially CIT, in relation to total budgetary revenues from taxes.

Comparison of ITR on consumption, labour and capital for the study period allows for the following conclusions:

1. The ITR on labour is the highest. In 2007, the EU-27 personal income tax (PIT) and social security contributions (SSC) together comprised 34.1% of gross wages, in 2009 less than 32,2% and 33.4% in 2010. The ITR on labour has decreased because of the efforts made in many countries towards reduction in taxes and contributions for the lowest earners, and also because of the decline in wages due to the crisis;
2. There is a slight decline in the tax burden on consumption (ITR on consumption) - from 21.9% in 2007 to 21.3% in 2010. This has occurred despite the increase in the standard rate of VAT and excise tax increases. This means that the structure of consumption is undergoing transformation. The share of products and services with the preferential VAT rate is increasing. Such a shift in the structure of consumption structure mostly concerns the lowest income households;
3. The effective tax rate on capital (ITR on capital) was reduced over the study period from 26.7% to 21.5%, i.e. by 5.2 percentage points. It should be emphasized though, that it was the corporate income tax (corporate ITR) that decreased the most - from 22.3% to 16.7%, i.e. by 5.6 percentage points;
4. The decreased share of revenues in relation to GDP caused by the crisis has resulted in a decreased implicit tax rate on consumption, labour and capital. The tax burdens on capital have decreased rapidly, and the tax burdens on labour have decrease only to a very small extent (in fact are barely perceptible). Therefore the ITR, as another measure of fiscalisation, confirms that the costs of the crisis are borne by the employees to the greatest extent. This shift in the tax burden indicates that tax policy is to a greater extent geared to implement the fiscal. rather than the redistributive or stimulatory, function or to encourage demand, and therefore it does not help alleviate the economic crisis.

In Poland, the changes in the tax system do not coincide with the trends observed in other EU countries. Poland’s specificity lies in the fact that:

1. The decrease in budgetary revenues from taxes in relation to GDP was greater than in other EU countries and was not a consequence of the decline of the GDP growth rate, but rather was the result of earlier political decisions on tax cuts (including the shift from three personal income tax brackets of 19%, 30% and 40% to two-tier scale of 18% and 32%).
2. The decrease in budgetary revenues did not significantly affect the structure of budgetary revenues from taxes.

3. The decrease in revenue from taxes on consumption (in relation to GDP) was higher than the average in EU-27 and was accompanied by a pronounced reduction of the ITR on consumption.
4. The structure of budgetary revenues from taxes differs significantly from that observed in the EU-27. The difference is that in Poland the share of revenue from taxation on labour in the overall budgetary revenues from taxes is lower by 11 percentage points, while the share of consumption taxes and capital taxes is higher.
5. Although the share of taxes on labour in the overall revenues from taxes is clearly lower, the ITR on labour in Poland is almost similar to EU average. This can be explained by the low level of gross wages in Poland. This hypothesis is confirmed by the low share of employment costs in relation to GDP. In Poland these costs amount to 37.2% of GDP, while the arithmetic average for the EU-27 is 46.4% of GDP[3].
6. Despite the relatively high share of taxes on capital in budgetary revenues, the tax burden on corporations is relatively low and also the effective tax rate (corporate ITR) is lower than in most EU countries.
7. The relatively high share of capital taxes in the Polish budget can be explained by taxes collected from the self-employed and small businesses. According to the terminology used in the European Commission, these taxes are regarded as taxation of capital. In Poland, most self-employed businesses do not have large capital; a significant portion of their taxes can thus be regarded as taxes on labour. At the same time, the taxes they pay in Poland represent 12.1% of total budgetary revenue, compared to 4.0% in the EU-27, so these taxes are more than three times higher in Poland than in the EU.

In Poland, the process of shifting the tax burden from capital (and especially from taxation of corporations) to labour and consumption is taking place at a faster rate than in other EU countries.

Statistical data shows that in time of crisis, the burden of maintaining the country is based on taxation of labour rather than on taxation of capital. How should this be assessed? There is no clear answer.

Supporters of the liberal approach consider this direction of tax burden evolution to be correct. The reduced tax burden for entrepreneurs fosters investment and employment and thus helps economy recover from the crisis.

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[3] Data for 2010. Calculations based on the *Statistical Yearbook of Polish Republic*, GUS, Warsaw, 2011, p. 885.

The Keynesians believe that the tax burden on labour reduces consumer demand and hampers the process of recovering from the crisis, and also leads to increased social disparities.

There is also another option – that the consequences of the crisis should be incurred to approximately the same degree by both capital and labour. It is also worth noting that the recent prevailing view is that the burden of crisis should be shifted from the poor to the rich, and from employees to entrepreneurs.

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Streszczenie

WPŁYW KRYZYSU NA OPODATKOWANIE KONSUMPCJI, PRACY I KAPITAŁU W UNII EUROPEJSKIEJ

Celem artykułu jest pokazanie wpływu kryzysu na zmiany w opodatkowaniu konsumpcji, pracy i kapitału w różnych krajach UE.

Reakcja polityki podatkowej na obecny kryzys będzie analizowana w trzech aspektach:

1. *Analiza obciążeń podatkowych rozpatrywanych według ich ekonomicznych funkcji, czyli udział podatków obciążających konsumpcję, pracę i kapitał w łącznych dochodach budżetowych z podatków oraz w relacji do PKB.*
2. *Analiza trendów dotyczących ukrytych (efektywnych) stawek opodatkowania (the implicite tax rate – ITR) konsumpcji, pracy i kapitału. ITR jest wskaźnikiem, który pokazuje relacje między obciążeniami podatkowymi nakładanymi na dany rodzaj aktywności gospodarczej (konsumpcję, pracę lub kapitał) i łącznymi dochodami osiąganymi z określonego rodzaju aktywności. ITR uwzględnia legislacyjne aspekty podatków i inne czynniki wpływające na ostateczne obciążenia podatkowe, a zatem wywiera wpływ na zachowania różnych podmiotów gospodarczych i podejmowanych przez nich decyzji.*
3. *Trendy obserwowane w krajach UE są porównywane ze zmianami dokonującymi się w Polsce. Skłania to zarazem do przedstawienia specyfiki polityki fiskalnej prowadzonej w Polsce w ostatnich latach.*

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