

# STRUCTURAL CHANGES IN PUBLIC EXPENDITURES IN THE EUROPEAN UNION SINCE 2008 – WITH SPECIAL REGARD TO NEW MEMBER STATES

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# **STRUCTURAL CHANGES IN PUBLIC EXPENDITURES IN THE EUROPEAN UNION SINCE 2008 – WITH SPECIAL REGARD TO NEW MEMBER STATES**

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## **Abstract**

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This paper analyses the reasons for growing size and the change in the structure of public expenditures in the European Union since 2007, with special regard to the New Member States (NMS). In the first part, by using the decomposition technic, the increase of expenditure ratio-to-GDP will be separated to 1) the impact of the change in GDP and 2) the effect of the change of actual public expenditures. The calculation shows that in 2009, mainly the fall of GDP was responsible for the rise in the expenditure ratio. This means that the “automatic stabilizer” was more important in shaping the fiscal trends in the year of the acute crisis than the demand-boosting actions. Taken, however, the entire period since 2008, the higher expenditure ratio in 2014 can exclusively explained by the expenditure effect. Beyond the average, there is a great variety both in the old and in the new member states.

Concerning the structure of raising expenditure ratio, the paper uses the COFOG statistics measured by the share in GDP. The main characteristic of the changes can be summarized by the growing share of expenditures on social protection and health since 2008, in the EU28 average. In NMS, however, the share of expenditures on social protection decreased since the global crisis.

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## Executive summary

In 2009, the year of the acute financial and economic crisis, the former trend of decreasing fiscal deficit reversed in the EU member states: in the EU27, expenditures spectacularly rose from 44.9% of GDP in 2007 to 50.3% in 2009, thus by 5.4 percentage points.

The governments of the member states faced multiple challenges during the crisis. Economic growth fell far from its potential rate, into negative territory, and unemployment rates jumped by 7-10 percentage points on average. At the same time, the governments were able to meet their financing needs only at substantially elevated level of interest rates from the international financial markets. The fiscal debt to GDP ratio rose markedly in every member state: the average debt ratio was 86.8% in 2014 in the EU28, as opposed to the 57.8% in 2007, and even the debt ratios in most of the less indebted member states increased to around 40%.

In the autumn of 2008 the EU urged the member states – at least the ones that could afford it, thanks to their favourable initial fiscal position – to “give free rein” to the fiscal deficit. Due to the unimpeded operation of the „automatic stabilizer”, the overall public expenditure ratio of the EU28 rose by 5.4 percentage points during 2008-09. It is important to note that mainly the contraction of GDP, not the „runaway” spending of member states, was the decisive factor behind the immediate rise in the expenditures to GDP ratio: the effect of contracting GDP accounted for 63% of the rise in the ratio in 2008-2009, as opposed to the 37% due to the effect of raising expenditures. This means that the „automatic stabilizer” was more important in shaping the fiscal trends in the year of the acute crisis than the demand-boosting actions, or bank and company bailouts, or the steps taken to increase social spending.

Still, the subsequent responses of the various member states to the fiscal consequences of the crisis differed widely, depending on the differences in the inherited fiscal position and on the extent of how deeply the individual countries were involved in the bank-saving measures. As for the inherited position, Hungary, for example, was among the countries where letting the automatic stabilizer operate was not an option; its prior fiscal deficit was high, even after the 2006-2007 consolidation package, and this, along with the country’s high external indebtedness, created a fragile financial situation. After the outbreak of the crisis, the government was forced to pursue pro-cyclical fiscal policy, which resulted in a decrease of the deficit-to-GDP ratio between 2007 and 2009, which was unique within the EU.

Yet, the group of Eastern European new member states (EU11) on average, experienced a surge of deficit similar to the EU as a whole, with a particularly steep rise in Latvia, Lithuania and Romania, in 2008-2009. This, however, was only partly due to expenditures – since the *latter grew at a less spectacular pace than in the EU28*, by 3.3 percentage points – it was also a result of the more drastic fall in fiscal revenues from 2007 to 2009 in Eastern Europe than in the EU28. In particular, the rise in the expenditure-to-GDP ratio was moderate in the Visegrad countries, except for Slovakia.

The Baltic states are a special case: they pursued restrictionary fiscal policy without any compelling reason, either in terms of the inherited fiscal situation or in terms of the burden of banking sector bailout. The Latvian government implemented an austerity package in 2008-2009 that amounted to 6% of GDP, slashing all main categories. Lithuania and Estonia

introduced extremely harsh austerity measures as well, thus the Baltic states were among the member states that implemented the sharpest expenditure cuts throughout Europe.

Although the overall spending-to-GDP ratio of the EU28 has decreased since 2009, *it still was higher by 3.3 percentage points in 2014* than in 2007, the last pre-crisis year. We proceed by highlighting the expenditure categories that were primarily responsible for the elevated level of state redistribution.

According to the COFOG statistics – breakdown of general government expenditures by function – the overall spending to GDP ratio of the EU28 rose primarily due to the *social protection* expenditures. As a percentage of GDP, pension disbursements and other social expenditures rose by 1.6 and 0.7 percentage points, respectively, between 2007 and 2014, despite the fact that almost every member state raised the retirement age and modified the benefit formulas. Pension expenditures constitute one of the largest categories within government spending, with a share of 10-15% within the GDP.

*Health care* expenditures also rose in the EU28 as a percentage of GDP, from 6.5% to 7.2%. Some relative growth in general public services was observed as well, but the GDP share of other expenditure categories was basically the same in 2014 than in 2007.

To sum up, the crisis brought about a clear shift in the structure of public expenditures in the EU, with *relative gains in welfare spending*. From the overall rise of 3.3 percentage points in the spending to GDP ratio during 2007-14, social and healthcare spending accounts for 3 percentage points. In a growing number of member states, social protection expenditures make up one-fifth of GDP.

Public spending on *economic affairs* remained largely unchanged in the EU28 as a whole. On average, European public expenditures on this category amount to only 4-4.5% of GDP, with large variance among the individual member states; much of this variance can be attributed to the differences in the extent to which the countries were involved in the banking sector bailout. But the EU funding provided an important additional source of development spending, amounting to 1.5-3.5% of GDP between 2007 and 2013.

As previously noted, the rise in the GDP ratio of expenditures between 2007 and 2009 was less steep in the Eastern European new member states than in the EU28 as a whole. This is true for the cumulative rise of the said ratio *from 2007 to 2014 as well*: compared to the overall rise of 3.3 pps in the EU28, the ratio rose by only 0.5 and 0.4 percentage point, respectively, in the EU11 and the V4. The difference is especially visible regarding expenditures on general public services and on social protection: a slight-to-moderate rise in the spending-to-GDP ratios for both spending categories in the EU28 stood against a stagnation or decline in Eastern Europe.

On the whole, the European fiscal measures focused not so much on improving the long-term growth potential but rather on the mitigation of the recession, and they served this task quite well. Later, the focus shifted to the mitigation of the short-term fiscal consequences of the crisis and the anti-recession measures, with partial success. It should be noted, however, that the same measures led to different outcomes in different countries, depending on economic factors (productivity, competitiveness), social structure (average level of education, demographic trends), and even the level of trust. The Greek and the Latvian fiscal

consolidation efforts, or the Irish fiscal consolidation following a huge banking bailout (with a cost up to 30% of GDP) can serve as good illustrations to this point.

Whether the shift toward social spending during the reference period has any long-term effect on growth potential is uncertain. On the other hand, the data on the last decade does not suggest a growth enhancing-effect of infrastructure, education and healthcare spending – the so-called productive expenditures. Even if this apparent lack of positive impact is a result of the specifics of this particular, crisis-ridden period, at any rate the quality of institutional setup and the level of social trust are at least as important in this respect as the quantitative evolution of fiscal expenditures.

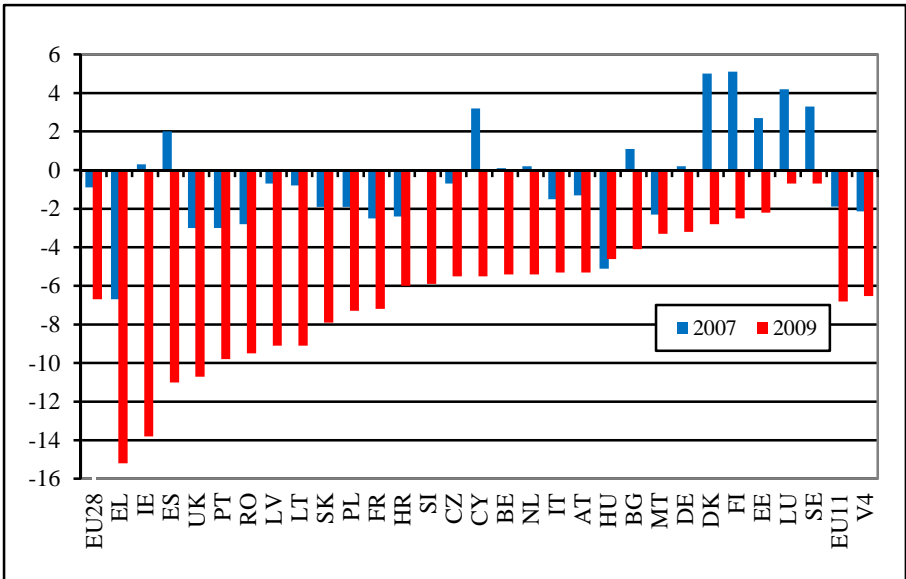


# 1. The fiscal situation in the EU28 before, during and after the crisis: an overview

## 1.1. Fiscal balances

In the mid-2000s, until the outbreak of the crisis, fiscal deficits tended to decrease in the majority of the EU countries. This was, on the one hand, a result of robust – in some countries even overheated – economic growth. On the other hand, the Stability and Growth Pact also prompted the member states to make efforts to reduce the deficit.

**Chart 1: General government balance in the EU-countries, as a percentage of GDP in 2007 and 2009**



Source: Eurostat database, Economy and Finance, Government Finance Statistics database

As a result, the overall deficit in the EU28 as a whole was as low as 0.9% of GDP in 2007. Out of 28 current member states, only 16 had negative fiscal balance, while 12 achieved surplus. But the situation radically changed after the autumn of 2008, following the escalation of the financial and economic crisis. The crisis exacerbated the fiscal situation through several channels: it reduced tax revenues, while it pushed up expenditures, mostly related to surging unemployment. The European Commission declared, in its European Economic Recovery Plan, that “the Commission proposes that Member States agree a co-ordinated budgetary stimulus package which should be timely, targeted and temporary, to be implemented immediately”, implying that – in the countries that are not facing significant imbalances – the automatic stabilizers need to be let operate freely, and even be complemented by additional measures. The fiscal easing served as a means to cushion the fall in demand, precipitated by the crisis. Hungary was the only country that posted a smaller deficit in 2009 than in 2007, since it was forced – due to its very fragile financial standing – to apply pro-cyclical fiscal policy amid the recession. The group of Eastern European new member states however, on average, experienced a surge of deficit similar to the EU as a whole, with a particularly steep rise in Latvia, Lithuania and Romania, in 2008-2009. In Latvia and Lithuania, the deficit rose

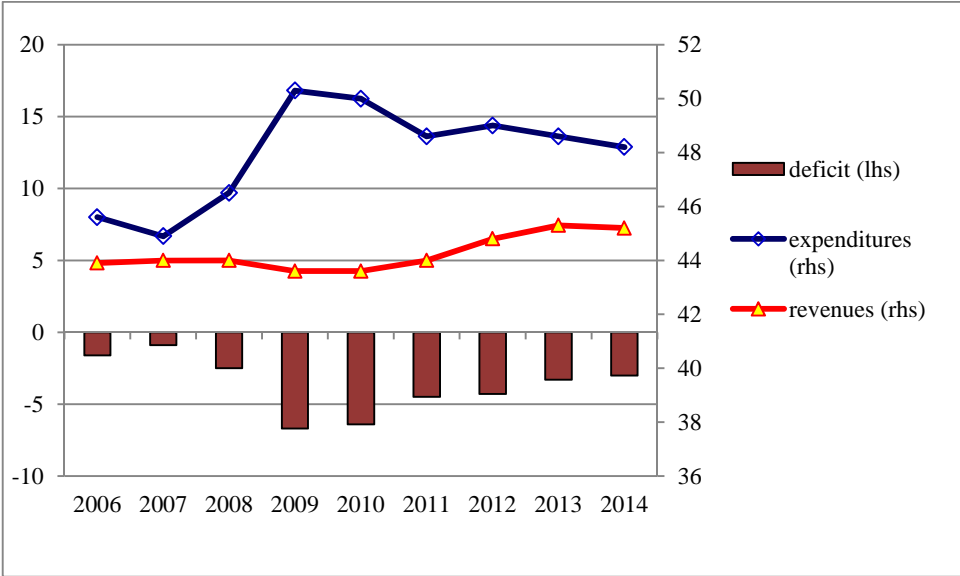
despite the harsh austerity introduced simultaneously, implying that much of the deficit surge was a result of plummeting GDP, not soaring expenditures.

In 2009 only the deficits posted by Denmark, Finland, Estonia, Sweden and Luxembourg remained below the Maastricht reference level, and not a single country posted positive fiscal balance. While the deficit-to-GDP ratios of the member states varied between 0.7% and 15.2%, the average deficit ratio of the EU28 stood at 6.7%.

The fiscal outcomes cannot be linked entirely to the recession itself: other factors played a role as well. Not only the operation of the automatic stabilizer led to higher fiscal deficits but expenditures were also boosted by stimulus packages that – among others – aimed at buttressing various economic sectors that had been especially hardly hit by the crisis. Automotive industry is a prominent recipient: in Germany for example, it received substantial support in the form of a “cash for clunkers” program.

The **consolidation of the banking sector** in 2008-2010, in the form of state guarantees and bank recapitalizations, caused an additional expenditure of several billion euros – and, consequently, an increase in overall deficit by a comparable amount. This was necessary to avoid the collapse of the banking system after the Lehman Brothers bankruptcy<sup>1</sup>.

**Chart 2: Fiscal expenditure, revenue and deficit in percent of GDP in the EU28**



Source: Eurostat database, Economy and Finance, Government Statistics. Retrieved: 2016.05.10.

In the EU, rocketing expenditures were the primary factor behind the deficit growth, while the role of decreasing revenues was less spectacular, as can be seen in-ON chart 2. Only 10% of the overall rise in the deficit-to-GDP ratio was due to declining revenues; the other 90% came from the leap in expenditures. Of course, the negative change of GDP in itself contributed to rising deficit-to-GDP ratios – this factor is discussed in the following subsection.

By 2009, the GDP ratio of fiscal expenditures was higher by 5.4 percentage points than in 2007. After 2009, the trend turned downward, even if the decrease was not uninterrupted.

1 The banking sector bailout caused an enormous additional government spending in Ireland, the UK and in Spain, but it contributed to the increase in the fiscal deficit, more or less, in almost every other member state as well.

Still, even as late as in 2014, the expenditures-to-GDP ratio exceeded its 2007 level by 3.3 percentage points. After the 2009 peak at 6.7%, the average deficit-to-GDP ratio was reduced to 3% by 2014, even though, as it will be shown in the subsequent sections, this average trend is a net result of widely differing trends in the individual member states. To this reduction of the deficit ratio by 3.7 percentage points, expenditure cuts contributed by 2.1 percentage points, while rising revenues contributed by 1.6 percentage points. As can be seen from chart 2, the fiscal consolidation efforts brought about a rise in revenues by 1 percentage point, from 43.6% to 45.2% of GDP, between 2009 and 2014.

## 1.2. The relative impact of changes in the GDP and changes in expenditures on the expenditures-to-GDP ratio

To make an economic assessment of the steep rise in the GDP ratio of fiscal expenditures during the crisis and its gradual decrease afterwards, it is important to know to what extent these changes are due to changes in GDP on the one hand, and to the nominal changes in expenditures on the other. To put it differently: to what extent the generous government spending accounted for the rising expenditure-to-GDP ratio, and how much of this rise can be attributed to the contraction in the GDP (that is, the denominator of the ratio in question).

For computing the relative contributions of the two factors, we apply a standard decomposition formula:

$$K_{ij} = K_E + K_{GDP} \quad (1)$$

where

$K_{ij}$  is the change in the expenditures-to-GDP, measured in percentage points, between the years  $i$  and  $j$ , with  $i$  denoting the base period, and  $j$  denoting the reference period,

$K_E$  is the impact of the change in expenditures to the expenditures-to-GDP, with the exclusion of the impact of the change in GDP: the expenditure effect;

$K_{GDP}$  is the impact of GDP change on the expenditures-to-GDP ratio (GDP effect).

$$\sum \frac{E_j}{GDP_j} - \sum \frac{E_i}{GDP_i} = K_{ij} \quad (2)$$

$$\sum \frac{E_j}{GDP_i} - \sum \frac{E_i}{GDP_i} = K_E \quad (3)$$

$$\sum \frac{E_j}{GDP_j} - \sum \frac{E_j}{GDP_i} = K_{GDP} \quad (4)$$

where

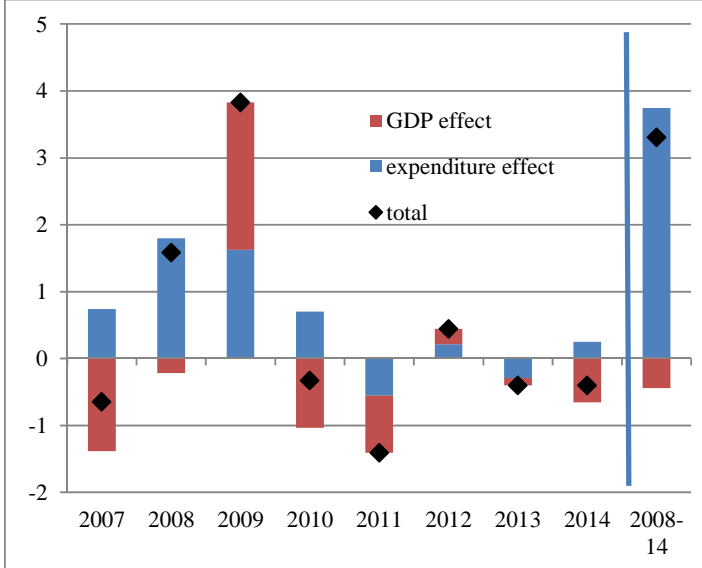
$E_{i,j}$  are the nominal values of current expenditures in the base period and the reference period, respectively,

$GDP_{i,j}$  are the the nominal GDP values in the base period and the reference period, respectively.

From equations (3) and (4) the extent of the respective impacts of changes in expenditure (3) and of changes in nominal GDP (4) on the change in the GDP ratio of expenditures between the two periods can be calculated. Equation (3) informs about the magnitude of the change that would have taken place had the nominal GDP in period  $j$  been identical to that of period  $i$ , that is, the extent of the change in the expenditure-to-GDP ratio that is *independent* from GDP

change. Equation (4), on its turn, assumes away the change in nominal expenditures. **A positive value at any of the two components indicates that they had an upward effect on the GDP rate of expenditures; a negative value indicates a downward effect.** In case of the GDP effect it means that a negative value contributes to the decrease of the public expenditure ratio. Values are calculated at current prices.

**Chart 3: The annual and the cumulative effect of the changes in fiscal expenditures and GDP on the change in the expenditure-to-GDP ratio in the EU28, between 2007 and 2014**



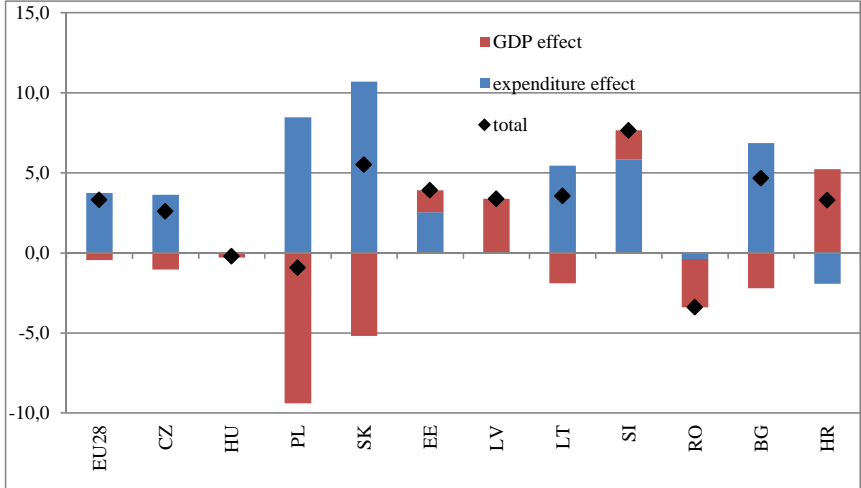
Source: see chart 2, and own calculation

In 2007, the last year before the crisis, strong GDP growth exerted a substantial downward impact on the rate of fiscal redistribution, overriding the opposite effect of rising expenditures. As a net result, the GDP ratio of expenditures slipped by 0.7% percentage point. In 2008, however, the weakening downward GDP effect could not offset the upward effect of expanding expenditures, resulting in a rise of 1.56 percentage points in the GDP ratio of expenditures. In 2009, at the peak of the crisis, both factors raised the expenditure-to-GDP ratio, resulting in a rise of **3.83** percentage points compared to previous year. It should be emphasized that the impact of falling GDP more pronounced in 2009 than the impact of rising expenditures: the former accounted for 57%, and the latter for only 43% of the overall rise. This proves that the “automatic stabilizer” was the primary factor in 2009, as opposed to the stimulus packages, or bank consolidation and firm-saving measures, or the increased social spending (see chart 3).

From 2010, as the recovery began, the change in GDP has had a moderating effect on the expenditure ratio, while the year-on-year expenditure effect kept shifting between positive and negative territory, as the fiscal consolidation efforts became more prominent in many member states. On the whole, taking 2007 as a base year, the overall rise in the expenditure-to-GDP ratio between 2007 and 2014 was exclusively due to increasing expenditures. As can be seen in chart 3, the higher ratio in 2014 (by 3.3 percentage points compared to 2007) was a net result of the rise of more than 3.5 percentage points from the *expenditure effect*, partly offset by a downward push equal to almost 0.5 percentage point coming from the *GDP effect*. From 2010 the overall economy of the EU28 was rising slowly, but almost continuously, yet, the GDP ratio of expenditures were not drastically lower in 2008-13 on average than in 2009. Since the growth outlook in the coming years is not much better than the actual growth record

during 2010-14, direct expenditure cuts would be necessary to a reduction of the expenditure-to-GDP ratio, but no such significant cuts are on the horizon at present. (The detailed data on the decomposition of the expenditure-to-GDP ratios by country are displayed in Annex 1.)

**Chart 4: The cumulative effect of the changes in fiscal expenditures and GDP on the change in the expenditure-to-GDP ratio in the EU28 and in the New Member States, between 2008 and 2014**



Source: see chart 2, and own calculation

The New Member States do not show a uniform picture. A remarkable similarity to the old member states is that in 7 from the 10 countries the public expenditure ratio significantly grew between 2008 and 2014 (by 3-7 pps); in Hungary stagnated, in Poland declined slightly and in Romania definitely fell.

Concerning the components of this pattern, however, there are no similarities between NMS. The extreme case is Hungary, where both the cumulative GDP effect and expenditure effect were close to zero in the period between 2008 and 2014, reflecting a near-zero economic growth on the one hand (Due to the very sharp downturn in 2009 and a double-dip recession in 2012), and the prevalence of fiscal austerity – with a brief intermezzo of a very degressive fiscal easing in 2011 – between 2007 and 2012. Without the significant rise in expenditures in 2013-2014, the cumulative expenditure effect for 2008-14 would have been negative, in contrast with the EU as a whole or the other V4 countries.

Two other countries show remarkable difference to the other countries. In Lithuania, the increase of expenditure ratio was exclusively a result of the GDP decline, while Romania is a counter-example: the growth of GDP led to the fall of expenditure ratio, while the expenditure effect was negligible. That means that in the Romanian economy the fast economic growth was accompanied by a disciplined fiscal policy.

The Czech Republic displayed a similar pattern to that of the EU28 for the 2008-14 period as a whole (Chart 4). The rate of expenditures was in 2014 2.6 per cent higher than it was in 2007 and from this increase 3.62 pps can be attributed to the actual raise in expenditures, meanwhile the GDP growth had a decreasing impact (-1.02 pps) on the rate of expenditures to GDP.

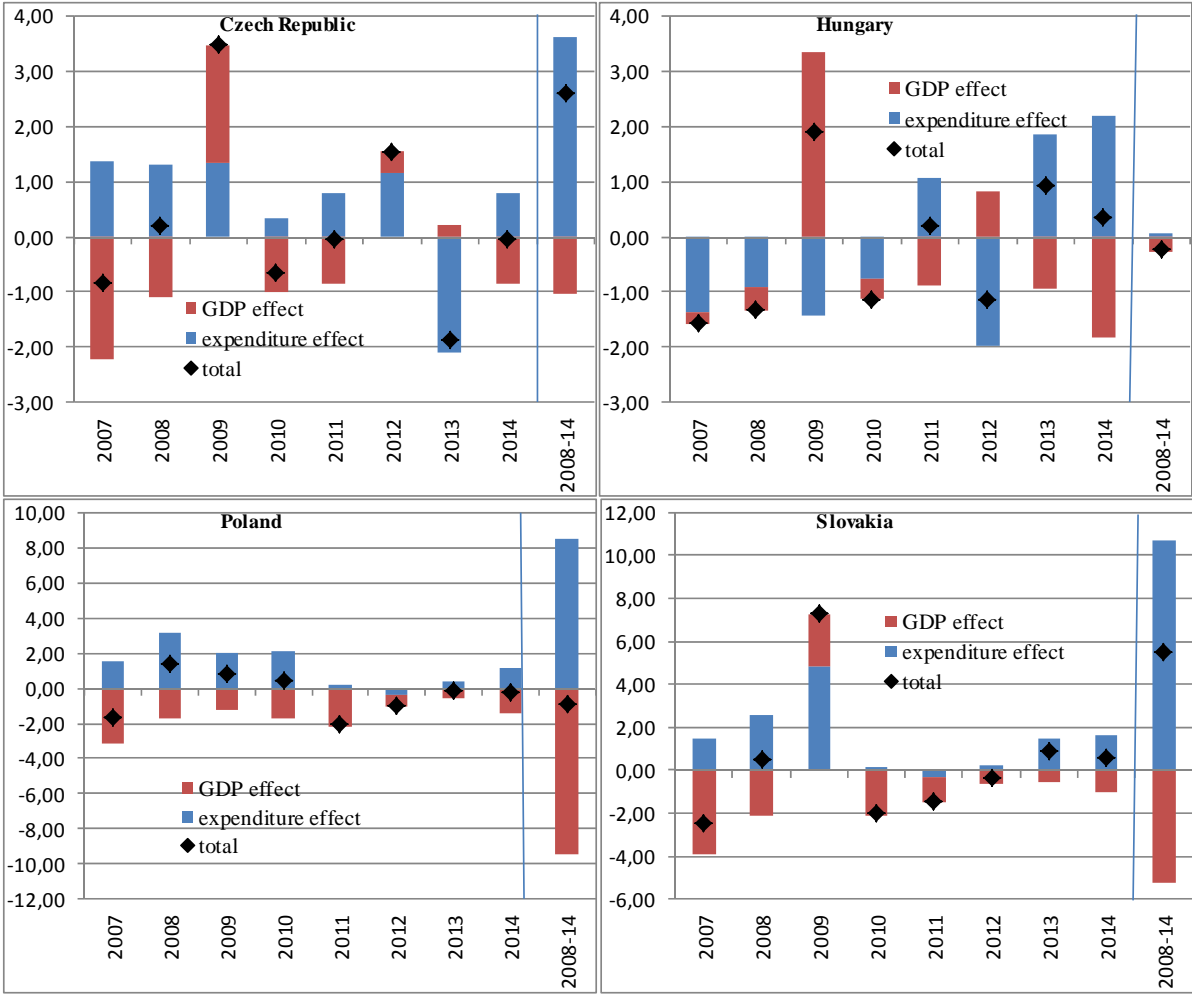
In Poland, which avoided recession in 2009, the cumulative GDP effect even surpassed the raising expenditure effect – which in itself was also very sizeable – resulting in an overall decrease in the expenditure ratio from 2007 to 2014.

Although the course of year-on-year changes in Slovakia was not very different from that in the EU28, in terms of their direction at least, both the cumulative upward expenditure effect and the downward GDP effect was more pronounced in Slovakia than in the EU28. This is especially true for the expenditure effect, which was also the strongest among the Visegrad countries, primarily due the extremely steep surge of expenditures in 2009.

On the other hand, the extraordinary GDP growth prior the crisis and the very strong rebound in 2010 resulted in an overall negative GDP effect (t.i. decreasing effect on expenditure ratio) that clearly surpasses that in the EU28 and in the other V4 countries – with the obvious expectation of Poland that continued to grow through the crisis period (Chart 5).

Still, as a net result, the massive expenditure effect trumped the GDP effect, and the rise in the expenditure-to-GDP ratio in Slovakia was the highest among the V4 countries (although from a very low base level) and was well above the EU average.

**Chart 5: The effect of the changes in fiscal expenditures and GDP on the change in the expenditure-to-GDP ratio in V4 countries between 2007 and 2014**



Source: see chart 2, and own calculation

## **2. The impact of the crisis on the structure of public expenditures: a detailed analysis**

### **2.1. Public expenditures by function: an overview of the statistical data**

One of the applicable classifications of various spending items is the classification by function (Classification of Functions of Government - **COFOG**). This classification has three levels of details: COFOG I (divisions, ten main categories), COFOG II (groups, 69 categories) and COFOG III (classes, 109 categories). Hereby we limit our analysis to the divisions and the most important groups.

#### **01 GENERAL PUBLIC SERVICES**

- 01.1 Executive and legislative organs, financial and fiscal affairs, external affairs
- 01.2 Foreign economic aid
- 01.3 General services
- 01.4 Basic research
- 01.5 R&D General public services
- 01.6 General public services n.e.c.
- 01.7 Public debt transactions
- 01.8 Transfers of a general character between different levels of government

#### **02 DEFENCE**

#### **03 PUBLIC ORDER AND SAFETY**

#### **04 ECONOMIC AFFAIRS**

- 04.1 General economic, commercial and labour affairs
- 04.2 Agriculture, forestry, fishing and hunting
- 04.3 Fuel and energy
- 04.4 Mining, manufacturing and construction
- 04.5 Transport
- 04.6 Communication
- 04.7 Other industries
- 04.8 R&D Economic affairs
- 04.9 Economic affairs n.e.c.

#### **05 ENVIRONMENTAL PROTECTION**

#### **06 HOUSING AND COMMUNITY AMENITIES**

#### **07 HEALTH**

- 07.1 Medical products, appliances and equipment
- 07.2 Outpatient services
- 07.3 Hospital services
- 07.4 Public health services
- 07.5 R&D Health
- 07.6 Health n.e.c.

## **08 RECREATION, CULTURE AND RELIGION**

- 08.1 Recreational and sporting services
- 08.2 Cultural services
- 08.3 Broadcasting and publishing services
- 08.4 Religious and other community services
- 08.5 R&D Recreation, culture and religion
- 08.6 Recreation, culture and religion n.e.c.

## **09 EDUCATION**

- 09.1 Pre-primary and primary education
- 09.2 Secondary education
- 09.3 Post-secondary non-tertiary education
- 09.4 Tertiary education
- 09.5 Education not definable by level
- 09.6 Subsidiary services to education
- 09.7 R&D Education
- 09.8 Education n.e.c.

## **10 SOCIAL PROTECTION**

- 10.1 Sickness and disability
- 10.2 Old age
- 10.3 Survivors
- 10.4 Family and children
- 10.5 Unemployment
- 10.6 Housing
- 10.7 Social exclusion n.e.c.
- 10.8 R&D Social protection
- 10.9 Social protection n.e.c.

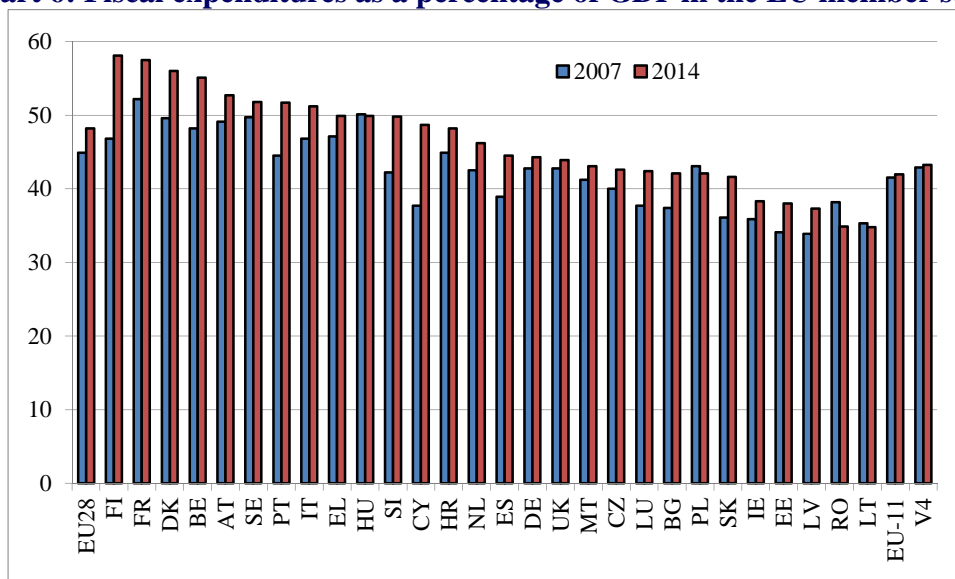


## 2.2. General government expenditures by country

Behind the average rise in the overall expenditures to GDP ratio between 2007-14 in the EU28 (from 44.9% to 48.2%), the expenditure paths of the individual countries were quite varied. Yet, the ratio rose in almost every member states, with only four exceptions: Poland and Romania, on the one hand, due to the especially good growth record, and Hungary and Lithuania on the other hand, due to the return of the expenditures to GDP ratio to its pre-crisis level after a temporary surge. (Until 2013, Bulgaria belonged to this latter group, but 2014 saw another surge in fiscal spending.)

As a result, while the spending to GDP ratio generally remained below 50 in 2007 (with the exception of France, and Hungary), the number of member states with their spending ratio above 50% (in some cases, even close to 60%) was 8 in 2014.

**Chart 6: Fiscal expenditures as a percentage of GDP in the EU member states**



Source: See chart 2

The rise in the GDP ratio of expenditures was the highest in Finland and Cyprus (around 11 percentage points in both cases) but the ratio grew by more than 7 pps in Slovenia and Portugal as well. Such an extraordinary rise could not have happened without the protracted economic weakness in those countries.

The expenditure ratio is related, among others, to the banking bailout costs and their timing, as the data on Ireland, Slovenia, Spain and Portugal show. But the pursued fiscal policies and the strength of the post-crisis recovery is also important: in Ireland, the rise in the spending to GDP ratio was relatively moderate, considering the enormous banking consolidation – in fact, the rise from 2007-to 2014 was smaller than in Slovakia, a country that was not involved in the bank crash. As it is shown on chart 4, the GDP ratio of expenditures significantly rose in a number of countries where neither the recession, nor the bailout costs were particularly debilitating.

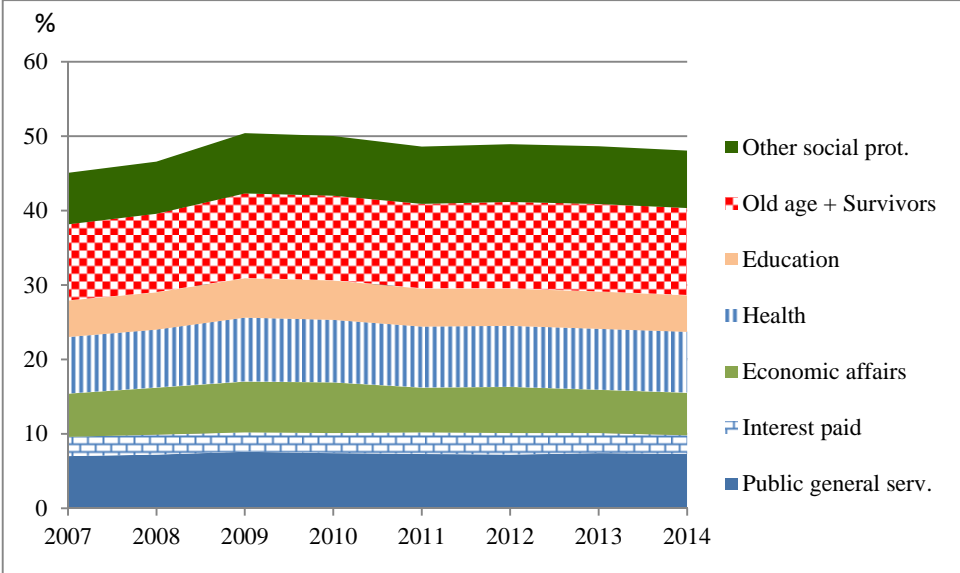
The expenditure-to-GDP ratio, on average, is *below* the EU28 level in the *Eastern European new member states* (denoted as EU11 in the chart), and within them, in the Visegrad countries (V4) as well. Moreover, the ratio, on average at least, *did not rise* significantly from 2007 to 2014. (It rose by 0.5 and 0.4 percentage point, respectively, as opposed to the 3.3 pps rise in

the EU28 as a whole.) Two remarks should be added, however. First, what is true for the EU11 and the V4 as a whole, is not necessarily true to the individual countries. For example, the ratio rose by 5.5 percentage points in Slovakia from 2007 to 2014, while it stagnated in Hungary (on a rather high level), and slightly declined in Poland. Second, the chart only shows the beginning and the end of the period in question: in a number of countries, e.g. in the Baltic states, Romania, even Poland, the crisis brought about a more or less significant temporary surge in the GDP ratio of expenditures, only to slide back during the subsequent years, due to a rebound of growth and to consolidation efforts. The ratio was the highest in 2009 (within the reference period) in the EU28 as a whole as well.

**2.3. Public spending in the EU28: its structure and evolution**

As we have shown in section 1.2, the crisis brought about a substantial rise in the GDP ratio of general government expenditures; the ratio started to slowly decrease after 2010 but exceeded the pre-crisis level by more than 3 percentage points even in 2014.

**Chart 7: The components of overall fiscal expenditures of the EU28 between 2007 and 2014 as a percentage of GDP**



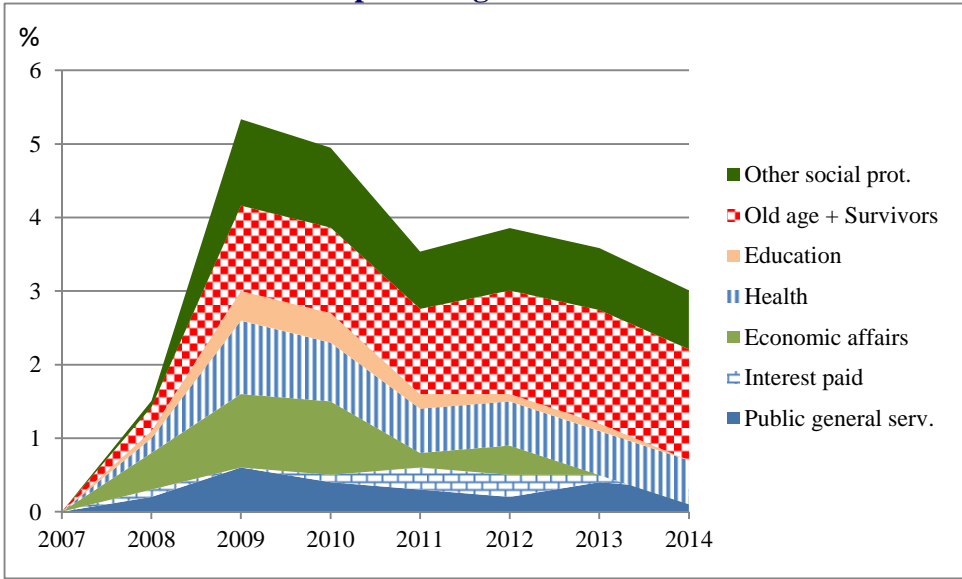
Source: Eurostat database, Economy and Finance, Government Statistics, General Government Expenditures by Function (COFOG) Downloaded: 10.05.2016.

Note: in this chart, the category of general public services includes the COFOG divisions 01, 02 and 03, except interest rate expenditures (a part of COFOG 01) that are shown separately on the chart. The category of economic expenditures includes environmental protection (05) and housing and community amenities (06) expenditures, along with the expenditure on economic affairs (04). Social protection expenditures (10) are divided into two categories: pensions and other social spending.

Chart 9 shows the breakdown of government spending (as a percentage of GDP) by broadly defined function between 2007 and 2014, while chart 10 shows the **changes** of structure (in terms of percentage points). As shown in the two charts, the rise in the overall ratio of general government expenditures in the EU28 was primarily due to the respective rise in the expenditures related to healthcare, pensions and social protection. During the crisis, the ratio of economic expenditures rose significantly as well, but this was largely temporary, since the drivers of this rise – banking bailouts, countercyclical stimulus packages – phased out by the end of the period in question, and also counteracting austerity measures were implemented in

most countries. The ratio of *general public services* expenditures, defined broadly in chart 9 to include defence and public order and safety spending as well, rose only marginally between 2007 and 2014. Expenditures related to interest payments were 0.1 percentage point lower in 2014 (2.5%) than in 2007, although it should be noted that they temporarily surged close to 3% of GDP in 2011-12, primarily due to the countries that were particularly affected by the debt crisis (UK, Greece, Ireland, Spain): these countries experienced a temporary hike in their debt to GDP ratio.

**Chart 8: Change in the principal expenditure categories in 2007-2014 in the EU28 as a percentage of GDP**



Source: see chart 9

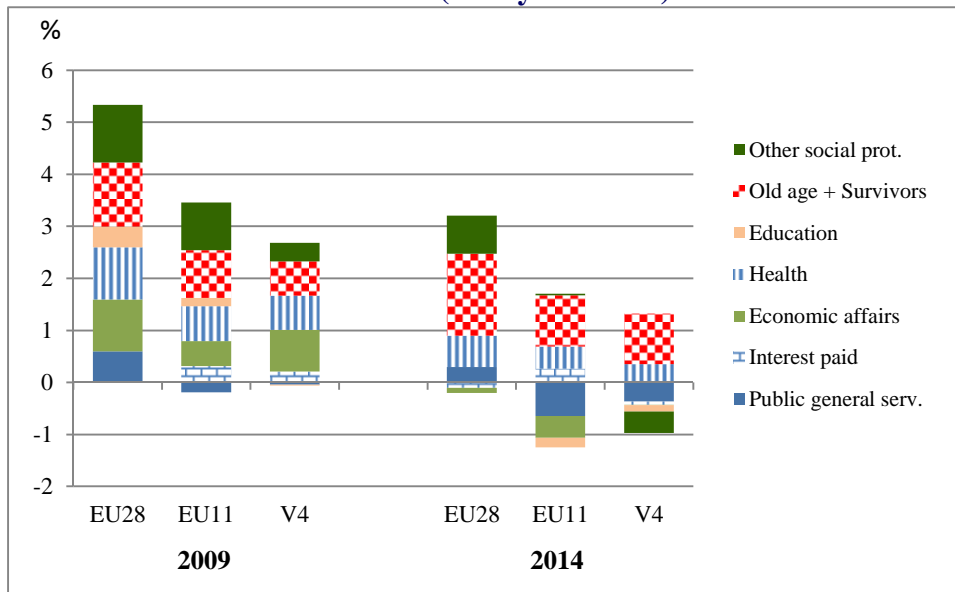
The rise in the ratio of *education* expenditures was temporary and not significant. (It is worth keeping in mind that more than half of the rise in the spending to GDP ratio in 2009 was due to the contraction of GDP – see section 1.2.)

Clearly *social protection* was the expenditure category that underwent the most prominent expansion, and much of this rise persisted in the subsequent years. *Pension disbursements* (old age and survivor) rose from 10.2% of GDP to 11.7% by 2014 in the EU28, partly because the crisis lead to an increased rate of retirement, partly due to the ageing of the population, unrelated to the crisis. Spending related to the other types of social protection expenditures rose as well, primarily because of expanding unemployment benefit and disability benefit costs.

More precisely, out of the 3.3 percentage point rise in the GDP ratio of overall public spending from 2007 to 2014, 2.3 percentage points can be attributed to social protection (pensions and other), while healthcare spending and general public service expenditures account for 0.7 and 0.3 percentage point, respectively. The ratio of the other spending categories remained almost flat during the period considered.

To sum up, while the ratio of public expenditures rose in all COFOG categories in the EU28 during the crisis period, the degree – and the persistence – of the rise differed widely among categories. It should be noted, however, that the story is quite different for the EU28 as a whole, and the Eastern European new member states and, more specifically, the Visegrad countries (EU11 and V4). The difference is displayed in the chart 7.

**Chart 9: Cumulative change in the principal expenditure categories, as a percentage of GDP, in the EU28, in the Eastern European new member states, and in the Visegrad countries (base year: 2007)**



Source: see chart 9

As previously mentioned, the overall rise in the ratio of expenditures was less pronounced in the *Eastern European* countries, both in the short term and in the longer run. This is especially true for the Visegrad four. Apart from interest paid, the expenditure ratio rose less in the EU11 than in the EU28 in every broad spending categories, both in the short and the long run. Overall public services and other social protection spending (most importantly, unemployment benefits) are worth highlighting: while the spending-to-GDP ratio rose in the EU28 for both categories between 2007 and 2014, it stagnated and decreased, respectively, in the EU11 and the V4.

In the case of general public services (including defence and public order and excluding interest payable), the GDP ratio *decreased or stagnated* from 2007 to 2009 in six countries out of eleven (especially in Romania and Latvia), even as Estonia and Slovakia saw a steep rise in the same ratio during the crisis period. After 2009, however, every EU11 country achieved a decrease in the ratio of broad public services expenditures, except Hungary (where an upturn in the relevant spending occurred in 2013-2014, along with the economic upturn). As a result, expenditures on public services decreased from 2007 to 2014 in 9 countries within the EU11, on account of the combined effect of economic recovery and the consolidation measures after (in the Baltic states and Hungary, even during) the crisis.

Unlike general public services, spending on other social expenditures did rise in the new member states during 2007-09, even if at a lesser degree (especially in the Visegrad countries) than in the EU28 as a whole. Among the V4, Slovakia was the outlier, just as in the case of public services, with a significant rise (by 1.8 pps) in the ratio of other social expenditures (primarily, but not exclusively, due to a rise in disability and sickness benefits); among the other Visegrad countries, relative non-pension social spending growth remained muted even in 2009, even as the recession in the V4, save Poland, was harsher than in the EU28 on average. Also, the subsequent decrease in the ratio of other social spending was somewhat

more substantial in Eastern Europe than in the EU as a whole, primarily due to the precipitous fall of the ratio in the Baltic states and in Hungary.

We give a more detailed analysis of the evolution of each spending categories in the following sections.

#### **2.4. General public services (COFOG 01), excluding public debt transactions (01.7)**

In the previous section (in charts 2 and 3) we combined general public services (COFOG 01) with defence (02) and public order and safety (03) expenditures. The share of the latter two categories, however, is very low: each of them typically makes up only 1-2% of GDP, and no notable changes have taken place in these areas during the reference period.

The sole exception is Greece where defence expenditure is traditionally high. It rose from 2.8% of GDP in 2007 to 3.4% in 2009, but receded afterwards, due to the fiscal cuts, to 2.7% in 2014. The annual data displaying the evolution of the expenditures by functions is shown in Annex 1.

As for the general public services proper (COFOG 01), the picture was very mixed among the member states both before and after the crisis. On average, the GDP ratio of public administration is moderate (4.2% in 2014, excluding interest paid). The expenditures on state bureaucracy do not seem to have country-specific character. Public service expenditures as a percentage of GDP are significantly higher than the EU average in the wealthy Nordic countries (Sweden, Finland, Denmark), some of the southern member states (Greece, Cyprus), Belgium, a country with a very large overall spending ratio, and Hungary, Bulgaria and Croatia among the Eastern European new member states. Other EU11 countries, like Romania, Poland, the Czech Republic and two of the three Baltic states, remained – or have become since 2007 – low spenders in terms of bureaucratic costs. Latvia, for example, implemented drastic public sector wage cuts and also cuts in the civil service workforce during 2009, amid dramatic recession (chart 10).

Sometimes, countries may display wide fluctuation of the public service spending ratio. It was outstandingly high, for example, in Bulgaria in 2007, due to the repayment of its remaining debt toward the IMF and the other international institutions. During the subsequent years, the ratio drifted downward, amid contradictory impulses, such as several welfare schemes benefiting public servants, and a subsequent fiscal consolidation, including the tightening of the public servant wage bill. In 2014, however, another jump in the ratio of public service expenditures occurred on account of a new round of wage increases in some public institutions<sup>2</sup>, pushing Bulgaria back into the group of above-average spenders.

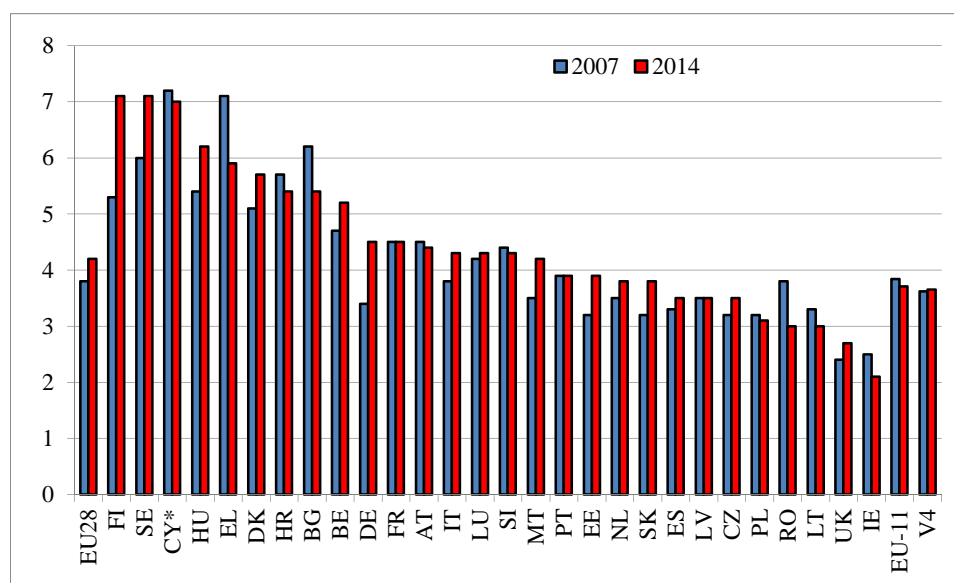
In Hungary, the ratio of public service expenditures to GDP (not including public debt transactions) was tentatively declining in the early 2010s, but it took a sharp upward turn in 2013-2014, pushing the ratio above 6%, well above the V4 – and even the EU28 – average. In 2014, the rise was partly due to the purchase of several firms in energetics, communication and finance.<sup>3</sup>

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2 Source: European Commission [2015]: Assessment of the 2015 Convergence Programme for Bulgaria

3 Source: Law on the implementation of the Budget Law 2014

**Chart 10: Expenditure on general public services expenditures, excluding interest payable, in the EU member states as a percentage of GDP**



Source: see chart 9

\*: For Cyprus, data from 2007 and 2013 are displayed, due to a one-off surge in public services expenditures in 2014, a result of the recapitalization of the cooperative banking sector.

## 2.5. Public debt transactions (COFOG 01.7)

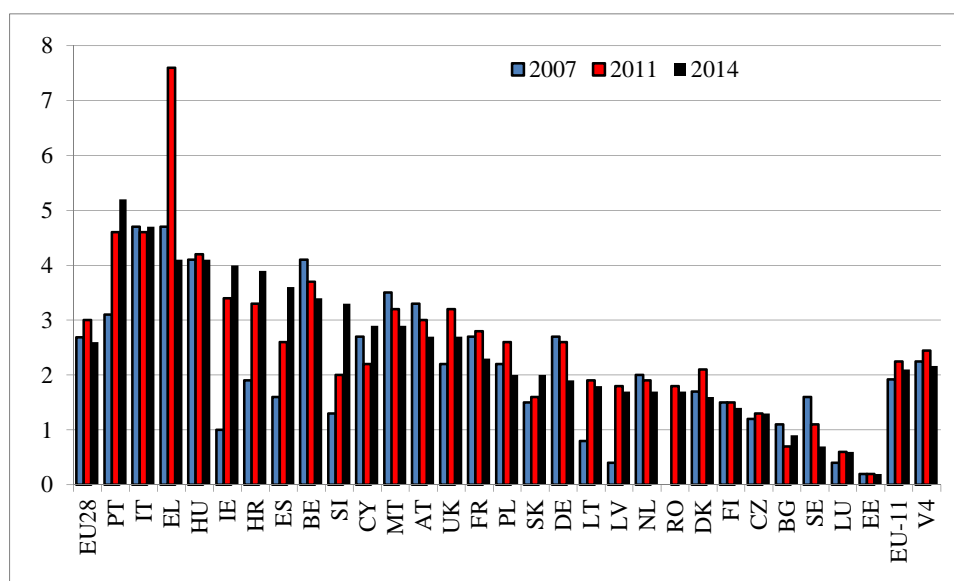
Interest costs on public debt soared steeply in many EU member states during the crisis, a joint result of higher debt-to-GDP ratios and to higher interest rates. After the crisis, however, the paths diverged: the debt-servicing costs continued to rise in some countries, while slightly decreased in others.

On chart 11 we displayed the year 2011 too, along with 2007 and 2014, since interest payments reached extraordinary peak levels this year in a number of countries.

From 58% of GDP in 2007, the overall gross debt of the EU28 rose to 73% in 2009 and 81% in 2011 (and the rise did not stop there), and almost none of the member states escaped this trend. This pushed up debt servicing costs as well, although the impact was partially offset by declining interest rates. The net result varied, in part depending on the evolution of the individual countries' risk assessment, but the member states with sharply rising debt had to deal with a substantial rise in debt servicing costs.

As chart 11 shows, the chaotic divergence makes difficult to make meaningful clusters from the pool of member states, which is a result of the complexity of influencing factors. Beyond the debt ratio and the changes in interest rates, the assessment of the financial and economic situation in each country became a prominent factor during and after the crisis. The crisis made investors cautious, which lead to a growing divergence in the terms of access to financing in the various countries with various levels of financial stability. Financial stability became the key to being attractive for investors.

**Chart 11: Expenditure on public debt transactions (COFOG 01.7) in the EU member states as a percentage of GDP (ranked in a decreasing order, based on 2014 data)**



Source: see chart 9

\*Estimated value for the EU28 and the EU11, due to the absence of official data on Romania for 2007

This explains the drop in the cost of public debt service in a number of countries, viewed as particularly stable (Germany, Netherlands, Sweden, even highly indebted Belgium), sometimes even amid further accumulation of debt.

The opposite group of countries includes Greece and Spain, first of all, but Portugal, Croatia, Slovenia, Lithuania and Latvia can also put in this group.

As for the latter two countries, the debt-to-GDP ratio doubled in Latvia, and the debt servicing cost as a percentage of GDP rose by four and a half times by 2011, while the doubling of debt ratio was accompanied by a somewhat lesser growth of debt servicing cost by „only” 2.4 times in Lithuania. (The level of the respective ratios, however, remained well below the EU average in both countries.) Despite the similarities between the Latvian and Lithuanian cases, the latter benefited from the fact that Lithuanian recession began later, by half a year, than in Latvia. Latvia felt the full brunt of the credit crunch after the Lehman Brothers crash. But by the time Lithuanian GDP began to contract in Q4 2008, it was possible to access to financing, even if at a very high interest rate, from the international markets.

As for the EU11 and the V4, the overall growth in the public debt service costs-to-GDP ratio from 2007 to 2011 was not more marked than in the EU28 as a whole. A notable difference, however, that while in the EU28 the ratio fell back below the 2007 level by 2014, this did not happen in the EU11 group (it did in the V4), due to Slovenia and Croatia (and, to a smaller extent, Slovakia and Bulgaria) that saw a further rise in the GDP ratio of public debt transaction expenditures from 2011 to 2014. All four countries (especially the former two) experienced a sharp rise in the debt-to-GDP ratio between 2011 and 2014.

## 2.6. Economic affairs (COFOG 04)

In charts 7-9, we combined economic affairs with environmental protection (COFOG 05) and housing and community amenities (COFOG 06). The latter two divisions, however, have only very low weight within the overall expenditures of member states.

Spending on environmental protection amounts to 0.8% of GDP in the EU28, with the ratio spread between 0.3-1.6 percent among the individual countries. The highest ratio can be observed in the Greece and Malta (!), while Sweden, Finland (!) and Cyprus bring up the rear, with a ratio as low as 0.3% in 2014.

Spending on housing and community amenities makes up 0.7% of GDP on average in the recent years, with the ratio spread between 0.2-2.2 percent in the member states. The ratio is outstanding in Cyprus (2.2%) and Bulgaria (1.6%).

As for economic affairs proper (COFOG 04), the size of expenditures is in close correlation with the costs of banking sector bailout, as is shown in chart 9. These costs, however, did not arise at the same time in the various countries. Ireland and the UK had to start recapitalizing their banking sector as early as 2008, while in other countries like Slovenia, the problem became acute much later.

Only five member states did not need to create an emergency fund for banks: Bulgaria, the Czech Republic, Estonia, Malta and Romania. While such funds have been established in every other member states, in many cases they served only as backup reserves: only 29% of the sums committed to these funds was drawn upon between 2008 and 2010, although even this sum, 4.285 bn euros, made up 10.5% of the EU GDP. In Poland, Slovakia, Finland and Lithuania, banking institutions did not draw upon the available aid at all, and the required amounts varied widely in other countries as well. Above-average sums were spent mostly in countries with larger-than-average banking sector (the United Kingdom), or in countries where the banking sector accumulated a particularly sizeable stock of „toxic” derivatives (e.g. Ireland, Greece)<sup>4</sup>.

Housing bubbles were among the triggers of the financial crisis in the Eurozone.<sup>5</sup> The housing bubbles primarily afflicted peripheral member states, but bursting bubbles were observed in some of the core countries as well, for example in Denmark. But Portugal, Spain, Ireland, Italy and Greece were the countries where the banking sector bailouts lead to a substantial deterioration in the financial market standing of these member states. In Spain the state intervention to the banking sector became necessary relatively late, in 2012.

By 2013, the Slovenian banking sector was in a very bad shape. The stock of outstanding household and non-bank business loans extended by the banks tripled during the past five years and exceeded 80% of GDP. The economic crisis gradually undermined the real economy, leading to a surge in the share of non-performing loans to 13.3% (that rose even further, to 16%, in 2014)<sup>6</sup>.

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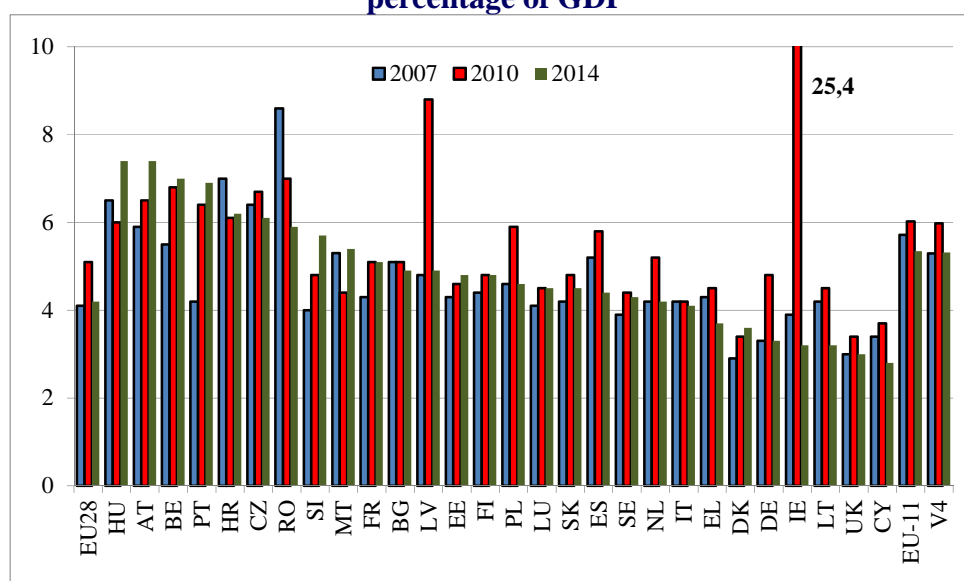
4 Source: European Commission [2011]: The effects of temporary State aid rules adopted in the context of the financial and economic crisis. Working paper No. 1126. Brussels, Belgium.

5 For details, see: Hartmann, P. (2015): Real estate markets and macroprudential policy in Europe. ECB Working Papers No. 1796/2015

6 Source: European Commission (2015): Commission staff working paper. Country report Slovenia 2015. COM(2015) 85 final. EB. Brussels, Belgium.



**Chart 12: Expenditure on economic affairs (COFOG 04) in the EU member states as a percentage of GDP**



Source: see chart 9

The bulk of the Slovenian banks were state-owned, which meant that the task of recapitalization of the three largest banks automatically fell on the shoulders of the state, along with two smaller private financial institutions, when the banking crisis hit in 2013<sup>7</sup>. This generated an additional cost in the Slovenian budget that amounted to 11% of GDP. Since the bailout was considered a one-off expenditure, the Slovenian government did not make extraordinary fiscal cuts immediately to cut expenditures. A wage freeze in the public sector was implemented, but this resulted in a saving amounting less than 1,5% of GDP. Instead, the government focused on the revenue side: for example, it raised the VAT rate, introduced a new real estate tax and, for one year, a special crisis tax as well. In 2013 the fiscal deficit hit 15% of GDP in Slovenia, the highest in the EU in that year.

In addition to the banking bailout, the governments tried to offset the recession by introducing stimulus packages. The most common measure, implemented in every member state after 2008 save Belgium, Denmark, Sweden and Cyprus, was the so-called „500k measure”<sup>8</sup>, but the European Commission recorded 22 different additional schemes, introduced in several member states. The allocated funds amounted to EUR 81 bn, but only 26% of this sum (EUR 21 bn) was actually spent, which does not even reach 1% of the EU28 GDP. While as a principle the „500k” type grants could be given to any European enterprises, in practice the automotive firms were particularly prominently represented within the pool of recipients: the automotive sector was granted EUR 9 bn in the form of repayable assistance<sup>9</sup>. besides, four member states launched clunker rebate programs to encourage car owners to replace old cars (older than ten years, or, in the case of Germany, nine years) with new or late-model ones. Germany spent more than EUR 6.5 bn on this scheme<sup>10</sup>.

7 The three state-owned banks were: NLB, NKBM and Abanka. The latter two was privatized since, and the state decreased its stake in the NLB as well.

8 The 500k measure allowed the granting of EUR 500 thousand per undertaking to cover investments and/or working capital

9 The biggest recipients were: Ford, Volvo, Saab, Opel, Peugeot and Renault.

10 Source: „Jump-starting the car industry”. The Economist. 2009. April 11. <<http://www.economist.com/node/14205513>> Date of download: 2015.10.29.

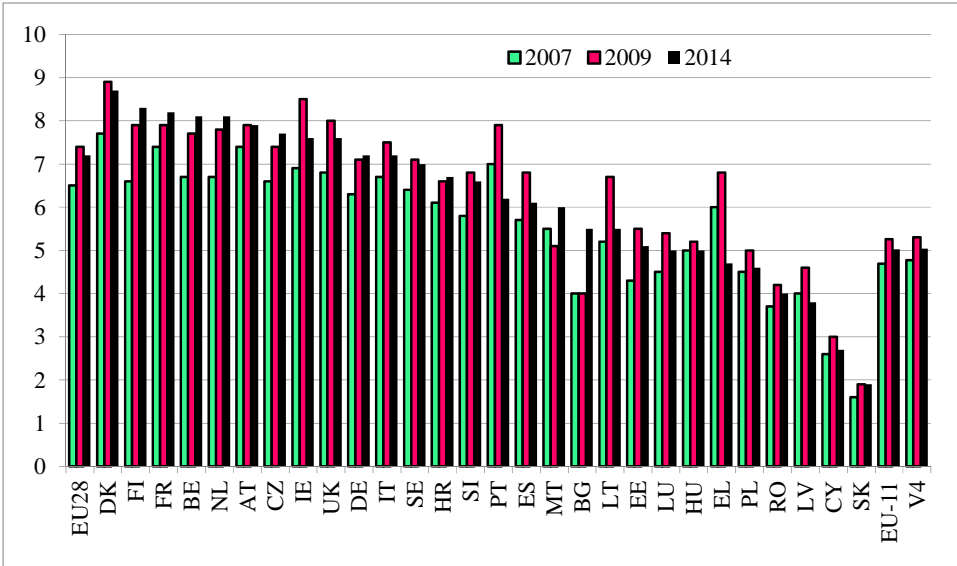
Among the Visegrad countries, Slovakia boasted the largest rise in spending on economic affairs between 2007 and 2009. Instead of subsidies to the banks or to the manufacturing sector, this rise was primarily a result of spending on transport infrastructure.

By 2014, much of the banking bailouts were over, not to mention the stimulus packages. As a result, economic expenditures as a percentage of GDP fell back almost to pre-crisis levels; in the Eastern European new member states, on average, they actually fell *below* the level observed in 2007. Hungary is a spectacular exception: here, the GDP ratio of expenditures on economic affairs atypically declined after the outbreak of the crisis but turned upward after 2010 and reached 7.4% in 2014, the highest among the EU countries. Beside general economic, commercial and labour affairs (COFOG 04.1), transport expenditures were instrumental in this rise.

**2.7. Health (COFOG 07) and education (COFOG 09) expenditures**

Healthcare and education spending changed little in the recent years in the EU countries. In the year of crisis, the ratio of these expenditures rose in all countries, even in Poland, although the latter escaped recession. This rise, however, was mostly a reflection of the GDP-effect. The GDP ratio of health spending eased from its 2009 in most member states, but usually it remained somewhat above 2007 levels. Healthcare expenditures are much less flexible downward than other functional types of expenditures, and, besides, many government implemented modernization projects within the healthcare sector. The aging population exerts an additional upward pressure on healthcare spending, although it does not causes sudden year-on-year leaps in expenditure levels. In the Eastern European member states, the ratio of health expenditures moved slightly upwards, as in the EU as a whole, but the average *level* was, and remained, distinctly below the EU average.

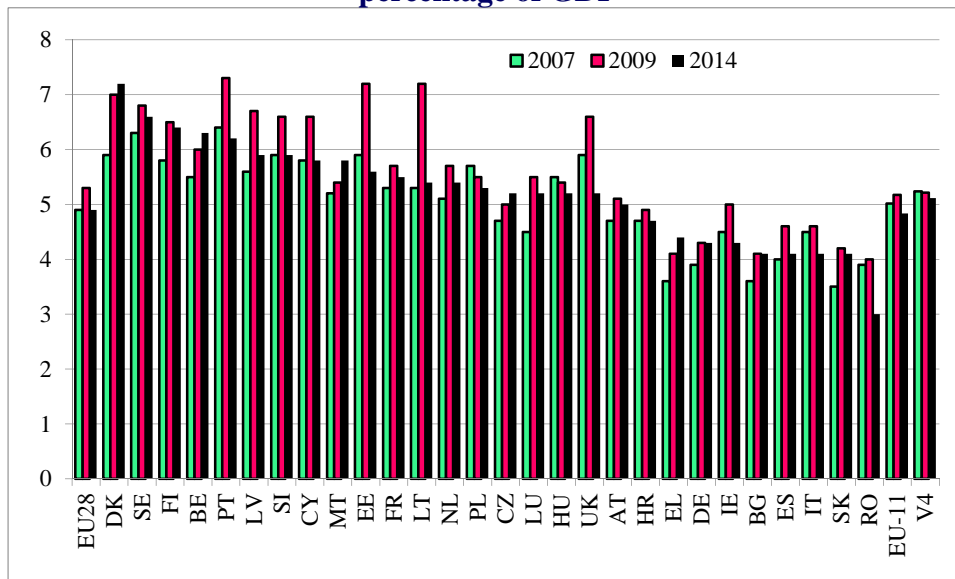
**Chart 13: Expenditure on health (COFOG 07) in the EU member states as a percentage of GDP**



Source: see chart 9

Education has a similar role within government spending than healthcare, since these two functional divisions – along with public infrastructural investments – constitute the productive part of public spending. (For an elaboration of this point, see chapter 3.)

**Chart 14: Expenditure on education (COFOG 09) in the EU member states as a percentage of GDP**



Source: see chart 9

In 2009, the of acute crisis, the GDP ratio of education expenditures, as a percentage of GDP, rose in almost every member state, due to falling GDP levels. The expectations were: Poland, which managed to avoid recession, Romania, and (with stagnating expenditure ratio) Ireland. The trends diverged during the post-crisis years: the GDP ratio of education spending returned to a level close to their pre-crisis levels in some countries – and in the EU as a whole – but remained elevated in others. In a third group of countries – Poland, the UK, Ireland, Italy, Hungary and Romania – the education spending ratio fell below pre-crisis levels. A particularly harsh cut took place in Romania, from a level that was already low to begin with: the GDP ratio fell to 2.8% in 2013, only to rise slightly to 3% in 2014.

In a number of old member states, on the other hand, the GDP ratio of education spending rose above 2007 levels, as part of the efforts to boost competitiveness. This was the case in Latvia as well, and even in Greece, even if the latter country administered harsh cuts in other spending categories.

In the countries where the ratio of education fell, preschool and primary school expenditures were cut most. By 2013, the GDP ratio of expenditures spent on primary education fell to 0.7% in Romania, 0.8% in Bulgaria and Lithuania and 0.9% Hungary – as opposed to the EU average of 1.6% – followed by only a minimal rise in 2014. The Swedish state boasted the highest ratio of primary education spending in 2014, 3.9% of GDP; the trend has been generally rising since 2008.

## 2.8. Social protection (COFOG 10)

Social protection constitutes the biggest item within the overall fiscal expenditures in the EU28, with an average GDP share of about 20%, and this ratio is growing.

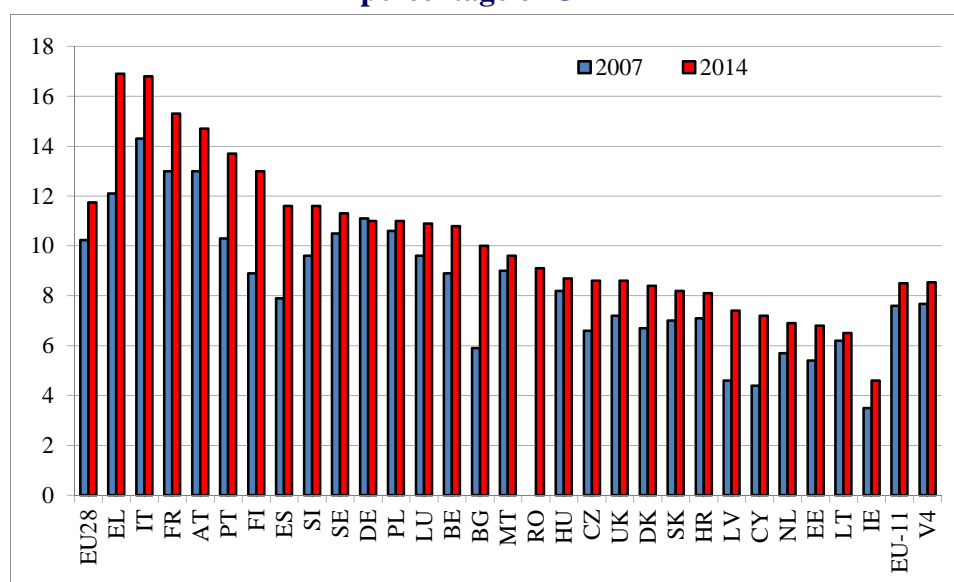
Old-age pensions and survivor's benefits – hereby referred as „pensions” – a make up more than 60% of social protection spending, hence we analyse pension expenditures in a separate section.

### 2.8.1. Pension expenditures as a percentage of GDP in the EU28 (COFOG 10.2 és 10.3)

Due to the persistent rise of pension expenditures, the year 2009 is not included in chart 17 as it did not represent a sharp turning point in most member states.

The rise in the social protection expenditures during the crisis was, in great part, buttressed by pension expenditures. On average, the GDP ratio of pension expenditures rose by 1.2 percentage points in the EU28 between 2007 and 2009, but it rose by 3.7 percentage points in Latvia, 3.4 percentage points in Bulgaria and 2.7 percentage points in Estonia. By contrast, the unemployment-related expenditures only rose by 0.4 percentage points in the EU28, with the highest rise occurring in Ireland (1.8 pps), Estonia (1.7 pps) and Spain (1.5 pps). It should be noted, however, that the less spectacular growth contribution of unemployment-related spending can be attributed not so much to the lack of surge in the latter category of expenditures, but rather to its much smaller weight within overall spending. While some of the Eastern European new member states saw an especially high rise in the ratio of pension expenditures, the rise – in terms of percentage points – was on average less spectacular among the CEEs than in the EU as a whole. For the EU11 in general, this stems from the lower initial pension expenditures-to-GDP ratio in 2007 compared to the EU28. In the V4, however, the rise in pension spending was actually less intense than in the EU as a whole; among the Visegrad countries, only the Czech Republic and Slovakia boasted a rise as drastic – or almost as drastic – than the EU28. In Poland, the relative rise was checked by the continuation of GDP growth while in Hungary the relative pension bill remain unchanged in 2009 compared to 2008, despite the steep recession, due to the first phase of the elimination of the 13<sup>th</sup> month pension.

**Chart 15: Expenditure on pensions (old-age and survivor) in the EU member states as a percentage of GDP**



Source: see chart 9

\*Estimated values on the EU28 and the EU11 for 2007, and on Bulgaria for 2007-and 2014, due to incomplete data on Romania and Bulgaria

In Latvia, joining the euro area was a high-priority goal which required pushing the fiscal deficit below the 3% threshold. This, along with the necessity of an “internal devaluation”, due to the fixed exchange rate, made a particularly restrictive fiscal policy stance unavoidable

during the crisis, which affected pensions too. Along with a freeze of indexation, and the two-step raise of the retirement age for women in 2008-2009, pension cuts were introduced in 2009, but they were repealed by the constitutional court. At the same time, the early retirement age and the minimum required length of service was also raised in two steps. Even so, the pension freeze, along with the partial rebound of GDP from 2011, could only offset about one-third of the total rise in the GDP ratio of pension expenditures from 2007 to 2010.

### *2.8.2. Other social protection spending*

Among the other types of social spending, unemployment-related benefits should be highlighted, due to their sharp increase during the crisis. The increases tended to be the higher the steeper the recession was in the individual member states, but the effectiveness of the labour market programs also made an effect. In countries facing harsh recession and lacking effective labour market schemes (e.g. the Baltic states, Ireland, or Spain), the rise in the GDP ratio of unemployment-related expenditures was dramatic. Later, these high ratio levels eased somewhat, but the fiscal consolidation packages usually did little good in terms of unemployment-related expenditures since the austerity programs that usually included cuts in public sector personnel pushed unemployment levels upward.

As a result, by 2014, a degree of polarization took place among the member states, due to countries that were unable to alleviate labour market problems, especially among the young generation (e.g. Spain, Ireland).

The GDP ratio of unemployment benefit costs depends not just on the unemployment rate, but is also influenced by the system of benefits. Denmark had by far the highest GDP ratio in the recent years, and this is primarily due to the relatively very generous support system.

The ratio of other social expenditures rose in the *EU11* as well, even if at a slightly lesser degree than in the EU28 as a whole, but, unlike in the EU28, this rise was completely eliminated by 2014 – the ratio stood at the same level in 2014 than in 2007. This is true for all three subcategories – family benefits, sickness and disability, unemployment – separately, as well.

As for the *V4* countries, the initial rise in the ratio of other social expenditures was modest – with a partial exception of Slovakia where the ratio of expenditures on sickness and disability rose at an uncharacteristically high pace between 2007 and 2010 – and by 2014, on the whole, it got not just eliminated but turned into decline, primarily due to the relative decrease in unemployment benefits. This reflects the nominal decline in unemployment benefits paid in Poland and Hungary. In the latter, the decrease has much to do with the massive public worker scheme, which helped reduce the number of unemployed relatively soon even if the actual labour market improvement came much later.

### 3. The structure of public expenditures in the light of growth performance

Research on the links between the functional structure of fiscal expenditures and economic growth exists since the appearance of COFOG statistics. Yet, the research results are far from robust; in fact, they are rather heterogeneous, examining different regions brought entirely different results. The quality problems with the COFOG statistics have only a small part in this heterogeneity: rather, the differences in economic and social structure and in the levels of development are the main factors.

But even the various econometric panel studies conducted on the EU member states tend to bring different results. *Ferreria et al.* (2012)<sup>11</sup>, after conducting a detailed analysis of the growth and expenditure data of the years 1995-2007, found that there is no statistically significant link between the two. They concluded that there is no universally optimal pattern of public expenditures that would conducive to an optimal macroeconomic performance.

*Pitlik és Schratzenstaller* (2011)<sup>12</sup> examined the EU and some of the other OECD countries; they found that higher expenditure-to-GDP ratio tends to correlate with relatively lower spending on infrastructure development (COFOG 04), healthcare and education. They noted, however, that this negative relationship is rather weak, due to the strong heterogeneity of the sample.

Using a slightly different approach, *Afonso – Alegre* (2008)<sup>13</sup> included total factor productivity as a dependent variable, in addition to labour productivity and per capita GDP growth. Based on the COFOG data of the EU15 countries for the years between 1970 and 2006, they found a significant negative correlation between economic growth on the one hand, and health (COFOG 07) and social protection (COFOG 10) spending on the other hand. By contrast, they found a positive correlation between GDP growth and education (COFOG 09) expenditures. These relationships, however, were not particularly strong either.

In an earlier paper, *Devarajan et al.* (1996)<sup>14</sup> raised a point that has been sometimes overlooked since: analysing data of developing countries, they asserted that the „productive” expenditures (transport, communication, health and education) may contribute positively to economic growth, *unless* their respective GDP ratios reach a certain threshold; above that threshold these expenditures crowd out private operators, hence raising them indefinitely is suboptimal. They acknowledge, however, that the optimal range of expenditure-to-GDP ratio varies across countries. *Pitlik – Schratzenstaller* (2011) corroborated these findings through quadratic models, while the previously mentioned *Afonso – Alegre* (2008) did not adopted such an approach.

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11 Ferreiro, J., del Valle, M. G., & Gómez, C. (2012): Composition of public expenditures and macroeconomic performance in the European Union. *European Journal of Economics and Economic Policies: Intervention*, (1), 109-128.

12 Pitlik, H., & Schratzenstaller, M. (2011): Growth implications of structure and size of public sectors (No. 404). WIFO.

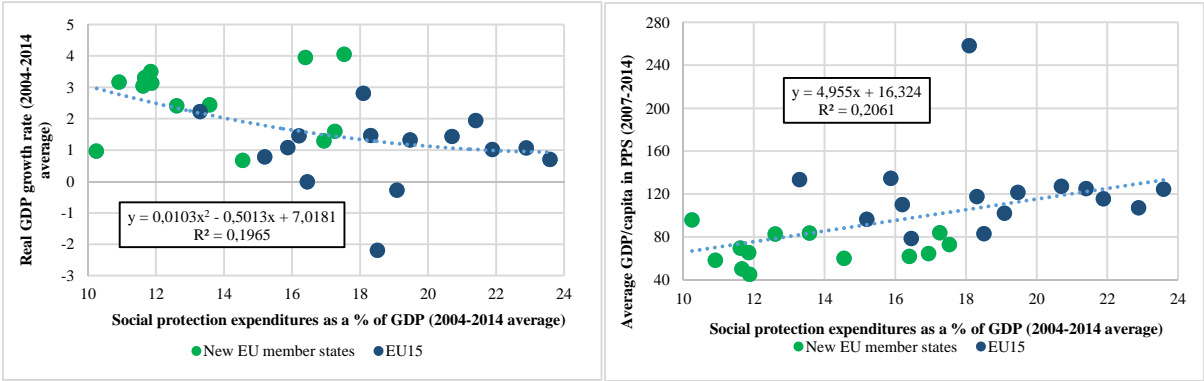
13 Afonso, A., Alegre, J., G. (2008): Economic growth and budgetary components. A panel assesment for the EU. Working Paper Series (No. 848). EKB.

14 Devarajan, S., Swaroop, V., & Zou, H. F. (1996): The composition of public expenditure and economic growth. *Journal of monetary economics*, 37(2), 313-344.

The studies conducted after 2008 consciously excluded the crisis period from their analysis since it represented a rupture in the structure of the panel data, partly as a reflection of the countercyclical policy response. By now, however, seven years from 2009, ignoring the crisis is not an option, hence we examine the relationship between economic growth and the structure of expenditures for the years between 2004 and 2014. For reasons of space, we do not apply standard panel methods.

While the abovementioned negative correlation between social spending and GDP growth seems to apply to the 2004-2014 period, the correlation is weak; furthermore, the direction of causality is far from unambiguous. A stronger correlation can be observed between the ratio of social spending and the *level* of economic development, but even this connection is far from robust.

**Chart 16: Correlation between the social protection expenditure and the growth rate and level of GDP in the European Union between 2004 and 2014**



Source: Eurostat, Kopint-Tárki

Note: For Greece, due to data availability, the data points encompass only the years 2006-2014

We look for a possible – linear or non-linear – correlation between the so-called productive public expenditures (economic affairs<sup>15</sup> + health + education) and the average growth rate. The „economic affairs” function includes every type of spending that purports to dynamise the economy, enhance productivity or the quality of life. It is generally true that the payback period of the „productive” expenditures is longer than that of the other types of expenditures. Health and education spending enhances productive capacities on the longer run, hence the connection between the GDP ratio of long run average productive expenditures and the average growth rate, presumably, should be positive. The correlation coefficients derived from the data, however, do not conform to the a priori expectations:

As shown by the table below, out of the three types of productive expenditure, only health spending correlates significantly to GDP growth, but the coefficient is negative. The linear correlation between productive expenditures total and GDP growth is weaker, and it is still negative. The coefficient of determination ( $R^2$ ) suggests a weak connection only, as well:

15 Spending on economic affairs include the costs of banking sector bailout, which cannot be separated from other types of investment.

**Table 1: Correlation coefficients between the GDP ratio of expenditure types deemed as “productive” and average GDP growth**

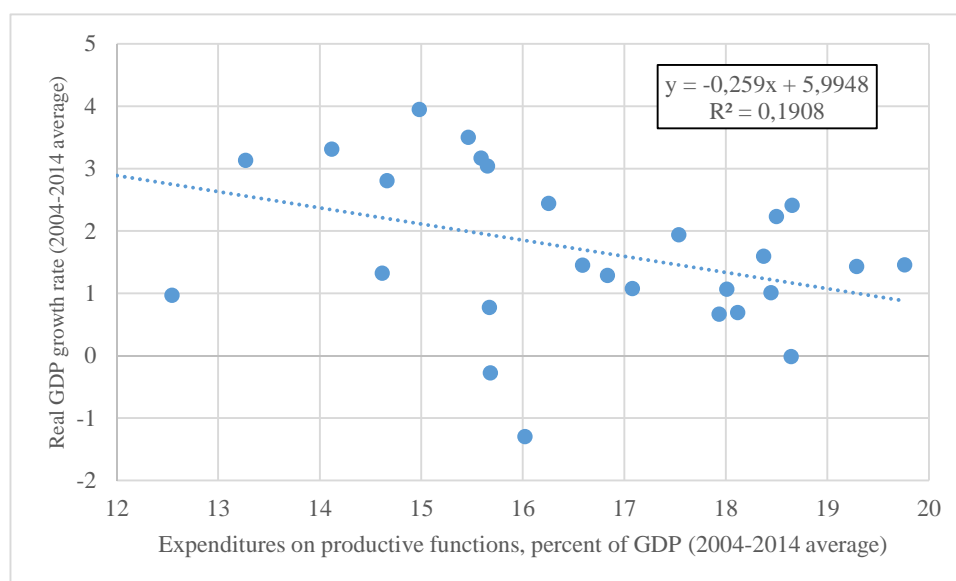
	Health	Education	Economic affairs	Productive functions total	GDP growth
Health	1				
Education	0.292	1			
Economic affairs	0.032	-0.362	1		
Productive functions total	0.869**	0.465*	0.349	1	
GDP growth	-0.562*	-0.484	0.143	-0.437*	1

\*\* significant at the 0.01 level \* significant at the 0.05 level (two-sided test)

Data source: Eurostat

The simple statistical overview above suggests that the growth impact of the spending on economic development during the period in question was very limited, and what is more, it is not statistically significant. This result, however, should be dealt with caution, since the economy of the member states underwent several ruptures during the investigation period. It should be added that during the crisis years the economy-related fiscal expenditures did not focus on enhancing the long-term growth potential, but rather on the cushioning of the recession, and as such, they were effective. Understandingly, the harder an economy was hit, the more substantial stimulus spending their governments tended to apply. This causal link does not exclude the possibility that amid more favorable economic conditions the correlation between spending on productive expenditure functions and economic growth is positive, although – based on the pre-crisis studies – this correlation is probably very weak, due to the differences in the economic and social structure of the individual countries.

**Chart 17: Correlation between the average GDP ratio of „productive” expenditure functions and the average GDP growth rate in the European Union (2004-2014)**



Source: Eurostat, Kopint-Tárki

Note: For Greece, due to data availability, the data points encompass only the years 2006-2014



## Annexes

### Annex I.a.: Year-on-year change in the expenditure-to-GDP ratio, and cumulated change between 2008-2014 (percentage points)

	2007	2008	2009	2010	2011	2012	2013	2014	2008-2014
EU28	-0.65	1.58	3.83	-0.33	-1.41	0.44	-0.40	-0.40	3.30
Belgium	-0.12	2.02	3.88	-0.85	1.12	1.38	-0.19	-0.46	6.90
Bulgaria	3.68	-0.47	2.51	-2.86	-2.49	0.57	2.97	4.43	4.66
Czech Republic	-0.85	0.21	3.46	-0.65	-0.04	1.54	-1.87	-0.04	2.60
Denmark	-0.24	0.94	6.28	0.26	-0.22	1.49	-1.79	-0.57	6.39
Germany	-1.88	0.76	4.01	-0.32	-2.54	-0.26	0.06	-0.24	1.45
Estonia	0.52	5.66	6.30	-5.54	-3.08	1.65	-0.82	-0.26	3.91
Ireland	2.04	5.93	5.28	18.46	-20.18	-3.68	-2.17	-1.42	2.23
Greece	1.95	3.74	3.25	-1.60	1.77	0.93	5.61	-10.83	2.87
Spain	0.65	2.23	4.62	-0.15	0.03	2.30	-2.82	-0.66	5.55
France	-0.27	0.76	3.77	-0.32	-0.52	0.91	0.20	0.50	5.30
Croatia	-0.18	-0.24	2.67	-0.17	1.63	-1.72	0.75	0.38	3.29
Italy	-0.84	1.04	3.33	-1.27	-0.74	1.67	0.27	0.19	4.49
Cyprus	0.76	2.31	2.87	0.47	0.46	-1.68	-2.87	6.02	7.58
Latvia	-2.14	3.29	6.37	1.06	-5.65	-2.03	-0.11	0.47	3.38
Lithuania	0.95	2.84	6.80	-2.59	0.19	-6.37	-0.57	-0.75	-0.46
Luxembourg	-2.05	1.98	5.64	-1.08	-0.90	1.26	-1.27	-0.90	4.72
Hungary	-1.57	-1.32	1.90	-1.13	0.20	-1.14	0.92	0.36	-0.21
Malta	-1.14	1.38	-0.71	-0.80	-0.07	1.44	-0.49	1.29	2.05
Netherlands	-0.59	1.11	4.61	-0.02	-1.18	0.12	-0.69	-0.16	3.80
Austria	-1.10	0.67	4.32	-1.37	-1.93	0.30	-0.22	1.78	3.56
Poland	-1.62	1.36	0.79	0.41	-2.01	-1.03	-0.18	-0.25	-0.92
Portugal	-0.76	0.85	4.89	1.60	-1.80	-1.49	1.41	1.76	7.22
Romania	2.95	0.56	1.79	-1.04	-0.42	-2.68	-1.24	-0.36	-3.39
Slovenia	-2.03	1.68	4.35	1.04	0.73	-1.42	11.70	-10.43	7.65
Slovakia	-2.44	0.53	7.28	-1.97	-1.48	-0.34	0.87	0.62	5.50
Finland	-1.55	1.46	6.50	0.00	-0.37	1.82	1.30	0.59	11.30
Sweden	-1.70	0.68	2.76	-1.93	-0.62	1.12	0.69	-0.60	2.10
United Kingdom	-0.10	3.75	3.03	-0.81	-1.87	-0.16	-1.86	-0.12	1.98

Source: Own calculation, based on Eurostat data

**Annex I.b.: The effect of year-on-year changes in GDP on the expenditure-to-GDP ratio and the cumulated GDP effect between 2008-2014 (percentage points)**

	2007	2008	2009	2010	2011	2012	2013	2014	2008-2014
EU28	-1.39	-0.22	2.20	-1.03	-0.86	0.23	-0.11	-0.66	-0.44
Belgium	-1.64	-0.38	1.24	-1.44	-0.98	-0.09	0.00	-0.71	-2.36
Bulgaria	-2.87	-2.09	1.66	-0.02	-0.54	-0.08	-0.48	-0.65	-2.20
Czech Republic	-2.21	-1.09	2.11	-0.99	-0.84	0.40	0.22	-0.84	-1.02
Denmark	-0.41	0.36	2.89	-0.93	-0.65	0.04	0.14	-0.71	1.14
Germany	-1.40	-0.47	2.68	-1.93	-1.63	-0.18	-0.13	-0.71	-2.38
Estonia	-2.64	2.15	6.78	-1.00	-2.84	-2.03	-0.60	-1.10	1.37
Ireland	-1.98	0.88	2.61	-0.26	-1.19	-0.08	-0.59	-1.99	-0.62
Greece	-1.54	0.17	2.33	2.87	4.95	4.03	1.94	-0.33	15.97
Spain	-1.47	-0.46	1.64	-0.01	0.46	1.26	0.75	-0.61	3.03
France	-1.23	-0.10	1.67	-1.11	-1.16	-0.10	-0.37	-0.10	-1.29
Croatia	-2.31	-0.92	3.49	0.80	0.14	1.03	0.51	0.17	5.23
Italy	-0.69	0.50	2.80	-0.84	-0.28	1.43	0.89	0.18	4.68
Cyprus									0.00
Latvia	-3.38	1.34	6.26	1.69	-2.42	-1.48	-1.11	-0.88	3.39
Lithuania	-3.91	-1.00	6.65	-0.69	-2.57	-1.39	-1.26	-1.06	-1.31
Luxembourg	-3.16	0.33	2.43	-2.51	-1.11	0.38	-1.88	-1.72	-4.08
Hungary	-0.21	-0.41	3.32	-0.37	-0.87	0.82	-0.94	-1.83	-0.28
Malta	-1.64	-1.42	1.03	-1.46	-0.79	-1.21	-1.71	-1.61	-7.16
Netherlands	-1.57	-0.74	1.81	-0.68	-0.78	0.50	0.23	-0.47	-0.12
Austria	-1.78	-0.77	2.06	-1.02	-1.43	-0.39	-0.16	-0.19	-1.90
Poland	-3.10	-1.74	-1.19	-1.69	-2.18	-0.66	-0.54	-1.38	-9.39
Portugal	-1.11	-0.09	1.50	-0.98	0.91	1.95	0.56	-0.47	3.39
Romania	-2.63	-3.28	2.87	0.32	-0.41	-0.23	-1.24	-1.03	-3.02
Slovenia	-2.93	-1.45	3.76	-0.61	-0.32	1.32	0.64	-1.52	1.82
Slovakia	-3.91	-2.07	2.41	-2.13	-1.15	-0.61	-0.59	-1.05	-5.19
Finland	-2.43	-0.35	4.53	-1.64	-1.40	0.80	0.44	0.41	2.79
Sweden	-1.69	0.28	2.75	-3.06	-1.35	0.15	-0.65	-1.17	-3.05
United Kingdom	-1.11	0.22	2.08	-0.75	-0.93	-0.55	-0.97	-0.38	-1.28

Source: Own calculation, based on Eurostat data

**Annex I.c.: “Expenditure effect” within the year-on-year changes in the expenditure-to-GDP ratio, and in the cumulated change between 2008-2014 (percentage points)**

	2007	2008	2009	2010	2011	2012	2013	2014	2008-2014
EU28	0.74	1.80	1.63	0.70	-0.55	0.21	-0.29	0.25	3.74
Belgium	1.52	2.40	2.64	0.59	2.10	1.46	-0.19	0.26	9.25
Bulgaria	6.55	1.62	0.85	-2.84	-1.95	0.65	3.45	5.08	6.86
Czech Republic	1.36	1.30	1.35	0.34	0.80	1.14	-2.10	0.80	3.62
Denmark	0.17	0.58	3.39	1.19	0.44	1.45	-1.93	0.13	5.24
Germany	-0.48	1.23	1.33	1.61	-0.91	-0.08	0.19	0.47	3.83
Estonia	3.16	3.51	-0.48	-4.55	-0.24	3.67	-0.22	0.85	2.54
Ireland	4.02	5.06	2.67	18.72	-18.98	-3.60	-1.58	0.57	2.86
Greece	3.49	3.57	0.92	-4.47	-3.18	-3.10	3.66	-10.50	-13.10
Spain	2.12	2.68	2.99	-0.14	-0.43	1.05	-3.57	-0.05	2.52
France	0.97	0.87	2.10	0.79	0.64	1.02	0.57	0.60	6.59
Croatia	2.13	0.68	-0.83	-0.97	1.49	-2.75	0.25	0.21	-1.94
Italy	-0.15	0.54	0.52	-0.43	-0.46	0.24	-0.62	0.02	-0.19
Cyprus	0.76	2.31	2.87	0.47	0.46	-1.68	-2.87	6.02	7.58
Latvia	1.24	1.95	0.11	-0.63	-3.23	-0.55	1.00	1.35	0.00
Lithuania	4.85	3.84	0.15	-1.90	2.76	-4.99	0.69	0.30	0.86
Luxembourg	1.11	1.64	3.20	1.43	0.21	0.88	0.61	0.82	8.80
Hungary	-1.36	-0.91	-1.43	-0.76	1.07	-1.96	1.85	2.20	0.06
Malta	0.50	2.81	-1.74	0.66	0.71	2.65	1.22	2.90	9.21
Netherlands	0.98	1.85	2.80	0.66	-0.40	-0.37	-0.92	0.31	3.92
Austria	0.68	1.44	2.26	-0.35	-0.51	0.69	-0.05	1.97	5.46
Poland	1.48	3.10	1.98	2.09	0.17	-0.37	0.36	1.13	8.47
Portugal	0.35	0.94	3.39	2.58	-2.72	-3.44	0.85	2.23	3.83
Romania	5.57	3.84	-1.08	-1.36	-0.01	-2.44	0.00	0.67	-0.37
Slovenia	0.90	3.13	0.59	1.65	1.06	-2.74	11.06	-8.91	5.83
Slovakia	1.48	2.60	4.87	0.16	-0.33	0.27	1.45	1.67	10.69
Finland	0.88	1.81	1.97	1.64	1.03	1.02	0.86	0.18	8.51
Sweden	-0.01	0.40	0.01	1.13	0.73	0.97	1.34	0.58	5.16
United Kingdom	1.00	3.54	0.95	-0.05	-0.95	0.39	-0.89	0.27	3.26

Source: Eurostat

## Annex II: The annual expenditure-to-GDP ratio by function (percent)

General government expenditure total (COFOG TOTAL)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	44,9	46,5	50,3	50,0	48,6	49,0	48,6	48,2
Belgium	48,2	50,3	54,1	53,3	54,4	55,8	55,6	55,1
Bulgaria	37,4	36,9	39,5	36,6	34,1	34,7	37,6	42,1
Czech Republic	40,0	40,2	43,6	43,0	42,9	44,5	42,6	42,6
Denmark	49,6	50,5	56,8	57,1	56,8	58,3	56,5	56,0
Germany	42,8	43,6	47,6	47,3	44,7	44,4	44,5	44,3
Estonia	34,1	39,7	46,1	40,5	37,4	39,1	38,3	38,0
Ireland	35,9	41,9	47,2	65,7	45,5	41,8	39,7	38,3
Greece	47,1	50,8	54,1	52,5	54,2	55,2	60,8	49,9
Spain	38,9	41,1	45,8	45,6	45,6	48,0	45,1	44,5
France	52,2	53,0	56,8	56,4	55,9	56,8	57,0	57,5
Croatia	44,9	44,7	47,3	47,2	48,8	47,1	47,8	48,2
Italy	46,8	47,8	51,1	49,9	49,1	50,8	51,0	51,2
Cyprus	37,7	38,6	42,3	42,2	42,5	41,9	41,4	48,7
Latvia	33,9	37,2	43,6	44,7	39,0	37,0	36,9	37,3
Lithuania	35,3	38,1	44,9	42,3	42,5	36,1	35,6	34,8
Luxembourg	37,7	39,6	45,3	44,2	43,3	44,6	43,3	42,4
Hungary	50,1	48,8	50,7	49,6	49,7	48,6	49,5	49,9
Malta	41,2	42,6	41,9	41,1	41,0	42,4	41,9	43,1
Netherlands	42,5	43,6	48,2	48,2	47,0	47,1	46,4	46,2
Austria	49,1	49,8	54,1	52,7	50,8	51,1	50,9	52,7
Poland	43,1	44,4	45,2	45,6	43,6	42,6	42,4	42,1
Portugal	44,5	45,3	50,2	51,8	50,0	48,5	49,9	51,7
Romania	38,2	38,8	40,6	39,6	39,1	36,5	35,2	34,9
Slovenia	42,2	43,9	48,2	49,3	50,0	48,6	60,3	49,8
Slovakia	36,1	36,7	43,9	42,0	40,5	40,1	41,0	41,6
Finland	46,8	48,3	54,8	54,8	54,4	56,2	57,5	58,1
Sweden	49,7	50,3	53,1	51,2	50,5	51,7	52,4	51,8
United Kingdom	42,8	46,6	49,6	48,8	46,9	46,8	44,9	43,9

Source: Eurostat

General public services (COFOG 01)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	6.4	6.6	6.7	6.7	6.9	6.9	6.9	6.7
Belgium	8.7	8.7	9.1	8.6	8.7	8.6	8.6	8.4
Bulgaria	7.3	5.0	7.1	3.8	3.8	3.5	3.6	6.3
Czech Republic	4.3	4.3	4.7	4.5	4.4	6.4	4.8	4.8
Denmark	6.7	7.1	7.9	7.9	8.2	9.2	7.6	7.2
Germany	6.1	6.4	6.6	6.6	6.7	6.5	6.4	6.3
Estonia	3.4	3.2	3.8	3.4	3.5	4.0	4.0	4.0
Ireland	3.5	3.9	4.6	5.4	5.9	6.5	6.6	6.1
Greece	11.6	11.5	12.2	12.3	12.9	10.9	9.8	9.9
Spain	4.9	5.1	5.6	5.5	6.2	6.6	7.1	6.9
France	7.1	7.2	7.2	6.8	6.8	6.9	6.9	6.7
Croatia	7.6	7.5	8.1	8.5	9.0	8.0	8.9	8.9
Italy	8.6	8.9	8.6	8.3	8.6	9.3	9.0	8.9
Cyprus	10.0	9.9	10.9	9.7	10.2	11.4	10.1	18.8
Latvia	3.9	3.8	4.7	4.8	4.8	4.8	4.8	4.9
Lithuania	4.0	4.0	4.4	4.6	8.5	4.5	5.3	4.6
Luxembourg	4.5	4.8	5.3	5.6	5.5	5.6	5.0	4.7
Hungary	9.5	9.3	10.1	9.4	9.0	9.6	10.3	10.2
Malta	7.0	7.3	7.8	6.8	7.2	7.4	7.0	7.1
Netherlands	5.5	5.7	5.5	5.7	5.3	5.2	5.1	5.2
Austria	7.6	7.3	7.9	7.7	7.4	7.3	7.2	6.9
Poland	5.4	5.4	5.6	5.6	5.6	5.7	5.7	5.0
Portugal	6.8	6.1	7.1	6.9	8.1	8.7	8.9	8.8
Romania	4.5	4.8	4.3	4.5	4.8	4.9	4.9	4.7
Slovenia	5.6	5.4	5.9	5.8	6.1	6.0	6.8	7.5
Slovakia	4.6	4.4	6.0	5.0	5.2	5.1	5.5	5.7
Finland	6.7	7.0	7.8	7.7	8.0	8.2	8.3	8.3
Sweden	7.7	7.8	7.4	7.4	7.6	7.7	7.8	7.8
United Kingdom	4.6	4.8	4.7	5.5	5.8	5.4	5.6	5.4

Source: Eurostat

Within general public services: Public debt transactions (COFOG 01.7)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	:	:	2.7	2.8	3.0	3.0	2.8	2.6
Belgium	4.1	4.0	3.9	3.7	3.7	3.7	3.5	3.4
Bulgaria	1.1	0.8	0.7	0.7	0.7	0.8	0.7	0.9
Czech Republic	1.2	1.1	1.3	1.4	1.3	1.4	1.4	1.3
Denmark	1.7	1.5	2.0	2.0	2.1	1.9	1.8	1.6
Germany	2.7	2.7	2.7	2.6	2.6	2.4	2.1	1.9
Estonia	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ireland	1.0	1.3	2.0	3.0	3.4	4.1	4.3	4.0
Greece	4.7	5.1	5.3	6.1	7.6	5.3	4.2	4.1
Spain	1.6	1.6	1.8	1.9	2.6	3.2	3.6	3.6
France	2.7	3.0	2.6	2.5	2.8	2.7	2.4	2.3
Croatia	1.9	2.0	2.4	2.7	3.3	3.6	3.7	3.9
Italy	4.7	4.8	4.4	4.3	4.6	5.2	4.9	4.7
Cyprus	2.7	2.6	2.3	2.0	2.2	2.9	3.2	2.9
Latvia	0.4	0.6	1.5	1.7	1.8	1.8	1.7	1.7
Lithuania	0.8	0.7	1.3	1.9	1.9	2.1	1.9	1.8
Luxembourg	0.4	0.4	0.6	0.6	0.6	0.6	0.7	0.6
Hungary	4.1	4.1	4.6	4.2	4.2	4.6	4.6	4.1
Malta	3.5	3.4	3.3	3.1	3.2	3.0	2.9	2.9
Netherlands	2.0	2.1	2.1	1.9	1.9	1.9	1.8	1.7
Austria	3.3	3.1	3.4	3.1	3.0	2.9	2.8	2.7
Poland	2.2	2.2	2.5	2.6	2.6	2.7	2.6	2.0
Portugal	3.1	3.3	3.2	3.2	4.6	5.1	5.1	5.2
Romania	:	:	1.6	1.6	1.8	1.8	1.8	1.7
Slovenia	1.3	1.1	1.5	1.8	2.0	2.2	2.8	3.3
Slovakia	1.5	1.3	1.6	1.4	1.6	1.9	2.0	2.0
Finland	1.5	1.5	1.5	1.4	1.5	1.5	1.4	1.4
Sweden	1.6	1.5	1.1	1.0	1.1	0.9	0.8	0.7
United Kingdom	2.2	2.3	1.9	2.9	3.2	2.9	2.9	2.7

Source: Eurostat

General public services, not including public debt transactions								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	:	:	4.0	3.9	3.9	3.9	4.1	4.1
Belgium	4.6	4.7	5.2	4.9	5.0	4.9	5.1	5.0
Bulgaria	6.2	4.2	6.4	3.1	3.1	2.7	2.9	5.4
Czech Republic	3.1	3.2	3.4	3.1	3.1	5.0	3.4	3.5
Denmark	5.0	5.6	5.9	5.9	6.1	7.3	5.8	5.6
Germany	3.4	3.7	3.9	4.0	4.1	4.1	4.3	4.4
Estonia	3.2	3.0	3.6	3.2	3.3	3.8	3.8	3.8
Ireland	2.5	2.6	2.6	2.4	2.5	2.4	2.3	2.1
Greece	6.9	6.4	6.9	6.2	5.3	5.6	5.6	5.8
Spain	3.3	3.5	3.8	3.6	3.6	3.4	3.5	3.3
France	4.4	4.2	4.6	4.3	4.0	4.2	4.5	4.4
Croatia	5.7	5.5	5.7	5.8	5.7	4.4	5.2	5.0
Italy	3.9	4.1	4.2	4.0	4.0	4.1	4.1	4.2
Cyprus	7.3	7.3	8.6	7.7	8.0	8.5	6.9	15.9
Latvia	3.5	3.2	3.2	3.1	3.0	3.0	3.1	3.2
Lithuania	3.2	3.3	3.1	2.7	6.6	2.4	3.4	2.8
Luxembourg	4.1	4.4	4.7	5.0	4.9	5.0	4.3	4.1
Hungary	5.4	5.2	5.5	5.2	4.8	5.0	5.7	6.1
Malta	3.5	3.9	4.5	3.7	4.0	4.4	4.1	4.2
Netherlands	3.5	3.6	3.4	3.8	3.4	3.3	3.3	3.5
Austria	4.3	4.2	4.5	4.6	4.4	4.4	4.4	4.2
Poland	3.2	3.2	3.1	3.0	3.0	3.0	3.1	3.0
Portugal	3.7	2.8	3.9	3.7	3.5	3.6	3.8	3.6
Romania	:	:	2.7	2.9	3.0	3.1	3.1	3.0
Slovenia	4.3	4.3	4.4	4.0	4.1	3.8	4.0	4.2
Slovakia	3.1	3.1	4.4	3.6	3.6	3.2	3.5	3.7
Finland	5.2	5.5	6.3	6.3	6.5	6.7	6.9	6.9
Sweden	6.1	6.3	6.3	6.4	6.5	6.8	7.0	7.1
United Kingdom	2.4	2.5	2.8	2.6	2.6	2.5	2.7	2.7

Source: Eurostat

Defence (COFOG 02)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	1.4	1.5	1.6	1.5	1.5	1.4	1.4	1.3
Belgium	1.0	1.1	1.0	1.0	0.9	0.9	0.9	0.9
Bulgaria	1.4	1.2	1.2	1.7	1.2	1.1	1.2	1.4
Czech Republic	1.1	1.0	1.0	1.0	0.9	0.8	0.8	0.7
Denmark	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.2
Germany	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.0
Estonia	1.3	1.7	2.2	1.7	1.5	1.8	1.8	1.8
Ireland	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Greece	2.8	3.0	3.3	2.7	2.4	2.4	2.1	2.7
Spain	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.9
France	1.7	1.7	1.9	1.9	1.8	1.8	1.8	1.7
Croatia	1.4	1.6	1.5	1.5	1.6	1.5	1.4	1.5
Italy	1.2	1.3	1.4	1.3	1.3	1.3	1.2	1.2
Cyprus	1.6	1.6	1.7	2.1	1.8	1.8	1.6	1.4
Latvia	1.4	1.5	1.2	1.0	1.0	0.9	0.9	0.9
Lithuania	1.8	1.4	1.4	1.2	1.0	1.0	1.0	1.1
Luxembourg	0.2	0.3	0.3	0.5	0.4	0.4	0.3	0.3
Hungary	1.3	1.0	0.9	1.2	1.1	0.7	0.7	0.6
Malta	0.6	0.6	0.9	0.8	0.8	0.7	0.6	0.8
Netherlands	1.3	1.3	1.4	1.3	1.3	1.2	1.2	1.1
Austria	0.8	0.9	0.7	0.6	0.6	0.6	0.6	0.6
Poland	1.9	1.9	1.5	1.6	1.6	1.5	1.7	1.5
Portugal	1.2	1.3	1.5	2.0	1.3	1.1	1.1	1.0
Romania	1.8	1.5	1.5	1.4	0.8	0.7	0.8	0.8
Slovenia	1.4	1.4	1.5	1.5	1.2	1.1	1.0	0.9
Slovakia	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9
Finland	1.4	1.4	1.6	1.5	1.4	1.5	1.5	1.4
Sweden	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.3
United Kingdom	2.3	2.5	2.6	2.6	2.5	2.4	2.3	2.2

Source: Eurostat



Public order and safety (COFOG 03)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8
Belgium	1.7	1.8	1.9	1.8	1.8	1.9	1.9	1.9
Bulgaria	2.8	2.6	2.8	2.5	2.4	2.2	2.6	2.8
Czech Republic	1.9	1.9	2.0	1.9	1.8	1.7	1.8	1.7
Denmark	0.9	1.0	1.1	1.0	1.1	1.0	1.0	1.0
Germany	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6
Estonia	2.1	2.7	2.3	2.2	2.1	2.0	1.9	1.9
Ireland	1.5	1.8	1.8	1.7	1.5	1.5	1.5	1.4
Greece	1.5	1.6	1.8	1.8	1.7	1.9	1.9	2.1
Spain	1.9	2.0	2.1	2.2	2.2	2.0	2.0	2.0
France	1.5	1.5	1.7	1.7	1.6	1.6	1.6	1.6
Croatia	2.1	2.1	2.2	2.2	2.4	2.2	2.2	2.1
Italy	1.9	1.8	2.0	2.0	2.0	1.9	1.9	1.9
Cyprus	1.9	1.9	2.1	2.2	2.1	2.0	2.1	1.7
Latvia	2.5	2.2	2.1	1.9	1.8	1.8	1.9	2.0
Lithuania	1.7	1.9	1.9	1.9	1.9	1.8	1.7	1.7
Luxembourg	0.9	0.9	1.0	1.1	1.0	1.0	1.0	1.0
Hungary	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9
Malta	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.4
Netherlands	1.8	1.8	2.0	1.9	1.9	1.9	2.0	1.9
Austria	1.3	1.3	1.4	1.4	1.3	1.3	1.3	1.3
Poland	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.2
Portugal	1.8	1.8	2.0	2.1	2.3	2.1	2.3	2.2
Romania	2.4	2.2	2.1	2.4	2.2	2.2	2.2	2.1
Slovenia	1.7	1.7	1.8	1.9	1.8	1.8	1.8	1.6
Slovakia	1.9	1.9	2.2	2.2	2.2	2.1	2.2	2.3
Finland	1.2	1.3	1.4	1.5	1.4	1.4	1.4	1.3
Sweden	1.3	1.3	1.4	1.4	1.3	1.4	1.4	1.3
United Kingdom	2.4	2.5	2.7	2.6	2.4	2.3	2.1	2.0

Source: Eurostat

Economic affairs (COFOG 04)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	4.1	4.6	4.9	5.1	4.5	4.7	4.3	4.2
Belgium	5.5	6.0	6.7	6.8	7.4	7.7	6.9	7.0
Bulgaria	5.1	6.2	4.2	5.1	4.3	5.2	5.5	4.9
Czech Republic	6.4	6.7	7.3	6.7	6.5	6.2	5.9	6.1
Denmark	2.9	2.8	3.3	3.4	3.4	3.7	3.5	3.6
Germany	3.3	3.6	4.0	4.8	3.7	3.7	3.5	3.3
Estonia	4.3	4.9	6.2	4.6	4.5	4.6	4.7	4.8
Ireland	3.9	5.5	6.8	25.4	7.4	3.2	2.7	3.2
Greece	4.3	5.7	5.4	4.5	4.1	6.7	15.0	3.7
Spain	5.2	5.4	5.7	5.8	5.5	7.9	4.5	4.4
France	4.3	4.5	4.9	5.1	4.8	5.0	4.9	5.1
Croatia	7.0	6.9	7.0	6.1	6.6	5.7	6.0	6.2
Italy	4.2	4.0	4.7	4.2	4.2	4.1	4.2	4.1
Cyprus	3.4	3.4	3.5	3.7	3.6	3.0	2.9	2.8
Latvia	4.8	6.2	7.3	8.8	5.4	4.9	4.8	4.9
Lithuania	4.2	4.6	3.9	4.5	4.0	3.3	3.5	3.2
Luxembourg	4.1	4.0	4.7	4.5	4.7	4.7	4.5	4.5
Hungary	6.5	5.7	5.8	6.0	7.3	6.2	6.8	7.4
Malta	5.3	6.7	4.4	4.4	4.4	5.0	5.1	5.4
Netherlands	4.2	4.4	5.4	5.2	4.8	4.5	3.8	4.2
Austria	5.9	6.3	7.7	6.5	6.1	6.3	5.7	7.4
Poland	4.6	5.2	5.6	5.9	5.6	4.8	4.1	4.6
Portugal	4.2	4.6	4.8	6.4	4.4	3.8	3.8	6.9
Romania	8.6	8.0	7.9	7.0	7.1	6.6	6.2	5.9
Slovenia	4.0	4.5	4.6	4.8	5.4	4.2	15.0	5.7
Slovakia	4.2	4.6	5.6	4.8	4.3	4.2	4.3	4.5
Finland	4.4	4.6	4.9	4.8	4.8	4.9	4.8	4.8
Sweden	3.9	4.2	4.5	4.4	4.3	4.5	4.3	4.3
United Kingdom	3.0	5.2	4.4	3.4	3.0	3.5	3.1	3.0

Source: Eurostat

Environmental protection (COFOG 05)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8
Belgium	0.7	0.8	0.9	1.0	1.2	1.2	1.2	0.9
Bulgaria	1.2	0.7	1.1	0.7	0.7	0.7	0.9	0.7
Czech Republic	0.9	0.9	0.7	1.0	1.3	1.3	1.0	1.1
Denmark	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5
Germany	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6
Estonia	0.8	1.0	1.0	-0.2	-0.3	0.8	0.6	0.6
Ireland	1.1	1.2	1.1	1.0	0.8	0.8	0.6	0.6
Greece	0.8	0.9	0.9	0.8	0.8	1.1	1.7	1.6
Spain	1.0	1.0	1.1	1.1	1.0	0.9	0.8	0.8
France	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0
Croatia	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Italy	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0
Cyprus	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3
Latvia	0.9	0.8	0.2	0.3	0.7	0.7	0.7	0.7
Lithuania	0.9	0.8	1.2	1.3	0.7	0.8	0.5	0.6
Luxembourg	1.0	1.0	1.2	1.1	1.1	1.2	1.1	1.1
Hungary	0.6	0.6	0.6	0.6	0.7	0.7	0.9	1.2
Malta	1.6	1.5	1.6	1.9	1.3	1.4	1.4	1.6
Netherlands	1.6	1.6	1.7	1.6	1.6	1.6	1.5	1.5
Austria	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5
Poland	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.9
Portugal	0.6	0.6	0.6	0.6	0.5	0.4	0.5	0.5
Romania	0.4	0.5	0.6	0.8	0.9	0.8	0.8	0.8
Slovenia	0.7	0.8	0.9	0.7	0.8	0.8	0.8	1.0
Slovakia	0.7	0.8	1.0	0.9	0.8	0.7	0.7	0.7
Finland	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3
Sweden	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3
United Kingdom	0.9	0.9	1.0	1.0	0.9	0.9	0.8	0.8

Source: Eurostat

Housing and community amenities (COFOG 06)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	0.9	0.9	1.0	0.8	0.7	0.7	0.7	0.7
Belgium	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4
Bulgaria	1.3	1.5	1.3	1.0	1.1	1.0	1.3	1.6
Czech Republic	1.0	0.9	1.0	1.0	0.9	0.7	0.8	0.9
Denmark	0.3	0.4	0.5	0.3	0.3	0.3	0.3	0.2
Germany	0.8	0.7	0.7	0.6	0.5	0.4	0.4	0.4
Estonia	0.6	0.6	0.1	0.5	0.5	0.6	0.5	0.4
Ireland	2.0	1.9	1.5	1.3	0.9	0.8	0.7	0.7
Greece	0.2	0.3	0.4	0.2	0.2	0.2	0.3	0.2
Spain	0.9	1.1	1.3	0.7	0.6	0.5	0.5	0.5
France	1.2	1.2	1.5	1.4	1.4	1.3	1.4	1.4
Croatia	1.1	1.1	1.0	1.3	1.4	0.9	1.0	0.7
Italy	0.7	0.7	0.8	0.8	0.7	0.8	0.7	0.7
Cyprus	2.3	2.5	3.0	2.6	2.5	2.1	1.9	2.2
Latvia	1.2	1.2	1.1	1.5	1.3	1.2	1.2	1.1
Lithuania	0.3	0.4	0.5	0.3	0.3	0.3	0.3	0.3
Luxembourg	0.6	0.7	0.9	0.8	0.9	1.0	0.7	0.8
Hungary	1.0	0.9	1.2	0.7	0.8	0.9	0.8	0.9
Malta	0.6	0.7	0.3	0.3	0.3	0.4	0.3	0.3
Netherlands	0.4	0.5	0.7	0.6	0.5	0.5	0.5	0.5
Austria	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4
Poland	1.1	1.1	1.1	0.8	0.8	0.8	0.7	0.7
Portugal	1.0	1.0	1.1	0.7	0.6	0.5	0.6	0.6
Romania	1.5	1.3	1.4	1.3	1.2	1.1	1.2	1.2
Slovenia	0.6	0.8	0.8	0.7	0.6	0.8	0.7	0.9
Slovakia	0.7	0.7	0.9	0.9	0.8	0.7	0.6	0.6
Finland	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4
Sweden	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8
United Kingdom	1.1	1.0	1.3	1.0	0.8	0.8	0.6	0.6

Source: Eurostat

Health (COFOG 07)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	6.5	6.7	7.4	7.3	7.1	7.1	7.2	7.2
Belgium	6.7	7.2	7.7	7.7	7.6	7.9	8.0	8.1
Bulgaria	4.0	4.4	4.0	4.5	4.2	4.4	4.5	5.5
Czech Republic	6.6	6.6	7.4	7.5	7.7	7.8	7.7	7.7
Denmark	7.7	7.9	8.9	8.6	8.5	8.7	8.6	8.7
Germany	6.3	6.4	7.1	7.0	6.8	6.8	7.1	7.2
Estonia	4.3	5.1	5.5	5.3	5.0	5.0	5.0	5.1
Ireland	6.9	7.7	8.5	8.1	8.1	8.2	7.9	7.6
Greece	6.0	6.4	6.8	6.8	6.4	5.8	5.1	4.7
Spain	5.7	6.0	6.8	6.6	6.5	6.2	6.1	6.1
France	7.4	7.4	7.9	7.9	7.9	8.0	8.1	8.2
Croatia	6.1	6.3	6.6	6.3	6.4	7.1	6.8	6.7
Italy	6.7	7.0	7.5	7.4	7.1	7.2	7.2	7.2
Cyprus	2.6	2.7	3.0	3.0	3.1	3.0	3.1	2.7
Latvia	4.0	4.3	4.6	4.2	4.1	3.9	3.7	3.8
Lithuania	5.2	5.6	6.7	6.9	6.6	5.9	5.6	5.5
Luxembourg	4.5	4.7	5.4	5.1	4.9	5.1	5.2	5.0
Hungary	5.0	4.9	5.2	5.1	5.1	5.2	5.0	5.0
Malta	5.5	5.3	5.1	5.3	5.4	5.5	5.7	6.0
Netherlands	6.7	6.8	7.8	7.8	7.9	8.3	8.2	8.1
Austria	7.4	7.6	7.9	7.9	7.8	7.8	7.8	7.9
Poland	4.5	5.0	5.0	5.0	4.7	4.6	4.6	4.6
Portugal	7.0	7.2	7.9	7.3	6.8	6.5	6.4	6.2
Romania	3.7	3.8	4.2	4.1	4.1	3.8	4.0	4.0
Slovenia	5.8	6.1	6.8	7.0	7.1	7.1	6.9	6.6
Slovakia	1.6	1.6	1.9	1.8	1.9	1.8	1.8	1.9
Finland	6.6	7.0	7.9	7.9	7.8	8.2	8.3	8.3
Sweden	6.4	6.6	7.1	6.8	6.8	6.9	7.0	7.0
United Kingdom	6.8	7.2	8.0	7.8	7.6	7.5	7.5	7.6

Source: Eurostat

Recreation, culture and religion (COFOG 08)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	1.1	1.1	1.2	1.1	1.1	1.1	1.0	1.0
Belgium	1.2	1.2	1.3	1.3	1.3	1.4	1.3	1.3
Bulgaria	0.7	0.8	0.7	0.7	0.7	0.8	0.8	1.5
Czech Republic	1.2	1.2	1.3	1.3	1.2	1.2	1.1	1.2
Denmark	1.7	1.8	1.9	1.8	1.8	1.8	1.8	1.8
Germany	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Estonia	2.0	2.3	2.3	2.1	1.9	1.8	2.1	2.0
Ireland	0.7	0.9	1.0	0.9	0.8	0.8	0.8	0.8
Greece	0.6	0.7	0.7	0.6	0.6	0.7	0.7	0.6
Spain	1.6	1.6	1.6	1.7	1.5	1.2	1.1	1.2
France	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5
Croatia	1.0	1.0	1.0	1.1	0.9	1.2	1.5	1.3
Italy	0.8	0.8	0.9	0.8	0.5	0.7	0.8	0.7
Cyprus	1.2	1.2	1.2	1.2	1.2	1.0	0.9	0.9
Latvia	1.7	1.8	1.8	1.6	1.6	1.5	1.6	1.7
Lithuania	1.0	1.1	1.2	1.0	1.0	0.8	0.8	0.9
Luxembourg	1.3	1.2	1.4	1.2	1.2	1.2	1.3	1.3
Hungary	1.5	1.5	1.4	1.8	1.8	1.9	1.8	2.0
Malta	0.5	0.6	0.7	0.8	0.8	0.9	0.9	1.1
Netherlands	1.5	1.7	1.8	1.8	1.7	1.6	1.5	1.5
Austria	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9
Poland	1.1	1.3	1.3	1.4	1.3	1.2	1.1	1.2
Portugal	1.0	1.1	1.1	1.1	1.0	0.9	0.9	0.9
Romania	1.1	1.1	1.1	1.0	1.1	1.0	0.9	1.0
Slovenia	1.2	1.6	1.7	2.2	1.9	1.9	1.8	1.7
Slovakia	0.8	0.9	1.0	1.0	1.0	0.9	0.9	0.9
Finland	1.0	1.1	1.2	1.2	1.2	1.2	1.5	1.4
Sweden	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
United Kingdom	0.9	1.0	1.0	1.0	0.9	0.9	0.7	0.7

Source: Eurostat

Education (COFOG 09)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	4.9	5.0	5.3	5.3	5.1	5.0	5.0	4.9
Belgium	5.5	5.7	6.0	6.0	6.1	6.3	6.4	6.3
Bulgaria	3.6	3.9	4.1	3.6	3.4	3.4	3.7	4.1
Czech Republic	4.7	4.7	5.0	5.1	5.1	5.1	5.1	5.2
Denmark	5.9	6.1	7.0	7.2	6.9	7.0	7.0	7.2
Germany	3.9	3.9	4.3	4.4	4.3	4.3	4.3	4.3
Estonia	5.9	6.7	7.2	6.6	6.2	6.2	5.9	5.6
Ireland	4.5	5.0	5.0	5.0	5.0	4.8	4.5	4.3
Greece	3.6	3.8	4.1	4.1	4.4	4.5	4.6	4.4
Spain	4.0	4.2	4.6	4.5	4.4	4.2	4.1	4.1
France	5.3	5.4	5.7	5.6	5.5	5.5	5.5	5.5
Croatia	4.7	4.7	4.9	5.1	4.9	4.9	5.1	4.7
Italy	4.5	4.4	4.6	4.4	4.1	4.1	4.1	4.1
Cyprus	5.8	6.2	6.6	6.8	6.6	6.1	6.5	5.8
Latvia	5.6	6.3	6.7	6.2	5.9	5.7	5.7	5.9
Lithuania	5.3	6.1	7.2	6.4	6.1	5.8	5.6	5.4
Luxembourg	4.5	4.9	5.5	5.2	5.4	5.6	5.2	5.2
Hungary	5.5	5.3	5.4	5.5	5.1	4.7	4.6	5.2
Malta	5.2	5.2	5.4	5.6	5.7	5.7	5.8	5.8
Netherlands	5.1	5.3	5.7	5.6	5.5	5.5	5.4	5.4
Austria	4.7	4.9	5.1	5.1	5.0	5.0	5.0	5.0
Poland	5.7	5.7	5.5	5.5	5.4	5.4	5.3	5.3
Portugal	6.4	6.7	7.3	7.6	7.3	6.2	6.2	6.2
Romania	3.9	4.4	4.0	3.3	4.1	3.0	2.8	3.0
Slovenia	5.9	6.1	6.6	6.5	6.4	6.5	6.5	5.9
Slovakia	3.5	3.5	4.2	4.2	4.1	4.1	4.0	4.1
Finland	5.8	5.8	6.5	6.6	6.5	6.4	6.4	6.4
Sweden	6.3	6.5	6.8	6.5	6.5	6.5	6.6	6.6
United Kingdom	5.9	6.1	6.6	6.6	6.0	5.7	5.3	5.2

Source: Eurostat

<b>Social protection (COFOG 10)</b>								
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
EU28	17.2	17.6	19.5	19.4	19.1	19.4	19.5	19.5
Belgium	16.8	17.4	19.1	18.7	18.9	19.5	20.1	19.9
Bulgaria	10.1	10.6	12.9	13.1	12.3	12.5	13.5	13.4
Czech Republic	11.9	11.9	13.1	13.0	13.2	13.4	13.6	13.2
Denmark	21.5	21.6	24.4	25.1	24.9	24.7	24.9	24.5
Germany	18.7	18.6	20.6	19.9	18.8	18.8	18.8	18.8
Estonia	9.3	11.5	15.4	14.2	12.6	12.2	11.8	11.8
Ireland	11.3	13.5	16.5	16.4	14.7	14.9	14.1	13.2
Greece	15.7	17.0	18.6	18.8	20.6	21.0	19.6	20.1
Spain	12.8	13.8	16.0	16.6	16.8	17.5	17.9	17.6
France	21.6	21.8	23.7	23.6	23.7	24.2	24.4	24.8
Croatia	13.6	13.1	14.6	14.7	15.1	15.2	14.6	15.7
Italy	17.5	18.1	19.8	19.8	19.8	20.5	21.0	21.4
Cyprus	8.6	8.9	10.0	10.6	11.1	11.3	11.9	12.2
Latvia	8.0	9.1	14.0	14.2	12.3	11.4	11.5	11.5
Lithuania	10.7	12.1	16.4	14.1	12.4	12.0	11.4	11.5
Luxembourg	16.0	17.1	19.7	19.1	18.1	18.7	18.8	18.6
Hungary	17.3	17.5	18.2	17.5	17.0	16.7	16.5	15.6
Malta	13.4	13.3	14.2	13.7	13.7	13.9	13.8	13.7
Netherlands	14.3	14.7	16.3	16.6	16.5	16.8	17.0	16.9
Austria	19.5	19.7	21.4	21.5	20.8	21.0	21.4	21.7
Poland	15.7	15.8	16.4	16.6	15.7	15.8	16.2	16.1
Portugal	14.6	15.0	16.9	17.1	17.7	18.2	19.2	18.5
Romania	10.2	11.3	13.6	13.8	12.8	12.3	11.5	11.4
Slovenia	15.3	15.6	17.5	18.2	18.7	18.5	18.8	18.0
Slovakia	17.4	17.5	20.1	20.4	19.4	19.8	20.1	20.0
Finland	19.1	19.4	22.7	22.8	22.6	23.8	24.8	25.4
Sweden	20.5	20.4	22.1	21.1	20.4	21.1	21.6	21.3
United Kingdom	14.9	15.5	17.3	17.3	17.1	17.3	16.8	16.5

Source: Eurostat



Within social protection: old age and survivors (COFOG 10.2 and 10.3)								
	2007	2008	2009	2010	2011	2012	2013	2014
EU28	:	:	:	:	:	:	:	:
Belgium	8.9	9.3	9.9	9.9	10.0	10.3	10.8	10.8
Bulgaria	5.9	6.0	:	:	:	:	:	:
Czech Republic	6.6	6.8	7.5	8.0	8.6	8.8	8.9	8.6
Denmark	6.7	6.8	7.5	7.6	7.9	8.0	8.2	8.4
Germany	11.1	11.1	11.8	11.5	11.0	11.1	11.0	11.0
Estonia	5.4	6.4	8.1	7.9	7.0	6.8	6.8	6.8
Ireland	3.5	4.0	5.1	5.2	5.0	5.3	4.8	4.6
Greece	12.1	13.6	14.5	15.0	16.3	17.5	16.2	16.9
Spain	7.9	8.1	9.0	9.5	10.1	10.7	11.3	11.6
France	13.0	13.4	14.3	14.5	14.6	14.9	15.1	15.3
Croatia	7.1	7.4	7.4	7.4	7.5	7.9	7.4	8.1
Italy	14.3	14.7	15.7	15.9	15.9	16.4	16.7	16.8
Cyprus	4.4	4.5	5.0	5.5	5.8	6.2	6.6	7.2
Latvia	4.6	5.3	8.3	9.0	8.1	7.7	7.7	7.4
Lithuania	6.2	6.3	7.9	7.0	6.3	6.4	6.2	6.5
Luxembourg	9.6	9.9	11.2	10.9	10.6	11.0	10.8	10.9
Hungary	8.2	8.6	8.6	8.6	8.8	9.2	9.2	8.7
Malta	9.0	8.9	9.8	9.6	9.7	10.0	9.9	9.6
Netherlands	5.7	5.7	6.3	6.4	6.6	6.8	6.9	6.9
Austria	13.0	13.2	14.2	14.2	14.0	14.2	14.5	14.7
Poland	10.6	11.1	11.2	11.2	10.8	10.9	11.2	11.0
Portugal	10.3	10.6	11.9	12.2	13.0	13.2	14.3	13.7
Romania	:	:	10.2	10.3	10.0	9.7	9.0	9.1
Slovenia	9.6	9.8	10.8	11.2	11.4	11.7	11.9	11.6
Slovakia	7.0	6.8	7.9	7.9	7.7	7.8	8.0	8.2
Finland	8.9	9.2	10.9	11.0	11.4	12.1	12.7	13.0
Sweden	10.5	10.8	11.8	11.1	10.8	11.3	11.6	11.3
United Kingdom	7.2	7.5	8.3	8.3	8.3	8.7	8.7	8.6

Source: Eurostat