

Raport Badawczy

Research Report

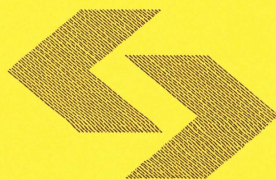
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**Local government debt and
investment in select OECD
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Local government debt and investment in select OECD countries over 1999–2013

Michał Bitner, Krzysztof S. Cichocki

1. Significance of the local government investment and its role in public finance

Local government sector plays a significant role in facilitating quality of life of local inhabitants and is the largest public investor. The tasks implemented by institutions of the sector include economic services – water, gas, and energy supply, roads construction and maintenance, and general purpose non-economic public services, for example education, health care, and also explicit social services. Select institutions controlled by local governments constitute enterprises, which activity is subordinated to market rules, other institutions facilitate minimization of market failures and conform to social needs and expectations. Local government expenditures, substantial in public sector, largely contribute to economic development and the debt of the local sector is low - below 9% of GDP in majority of analyzed countries (in Poland amounts to 4%). During 1999-2011 we observe periods of local budget deficits (2009-2010) as well as periods of surpluses (years 1999-2000 and 2006-2008) and investment expenditures change cyclically in many countries. Relative significance of the local government sector in the whole economy, especially in comparison with the general government sector, measured by a share of revenue in GDP is presented in Bitner, Cichocki, 2012a¹.

The analysis includes finances of local governments and of other institutions which belong to the local government sector as defined in the SNA and other compatible methodologies. Comparative analysis, which bases on all institutions of the local sector, not solely on local governments, presents a complete picture of the local sector, and of the whole public sector.

2. Objective and methodology

2.1. Objective, subject and scope of analysis

The objective of the paper is the comparative analysis of local government sector finance in select countries based on uniform data released by international institutions. The analysis uses only these data and conclusions result from this analysis. In the article we do not study neither compare institutional solutions in the local government finance sectors. We analyze over 1999-2011 period (13 years) finances of the whole local government sector including local governments and various institutions of the local sector. There are advantages of such an approach: analysis is neutral with regard to institutional solutions, which differ in the European Union (EU) member countries and the U.S., regarding for example budget completeness, and respects a variety of relations between “basic” budgets of local governments and financial plans of local government institutions. The approach uses the same data base for all institutions of the sector in EU and OECD countries, the same methodology of national accounts and enables investigation of debt and deficit consistently with the EU excessive deficit procedure.

We study all EU countries and select other countries of the Organization of Economic Cooperation and Development (OECD) - Norway, U.S. and Japan. For clarity of presentation

¹ This article is a second part of comparative analysis of local government sector finances in EU countries.

we present results only for select EU countries. The old EU (UE15) represent: Denmark, Germany, Spain, France, Italy, The Netherlands, Sweden and Great Britain; the new member states (NMS): Poland, Czech Republic and Hungary. Sometimes we include in the presentation other select countries.

Selection of the analysis period allows to compromise between two objectives: analysis of the sector dynamics of investment expenditure, debt, deficit and operating surplus and the sector long-term development, and smoothing regulatory changes in the local government finance system in select countries.

Analysis of local government finance over 1999–2011 enables observation of the above countries local finance in periods of prosperity (1999–2000, 2003–2007), and economic slowdown (2001–2002, 2008–2010). In Poland, the starting point of analysis (1999) is natural - in 1998 the local government system changed, in addition to the existing local government level (municipality), two new levels were introduced: districts and regions.

The basis for selection of countries to be presented in the article is the role of the local government sector in economies of these countries (share of revenue in GDP), and the share of debt in financing expenditure of the sector. The U.S. and Japan are the largest economies among OECD members, and Norway for years has had the highest *Human Development Index*. We present aggregate values for remaining EU member countries as three averages: for new member states (countries, which joined EU in 2004, or later), for fifteen countries which belonged to EU prior to 2004, and for all 27 UE member countries. We use arithmetic averages and not the averages weighted by the share of individual countries GDP in total EU GDP (as published by Eurostat).

Local government sector investment expenditures, expenditure structure, operating surplus, net borrowing and indebtedness are subject of investigation and comparison; we also study changes in these variables during the 2008–2010 crises. Local sector revenue and operating expenditure are analyzed in Bitner, Cichocki, 2012a.

2.2. Data utilized in analysis

The analysis bases on uniform comparative data from the Eurostat Dissemination Database - New Cronos Eurostat database (for EU member countries and Norway) and the SourceOECD database (for USA and Japan). In analysis of local expenditure in the U.S. we use financial reports of local governments budget implementation, published by the U.S. *Census Bureau* - consolidated data for the state and local governments (not the whole local government sector); these data required verification, as they base on budgetary classification, not on the SNA transactions. Therefore, the data we use for analysis of local government expenditure in the U.S. are approximate. Select Eurostat data, and the OECD data had to be compared with the Government Finance Statistics data base and appropriately verified². Thus, we implement two methodological standards ESA'95 (in European Union) and SNA (for OECD countries - nonmembers of EU), similarly to Bitner, Cichocki, 2012a. ESA'95 methodology is used for the excessive deficit procedure determined by of the European Union Treaty, art. 126³ and other implementing executive regulations.

² We take into account methodological differences between general principles of national accounts defined by the SNA and ESA'95 systems, and methodology used by GFS. Verifications include cases of obvious errors in the Eurostat database; for example the Gross Fixed Capital Formation of the general government sector in Italy, in 2002 equals 22.468 mln euro and the GFCF of the local government sector – 24.497 mln euro; a similar error regards GFCF of the g.g. sector in U.K. in 2005, and l.g. sector debt in Norway in 2006.

³ Treaty on E.U. Activity (O.J.L. UE C 115, 2008)

3. Background and economies of analyzed countries

3.1. Bibliography

Literature regarding local government finance is not extensive and a thorough comparative analysis is very seldom. Basic methodological issues of local government expenditure, revenue and regional accounts are described in the UN System of National Accounts, 1993, the European System of Accounts ESA 95, and in the IMF Government Finance Statistics Manual, 2001 and in Schwarting, 2006. They were comprehensively discussed in numerous publications, e.g. in the Studies in Methods series prepared by the UN Statistics Division, for example - National Accounts: A Practical Introduction, 2003. They are cited in Bitner, Cichocki, 2012a. There exist comparative studies of local government finance based on the above mentioned methodology. Dexia, 2008, presents a solid comparison of local finances and expenditure, but the level of aggregation is high and the analysis ends in 2007. The second report of the United Cities and Local Governments, 2010 is significant, but it analyzes over 100 states on all continents and the results, similarly to the first report, 2008 (and the 2009 report regarding financial crisis), have a general character and presents aggregate data.

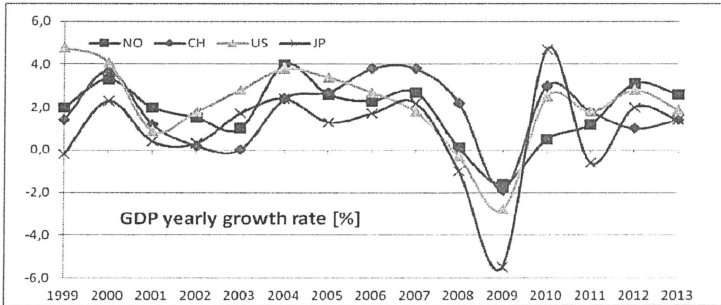
International comparison of local government finance data are included in select studies devoted mainly to fiscal institutions and rules: Ter-Minassian, in 1997 presented the first comprehensive report, but of very general character, the book by Dafflon, 2002, is cited very often, but compares only select countries of the old EU. Boogert and others, 2005, published a comparison of local government tasks in France, Germany, Poland and the Netherlands. The comparative study by Friedrich, Gwiazda and Nam, 2003 also considers select EU countries. Some general comparisons are presented in papers on the impact of global financial crisis on local government finance (Canuto, Liu, 2010) and in reports by the Council of European Municipalities and Regions, 2009.

Polish literature in the area focuses, in majority, on normative regulations regarding revenue, (also expenditure and debt), and the impact of these regulations on operation of local governments. International comparisons of revenue include Swianiewicz, Łukomska, 2010 (pp. 12-14) and Bitner, Cichocki, 2012 (pp. 42-71).

3.2. Performance of analyzed economies during 2008-2010 crises

Economic crisis of 2008-2010 has resulted in the decrease in GDP in the U.S., Japan and all EU member countries except Poland. It has also deteriorated the general government finance, caused sharp decrease in revenue, an increase in operating expenditures and debt (ratios of debt and net borrowing to GDP). The fall in GDP, general government investment, and an increase in deficit and debt had an impact on local government sector. Local revenues declined (Bitner, Cichocki, 2012a), local governments, which wanted to maintain investment level generated large deficits and issued high debt, some of them failed and substantially decreased investment.

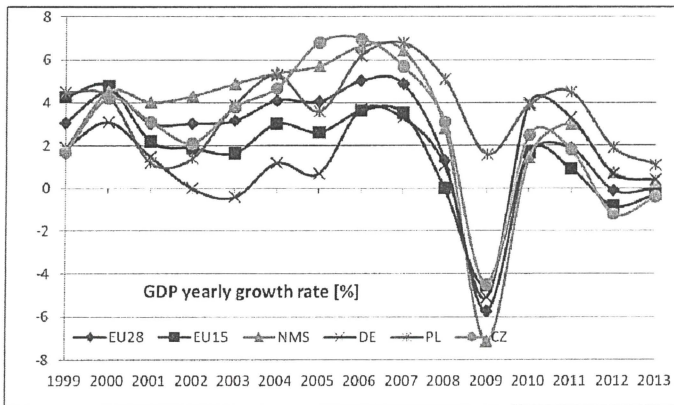
Figure 1. Percentage changes in real GDP in Norway, Switzerland, U.S. and Japan



Source: the authors' calculations based on Eurostat and OECD data

The GDP growth rate over 2001–2008 was in countries of NMS twice as high as in EU15, and substantially higher than in U.S., Norway and Japan. In 2009 the decrease of GDP was highest in NMS (-7%) and in Japan (-5,5%); in 2010 GDP grew, in Japan 4,4%, U.S. - 3,0%, NMS – nearly 2%, and in EU15 - 1,6%; however the rate of growth fell in 2011 to 1,7% in U.S. and 1,0% in EU15. In Japan the 2011 GDP decreased in nominal value by 0,7%. Norwegian economy was the most stable over 2008–2010, and in 2011 enjoyed GDP growth of 1,6% (NMS' GDP grew 3%).

Figure 2. Percentage changes in real (volume) investment expenditure in EU15, NMS



Source: the authors' calculations based on Eurostat and OECD data; the same in all consecutive figures

The impact of 2001-2003 economic slowdown (decrease in GDP and collapse of new technologies market) was much stronger in U.S., Norway, Japan, and EU15 countries than in NMS countries, except in Poland. In the U.S., crises hit in 2001 (after the drama of 11 September), the DJIA Index fell after 5 years off upward trend.

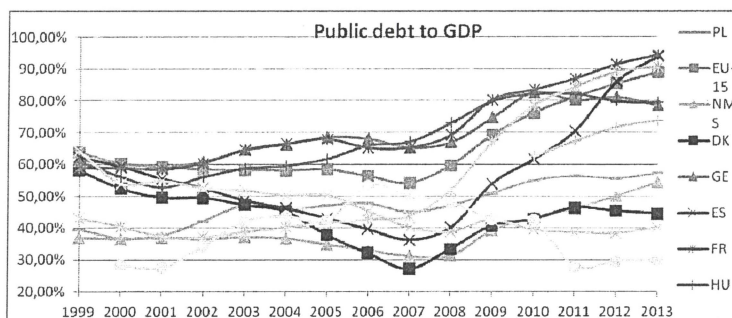
Figure 2 presents changes in investment expenditure of UE15, NMS countries, Norway, U.S. and Japan. One should note abrupt cut in investment expenditure in 2009: actually this drop contributed substantially to the negative change in GDP.

Fiscal incentives, widely implemented in response to economic crises, generated large deficits of general government budgets, and as a result, strong increase in public debt. These processes were extremely strong in OECD countries, which were not EU members. In U.S.,

over 2007–2009 the debt of the central government sector in relations to GDP rose from 36% to 62%, in Japan - from 165% to 192%. In 2009 the budget deficit (*net borrowing*) of the central government sector related to GDP equaled in the U.S. 11,5% and in Japan 8,7%.

In 2009 the budget deficit of general government sector was observed in many EU countries: in Greece 15,5% of GDP, Ireland -14%, Spain, Great Britain and Portugal - above 10%. In 2010 the deficit to GDP has not changed much, but in Ireland it exceeded 31%. In Poland, the public deficit of 7,8% GDP in 2010 is similar to the deficit in France and Slovakia, and is lower than in Romania, Lithuania and Latvia. In 2011 the deficit in relation to GDP decreased in nearly all countries; large deficits remained in Ireland (13%), Greece, Spain and U.K. (above 8%). Surpluses exhibited Sweden - 0,1% GDP, and Hungary - 4%. In figures 3, 4 we show changes in debt and deficit in relation to GDP (Maastricht definition) in select EU countries.

Figure 3. Ratio of general government (public) debt to GDP in select EU countries



Source: the authors' calculations based on Eurostat and OECD data

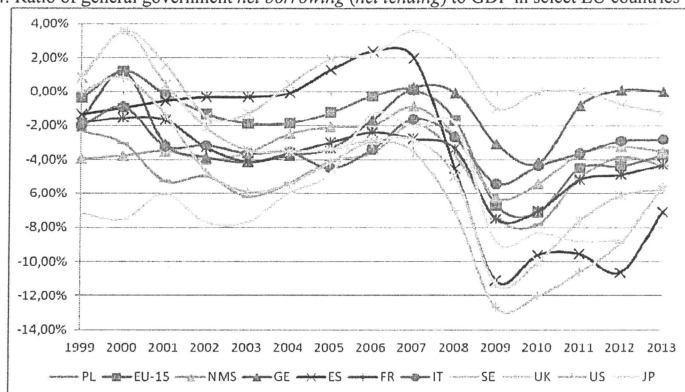
High deficits resulted in rapid rise of public debt, especially in Ireland (debt to GDP ratio in 2007 equaled 24,9%, in 2010 - 91,2%, in 2011 – 104% and in 2013 -123,7%). In select EU countries the debt to GDP ratio grew very fast over 2007-2013: in Greece, from 107% to 170% in 2011, and 175% in 2013, in Italy, from 103% to 132,6%, Portugal, from 68% to 129%, in the U.K., from 43,7% to 93,5% in 2013, in Spain from 36% to 94%, and in France from 65% to 94%. Since 2008 public debt to GDP was rising in all E.U. countries, including Luxemburg. In 2013 it decreased compared to 2010 in Norway (the strongest decrease), Denmark, Germany, Hungary and Latvia and Lithuania. In Belgium, Germany, Greece, France, Italy, Portugal and Hungary, the debt was higher than 60% GDP already prior to 2008 (in Italy and Greece was higher than 100% GDP). In Sweden the share stabilized over 2011-2013 at the 2007-2010 level (about 40%).

The public debt in relation GDP for EU15 countries in 2010 equaled 76,15%, 81,0% in 2011 and 88,8% in 2013, on average was much higher than for new member states (NMS) - 43,2%, 45,7%, and 53,2%. The average for all 27 EU countries equals 63,1%, 67,3% and 75,5% respectively.

Large deficits and high public debt in relation to GDP resulted in initiating the procedure of excessive deficit, which is strong, although relative, base for economic unity of E.U. member countries. At the end of 2010, 23 countries, out of 27 E.U. members, were included in the excessive deficit procedure. In 2010, especially in its second half, financial markets counter reacted to the increases in deficits and debt. Cost of money rose: profitability

of 10 year government bonds⁴ increased in Ireland from 4,83% in January to 8,45% in December, in Greece - from 6,02% to 12,01%, and in Portugal from 4,17% to 6,53%.

Figure 4. Ratio of general government *net borrowing (net lending)* to GDP in select EU countries



Source: the authors' calculations based on Eurostat and OECD data

4. Comparative analysis of local government sector expenditure over 1999–2010

4.1. Basic information regarding investment budget

The general principle of the local government sector finance valid also in majority of analyzed countries' public sectors is a division of the budget into operational budget (includes current expenditure) and capital (investment) budget. The division usually plays an important legal function, as it is related to "a golden rule of public finance", which states that current expenditure should be financed from current revenue (regular and cyclical). Non regular revenue and inflows from transactions included in financial accounts (capital revenue, which include debt) should exclusively serve investment financing.

We present analysis of investment expenditure of the local government sector and the general government sector, their share in GDP and in total investment in economies of select EU countries, Japan and the U.S. We also shortly discuss the structure of LG sector expenditure in the above countries. Comparison of local government investment with investment of the general government sector makes it possible to evaluate local governments role in generating GDP, and constitutes a very important starting point in all analysis regarding local governments debt and deficit.

The cost of debt service in relations to total expenditure of the local government sector is discussed in Bitner, Cichocki, 2012a.

4.2. Investment expenditures

We define investment as *gross fixed capital formation (GFCF)* – a category implemented in national accounts. The GFCF is the total value of fixed assets acquired by an institutional unit (e.g. local authority) in a given year (a reporting period) minus the value of fixed assets, which were disposed of during the period. The GFCF mirrors the value of both,

⁴ Determined consistently with the convergence criteria for calculating 10-year bonds profitability (yield to maturity) nominated in national currency.

the existing and new fixed assets (buildings, houses, equipment, and non-material assets) as well as essential improvements to non-financial assets, which extend life time of economic utility assets. Acquisition is defined as a purchase and own manufacture, barter transactions, in-kind transfers, and financial leasing. Disposal can be associated with sales, barter transactions, in-kind transfers, and financial leasing.

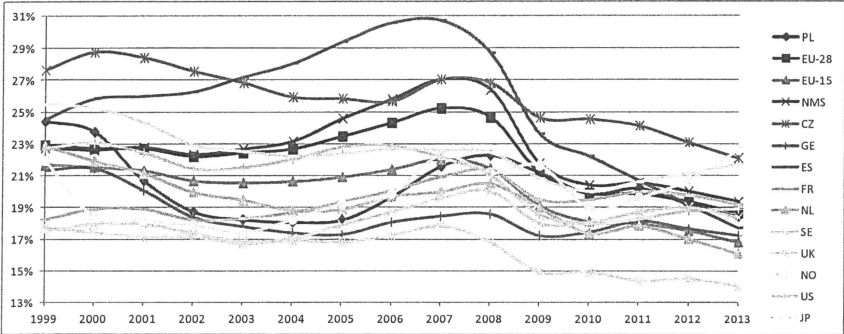
The *net* savings, a category that we use, do not include changes in the stock level and *net* acquisition of valuables. However, in the local government sector the share of expenditure which are not investment expenditures (GFCF) in the formation of *gross* capital is very low, does not exceed 1%-2%. We assume, differently to traditional assumptions, that the operational balance (result) does not equal *net* savings.

We analyze four indicators regarding investment expenditure: the share of investment, implemented in all sectors of the economy in GDP, including the whole economy investment, the share of investment in the general government sector in total investment in the economy, the share of local government sector investment in general government sector investment, and the share of local government sector investment in its total expenditure. We utilized data from the Eurostat dissemination database (formerly New Cronos), the OECD database (*via* SourceOECD) and the Government Finance Statistics of IMF. The US data are taken from the Treasury database: www.Treasury.gov

4.2.1. The role of investment in generating GDP

Gross Domestic Product, defined by aggregate demand, is the total expenditure on domestically produced goods and services - the sum of consumption, gross accumulation and *net* exports (exports minus imports). *Gross* accumulation includes: Gross Fixed Capital Formation (investment), changes in stock and in net wealth. Production activity of general government sector units, and also of the local government subsector is marginal, therefore the value of changes in their stocks is negligible, usually does not exceed 1% GFCF, Bitner, Cichocki, 2010, 2014.

Figure 5. The share of the economy investment in GDP



Source: the authors' calculations based on Eurostat and OECD data

The share of investment in GDP in analyzed countries oscillates between 15% and 25%, with exception of Great Britain, Ireland, and Greece, where over 2009-2013 the share

was lower. In Spain, Czech Republic (Cz.R.) and in Romania (starting 2005) the investment were exceptionally high. In Spain, the investment share in GDP equaled above 28% over 2004–2008, exceeded 30% in 2006 and 2007, but decreased to 17,7% in 2013. In Cz.R., until 2008 the share oscillated around 27% (26% in 2005, 2006), remained above 24% over 2009–2011 and equaled 22,1% in 2013. In Romania the share exceeded 30% in 2007–2008, and 24% over 2009–2012. Traditionally, high investment share in GDP presents Japanese economy, on average above 22%; about 21% over 2009–2013.

In 2013 the highest investment share in GDP presented Romania (23,6%), Norway (22,6%), Cz.R. (22,1%), Japan(21,7%), Austria (21,2%), Bulgaria (20,7%) and Switzerland (20,1%), where the share has remained stable for several years. Also in Sweden France and Austria the share remained stable correspondingly between, 18%-20%, 19%-21% and 20%-22%. The lowest share of investment in GDP was observed in Ireland, 10,7% in 2013, and below 12% in 2010. In the U.K. the share, on average, was below 17%, decreased from 17,8% in 2007 to 14,0% in 2013. In Greece – the share equaled 12,1% in 2013, and 15,1% in 2011, and 26,6% in 2007.

In Poland contribution of investment to GDP over 2002–2005 was lower than in the EU15, but starting 2006 it became higher, equaled 22,3% in 2008, 20,2% in 2011. The share was close the average value of the new member states, but over 2012–2013 (18,4%) was below the NMS average. The share of investment in GDP in the NMS, over 2009–2012, exceeded 20% and was higher than in the EU15 countries by 2 percentage points (over 2006–2008 by 4 pp.). In 2013 the share equaled 19,4% and was higher by 2,5 pp. than the EU15 countries share.

The economic recession of 2008–2010 is demonstrated in many countries by the strong decline in the share of investment in GDP in 2011 and 2013. The strongest decline in 2011, in comparison with 2007, is observed in Ireland (58%) and Greece (43%); in 2013 in Greece the decline increased to 54,3%. In Spain, compared to 2007, the share decreased in 2013 by 42%, and 33% in 2011. In Bulgaria the decline equaled 25% in 2011, and 27,8% in 2013. In Denmark and U.K. the share decreased by 20% - 21%, in the U.S. - by 17%. The decrease in the share was also observed in countries in which there was no decline in GDP, for example in Poland – by 6,3% in 2011 and 14,5% in 2013. The group of countries with the lowest decline in the share, similar to that of Poland, in 2011 include Italy, Japan, Norway and the Netherlands, (in Norway the share rose in 2013).

4.2.2. Contribution of the general government sector investment to total investment

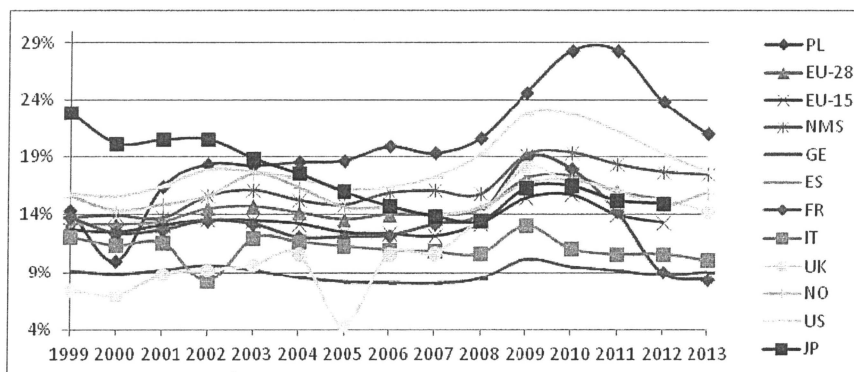
In the majority of the analyzed countries, we observe over time an increasing share of the general government sector investment in total investment, and a decrease over 2012–2013. In the U.S. the share grew from 15,6% in 2000, to 22,7% in 2010 (declined to 17,7% in 2013), in EU15 countries – from 12,6% to 15,7% in 2010; 13,3% in 2012. The increase of the share in the NMS is spectacular - from 13,7% in 1999 and 2001 to 19,4% in 2010, 17,5% in 2013. In Poland – the share rose from 14,3% in 1999 (10% in 2000) to 28,3% in 2010 and 2011; in 2013 equaled 21%. In 2009 we observe a strong increase of the share, in the NMS and in the U.S. (3,5 pp.) – associated with the “rescue programs”, implemented by the U.S. government. In the EU 15 countries the increase equaled 2,2 pp.

Due to large rise in general government sector investment the economic recession in select countries of the NMS was relatively weak.

The share is very low in Germany – at a stable 9% level, in Denmark (below 9% until 2009, and 13,5% in 2013), and in Italy – 10% in 2013. In Spain and France the share equals 10% in 2012, and 8,4% in 2013. The share in Great Britain decreased sharply in 2005, but is above 14% starting 2009 (18%).

In Ireland, the share was low until 2006 (14%), equaled 19% in 2001,2002, increased to 28% in 2010 and declined to 17,4% in 2012. Greece maintained the GG investment share at about 15% level, in 2011 it decreased to 11,4%, but in 2012 and 2013 equaled 16%.

Figure 6. Share of general government investment in total investment



Source: the authors' calculations based on Eurostat and OECD data

4.3. Local government investment expenditure

The investment expenditure of a local government, on average, constitutes 14%-22% of its total expenditure. The share is higher in the EU new member states than in the 15 countries of the “old EU” (the difference is about 6 - 8 percentage points). Many NMS countries, also select EU15 countries will seek, over 2015-2022, to acquire the EU funds for financing local infrastructure. The NMS will try to maintain high investment to narrow the infrastructure gap between them and the leading EU countries. The LGs will remain the major investor in the public sector of very many countries in Europe.

4.3.1. Share of local government sector investment in the general government sector investment

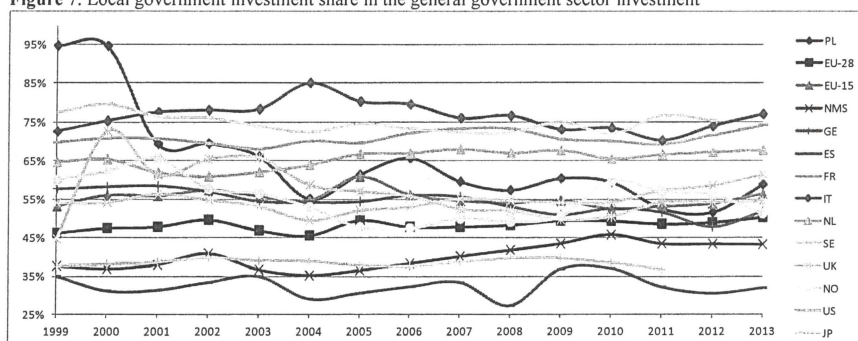
In the majority of analyzed countries local government sector is the largest investor of the general government sector. Greece is the evident exception – the share of local government in the public sector investment equals, on average, less than 20%, and over 2009-2011 – about 26%; it increased to 32% over 2012-2013. The share is also low in Bulgaria (below 30%), and Estonia - about 29% over 2010-2011, and 40% earlier, 43% in 2013, 34% in 2012. In 2012-2013 the share is below 40% in Hungary; 39% in 2013, about 60% over 2010-2011. Local government sector investment, in the analyzed period, is high - about 70% - in Italy (77% in 2013, 74% in 2012), and in France (74,2% in 2013). In Japan, on average the share of local investment constitute about 75% of the public sector investment. The share is also high in the Netherlands – 68% in 2013 and 2012.

The share of LG investment in public sector investment is much lower in new member states (around 43% over 2009-2013) than in old EU countries (54%–56% in the analyzed

period). However, starting 2007 the difference systematically decreases as a result of the rise of the share in NMS. It was 18-20 pp prior to 2007, 10 pp in 2009-2012 and 13 pp in 2013. In new member states the share equaled 38% in 1999, 45% in 2010 and 43%, in 2011 - 2013. In EU15 countries it remained at 53%-54% level, 60% in 2005 and 56,4% in 2013. The share in the US is below 40%.

In Poland, the share of local government investment in investment of the public sector, on average, equals about 60% (58,8% in 2013) and is much higher than the average calculated for all the EU countries (below 50%, only in 2013 – 50,3%). In 2011 and 2012, the share in Poland decreases to 52%. The local government sector investments were exceptionally high in 1999-2000 (above 94,5%); the central government sector investment were extremely low in Poland. Investment of the social insurance sector was negligible – yearly average investment share of the social insurance sector, in the analyzed period, equaled about 1,2% of total general government sector investment (410 mln PLN).

Figure 7. Local government investment share in the general government sector investment



Source: the authors' calculations based on Eurostat and OECD data

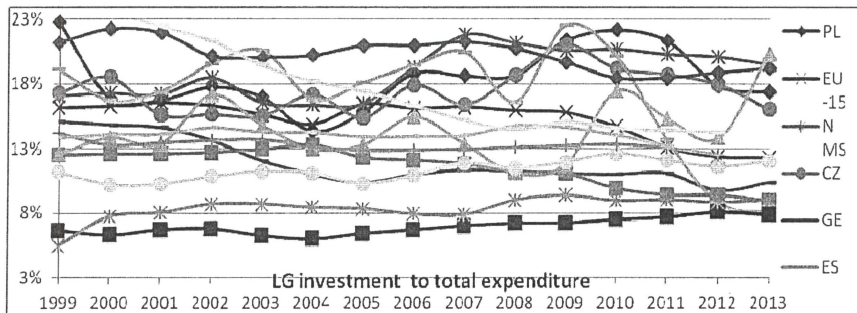
4.3.2. Share of investment expenditure in total expenditure of local government sector

Relation of investment expenditure to total expenditure of the local government sector strongly varies in the analyzed countries and there are no general trends in the changes. The lowest share of the capital budget in the total budget of the local government sector can be observed in Denmark, Sweden, Finland, Austria and the U.K. (similarly to the share of investment in GDP). However, these low shares result mostly from institutional solutions. The "size" of the local government sector in Scandinavian countries is much larger than in other EU countries. Revenue, over 2007 – 2012, of the LG sector constitutes over 37% of GDP in Denmark, 25% in Sweden, 20% in Finland and 14% of GDP in Norway. In addition, the expenditure for social care and health protection constitute the majority of the total expenditure of the LG sector in these countries. Austria (8%)??

The share of investment expenditure in the total expenditure of the local government sector is higher in new member states than in 15 countries of the "old EU". Starting 2007 the difference equals about 6 percentage points (8pp. in 2012 and 2013. In 2007 the share in NMS increases to 22,4%, and remains in the vicinity of 21%. The share consistently high in Portugal (above 18%), France and Slovenia (above 18%), Romania (above 22% from 2007) and Spain (about 19%, but 13,5% in 2011, 9% in 2012 and 8% in 2013, Japan (14,3% in 2012 and 2013), and in Poland - above 21% over 2009-2011, 17,8% in 2012 and 17,8% in 2013. It

is very difficult to explain why in France and Japan the share has been so high (definitely not because of the „infrastructure gap” existence). However, in Japan the share decreases systematically: from 24,8% in 1999 to 14,7% in 2009. In Greece the share remains about 21%, 18% in 2012 and 2013, and 15% in 2011.

Figure 8. Share of investment expenditure in total expenditure



Source: the authors' calculations based on Eurostat and OECD data

4.3.3. Structure of local government sector expenditure

Classification of Functions of Government (COFOG) defines functions of government in the following way: 01 – general public services; 02 - defense; 03 – law and justice; 04 – economic issues; 05 – environment protection; 06 – housing construction; 07 – health care; 08 – culture and leisure; 09 - education; 10 – social care. In figures 9 and 10 we compare expenditure structure in 2004 and 2009, and present shares of a given function (area) expenditure in total expenditure of the local government sector. Value of the share determines fiscal role of tasks and projects implemented in a given area of local government sector units.

Figure 9. Structure of local government sector expenditure according to COFOG, 2004

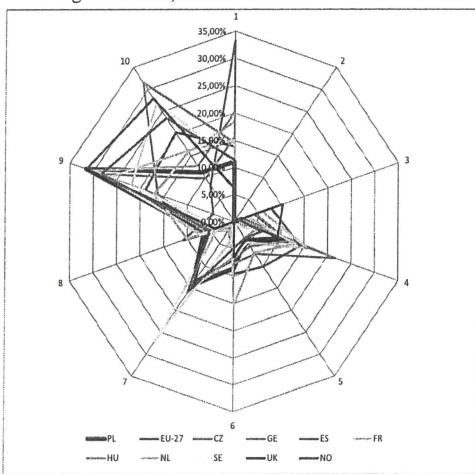
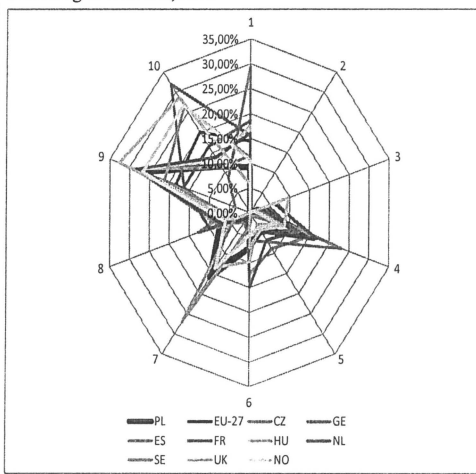


Figure 10. Structure of local government sector expenditure according to COFOG, 2009



Source: the authors' calculations based on Eurostat and OECD data

The fiscal role of specific groups of expenditure (shares of a given area expenditure in total expenditure) in the local government sector has not changed significantly during 1999-2010 in majority of countries. For example in U.K. expenditure for education as a ratio of total expenditure increased in 2009 by 1 percentage point (to 32,7%), in Netherlands - by 2 points (to 28,5%) in comparison with 2004. The share of expenditure for health care rose in Poland and Italy by 1,7 points (to 16% and 44%). The share of expenditure for culture and leisure rose in Poland and Czech Republic, by 0,9 point (to 7,5%), Norway – by 0,8 point (to 6%), Spain by 2 points (to 12,7%), and in Denmark by 2,2 points - to 23%.

There are major differences in expenditure structure of local government sector in individual countries, however, we indicate some general tendencies. Education is the area, in the majority of analyzed countries, which comprises dominant budgetary expenditure for financing its tasks and projects: in 2009 the EU average share was above 21%. The Baltic countries, Slovakia, Slovenia and Bulgaria show very high share of educational expenditure in total expenditure - above 30%. The share in Spain, Greece, Italy and Portugal is exceptionally low - below 10%. The low share usually results from institutional solutions, for instance in Spain most tasks in the area of education are implemented by Autonomous Communities in sector of federal „states” – S.1312, and units of the central government sector. In the new EU member states the share of expenditure for education (27,5%) is significantly higher than in UE15 countries (16%). In Poland the share equals nearly 27%, and approaches the average for the NMS.

Expenditure for general public services (i.g. units administration, services of general character e.g special planning, debt servicing) belong to the second group of expenditures of fiscal importance. The average share of expenditure in total expenditure for this group, in the EU15 countries and in the NMS equals about 18%. Greece, Spain and Portugal belong to countries with very high general public services expenditure (above 30% of total expenditure), three times higher than in Poland, Norway or Sweden (9%-11%), six times higher than in Ireland, Denmark and U.K. The lowest expenditure for general public services as a percentage of total expenditure are in Ireland, Denmark (4%), and in U.K. (5,75%).

Expenditure for social care constitute, on average, nearly 14% of the total expenditure for all EU countries. The social care expenditure in the EU15 countries (18,5%) are much higher than in the NMS – about 8% of total expenditure. In Poland in 2009 the share equaled 11,5%. In Denmark, Scandinavian countries, U.K. and Germany social care expenditures are high (about 25%); they play an important role in local societies.

Fiscally significant are expenditures for „economic issues” (including transport and communication) - 13% of total expenditure in the EU15 and the NMS countries (do not vary strongly among countries). The expenditures for health care vary strongly in individual countries - are especially high in Italy (44%), Scandinavian countries (above 20%), Poland - 16%, and very low in U.K., Netherlands, Spain, France, Greece, Ireland, Slovakia and Germany (below 2%). The share of expenditures for health care equals about 9% and is slightly higher in the EU15 than in NMS countries.

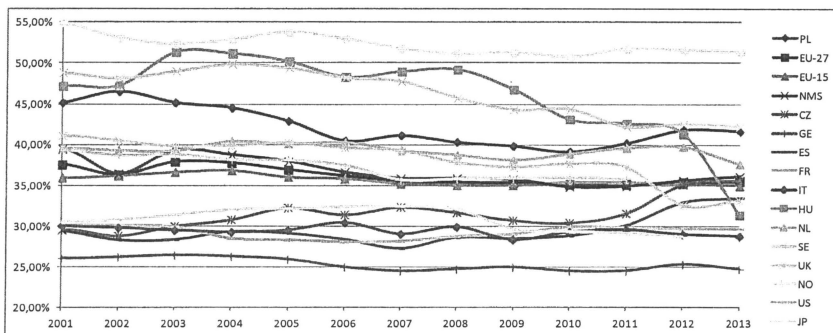
Expenditures for culture and leisure are relatively low, only in Spain and France slightly exceed 13% of the total expenditure (average for EU and for Poland equals 7%). Expenditures for „law and justice” are very low, only in the U.K. approached 10% of the total expenditure (average for EU equals 2,7%; in Poland - 2%).

Expenditures of the local government sector in major areas compared with expenditures in the same areas of the general government sector

In the majority of analyzed countries units of the local government sector implement and finance most public tasks in the area of environment protection, housing construction and culture and leisure. The tasks in the area of education and health care are financed differently in individual countries. In Czech Republic, Estonia, Latvia, Poland, Finland, Sweden and U.K. local government sector finance most tasks in the area of education, but in Greece and Spain only less than 5% of educational tasks are financed by local governments.

The share of LG employment expenditure in total LG expenditure varies in individual countries.

Fig. 11. Local government employment expenditure in total LG expenditure



Source: the authors' calculations based on Eurostat and OECD data

Table 1. Total expenditure: share of local government sector in the general government sector, COFOG 2009 in select countries

Country/Area	1	2	3	4	5	6	7	8	9	10
PL	23,7%	0,1%	14,3%	44,3%	91,1%	88,0%	45,7%	81,8%	69,9%	10,3%
EU15	26,6%	0,3%	20,4%	30,0%	67,1%	68,5%	27,5%	57,5%	36,2%	14,8%
NMS	21,2%	0,3%	6,3%	22,9%	64,0%	69,1%	17,6%	46,3%	53,5%	6,0%
CZ	30,5%	1,0%	10,4%	38,3%	93,0%	58,1%	3,6%	66,9%	72,1%	10,1%
DK	21,0%	1,0%	8,6%	40,1%	52,9%	42,1%	98,8%	53,4%	50,8%	80,0%
DE	20,4%	0,0%	21,3%	24,2%	62,1%	60,8%	1,8%	70,2%	29,9%	11,8%
ES	41,3%	0,0%	22,0%	19,7%	66,7%	73,6%	1,5%	52,3%	5,2%	3,9%
FR	31,0%	0,0%	26,2%	47,8%	92,9%	88,1%	1,5%	72,6%	32,1%	8,5%
IT	30,3%	0,0%	12,2%	52,5%	85,4%	82,9%	98,5%	56,5%	28,1%	3,8%
HU	20,5%	0,4%	8,1%	17,6%	52,5%	99,6%	32,4%	41,6%	64,3%	8,7%
NL	36,4%	0,0%	53,5%	51,2%	86,6%	93,8%	4,1%	83,0%	83,3%	13,4%
SE	39,1%	0,6%	15,7%	34,1%	58,2%	87,4%	96,7%	79,0%	77,0%	30,5%
UK	18,5%	0,3%	49,2%	28,5%	55,9%	67,0%	0,0%	49,4%	67,4%	22,8%

Source: the authors' calculations based on Eurostat and OECD data

In the area of health care local governments finance most tasks (over 95%) in Italy, Denmark and Sweden. In Germany, Spain, France and Netherlands their share in financing health care is negligible (below 5%). In Netherlands and U.K. local government sector implements half of tasks in the area of law and justice, while in France and federal countries Germany and Spain 22%-26% (15% in other countries). Social care is predominantly financed by local government sector in Denmark, and Sweden.

5. Surplus of the local government sector

5.1. Operating surplus

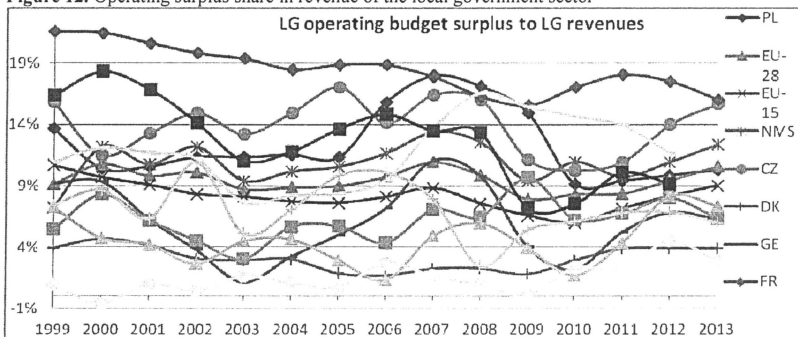
Operating surplus of the local government sector is defined as current revenues (total revenue minus capital transfers) minus current expenditure [total expenditure excluding investment (GFCF – P.51) and capital transfers (D.9)⁵]. It determines current budget funds, which in a given year can be used for investment financing. Relation of the surplus to revenue is the basic measure of financing local development and infrastructure projects - free of the burden of future costs associated with servicing debt.

Operating surplus in relation to revenue of the local government sector, over 1999-2011, is exceptionally high in France, Slovenia, Czech Republic, Romania, Bulgaria and Poland (yearly average equals: 17,3%, 17,8%, 13,5%, 14,5%, 14,2% and 12,8%). However, in 2011 the surplus declined, as compared with 2010, in Romania (from 21% to 15%), France (from 16,3% to 13,8%), Bulgaria (from 17,8% to 11,2%), and Cz.R. (from 10,2% to 8,3%). A sharp decline of the operating surplus in 2011 is also observed in Austria, and the U.K. (to 1,5% and 0,3% of the revenue). In Switzerland and in the U.S. the average share of the surplus in revenue over 1999-2009 equals 12,5%, and in Japan – 10%.

Low share of the operating surplus in revenue display Scandinavian countries, Germany, Ireland, Lithuania and Hungary - yearly average below 6%; Norway - 7,5%, Denmark - 3%. Particularly low is the local government sector operating surplus in Ireland, and U.K. with yearly average of 1,7% of the revenue.

In 2008–2009, in the local government sector, the operating surplus to revenue ratio decreased in very many countries, especially in Spain, Portugal, Germany, Japan (by 6-8 p. points), and in U.S. (16,5% in 2007, 11,3% in 2008 and 2,3% in 2009). The share decreased in 2010 - in Spain (to -3,9%), Germany (to 2,3%), Italy, Hungary (to 1,9%), Slovakia (from 5% to -1,4%) and in Poland (from 15% in 2009 to 9,7% and 9,3% in 2011). Negative surplus present: Portugal (over 2009-2011), Spain (2010-2011), Greece and Slovakia in 2010

Figure 12. Operating surplus share in revenue of the local government sector



Source: the authors' calculations based on Eurostat and OECD data

⁵ The surplus of the local government sector corresponds to *gross savings* (B.8G) as defined in the system of national accounts minus a change in stock level (P.52–53).

The average value of the operating surplus to revenue ratio has systematically (excluding 1999) been higher in new member states than in the “old” EU countries (in 2007-2008 by 5,5 p. points, and in 2009-2011 - by about 4,5pp).

5.2. Surplus of the total revenue over operating expenditure

The revenue in excess of operating expenditure - a surplus that we receive subtracting operating expenditure from total revenue determines, in a given year, an amount of budget funds which can be used for financing investment and for debt service. Relation of this surplus to revenue provides basic information regarding possibility of financing development investment projects, given an actual burden of indebtedness. It helps also assess creditworthiness – an ability to issue debt in future budgets (affordability to pay cost of debt service).

There is a systematic difference of several percentage points between the average value of the ratio (the revenue surplus to revenue) in NMS and in countries of the EU15 (above 5 prc. points). In Poland the average value of the ratio equals 17,7%, in Czech Republic - 22,8%, in Hungary 14,7%. The ratio assumes low values in the Scandinavian countries and U.K. (8,4%), in Norway - 7,6%, Sweden - 6,6%, and in Denmark - 3,5%. During 2008–2009 the surplus to revenue ratio declined in many countries, in Germany by 40%, in U.S. – by 80%, but recovered in 2010. In 2010-2011 dramatic decline takes place in Spain to the 2% level, by nearly 90%, and in Italy – by 50%.

5.3. Local government sector and the central government sector

The financial situation of the local government sector measured by the ratio of the operating surplus to revenue ratio is entirely different from that of the central government sector. Among 32 analyzed countries, 16 show negative yearly average value of the operating surplus to revenue ratio in the central government sector. In Poland, Greece, Japan, Portugal and France, central government sector operating balance was negative in every single year (of the analyzed period). Economic recession of 2008-2010 resulted in substantial decrease of the central government revenue (also in nominal terms), while the real expenditures increased (a small decrease in investment expenditure was compensated by a solid increase in current expenditure) - in many cases as a result of fiscal incentives introduced by governments. This, in turn, resulted in strong operating budget imbalances, and generation of negative operating balances (deficits).

Declining operating balances were observed in the majority of analyzed countries over 2009–2010, especially strong were the declines in the central government sector of the U.S., Japan and Spain, but also in Greece, France, Portugal and Ireland. The only countries, in which the recession had very small impact on operating surplus were Switzerland and Norway, with positive operating balance. In Switzerland the operating surplus to revenue ratio was the highest during the whole analyzed period (23%, 18% , 18% in years 2008–2010).

6. Deficit and debt of the local government sector

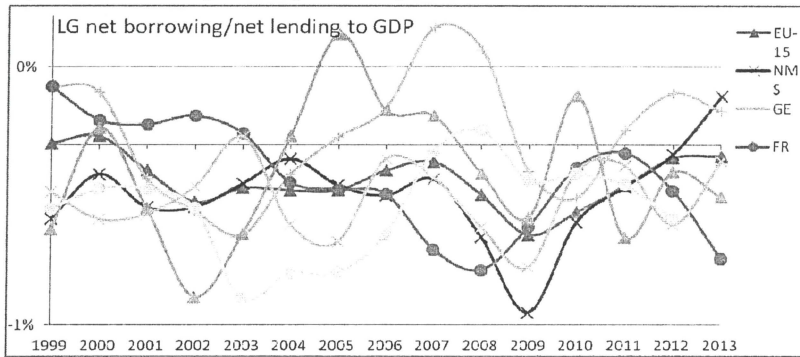
6.1. *Net borrowing / net lending*

Local government sector of many countries generated deficit (negative net financial balance) in several years of the analyzed period. However, during the analyzed period, nearly in all countries there were years when the local governments generated surpluses, which mostly occurred over 1999–2000 and in 2006. In Estonia, Slovakia, and Latvia, the local

government sector in 2006 generated substantial deficits, in spite of the positive operating balance – as a result of a step increase in investment expenditure, which to a large extent were financed from the EU Cohesion Fund (we observe some symptoms of periodicity).

In many countries the share of local government sector deficit to GDP is substantial: in Norway (over 2008–2010), U.S. (2009), Poland (2009–2010) the share was greater than 1%. Both in Poland and Norway the deficits can be mostly attributed to an increase in the growth rate of investment expenditure; over 2008–2010 the ratio of investment expenditure to total expenditure grew in Poland by 19,6% (21% in 2011), and in Norway - by 11,6% (11% in 2011). In Poland, after 2007, we observe a systematic increase of the local government sector deficit, and also an increase of the deficit in relation to the sector revenue and GDP (in 2007 local government sector in Poland showed small surplus). In 2008 the deficit in relation to GDP equaled 0,18%, in 2009 - 1%, in 2010 - 1,14%, and in 2011 - 0,75%.

Figure 13a. Net borrowing/net lending of the local government sector in relation to GDP

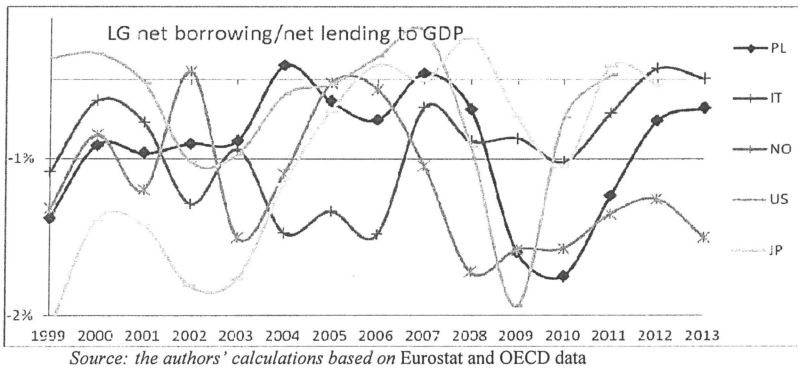


Source: the authors' calculations based on Eurostat and OECD data

The balances substantially deteriorated in 2008 and in 2009-2010. However, the causes of these negative balances vary in select countries. In countries of UE15, the deficits resulted from deteriorating operating balances of the local government sector, as at the same time the investment expenditure share in total expenditure remains stable. Prior to 2008 the average ratio of the net financial balance to revenue in the sector in UE15 equaled 0,9%, in 2008 - 1,6%, and in 2009 and 2010 was above 3%. In NMS the rise in deficits continued in spite of an improvement in the local government sector operating balances: the average ratio of the net financial balance to revenue over 2008–2010 (4,7%) and over 2008–2011 (3,9%), was larger than the ratio calculated for years 1999–2007 (2,2%). It was a dynamic increase in investment expenditure, and the decline in revenue, which contributed to the increasing local government sector deficits.

In Japan high ratio of local government sector deficit to GDP in 2002–2003 was the result of a sharp decline in excess revenue over current expenditure (during 2002–2003 by more than 25% compared to 2001). The investment expenditure also declined, but to a lesser extent. In Japan the local government sector reallocates half of public funds, and even a small decline of excess revenue (also of the operating surplus) of the sector can generate substantial rise in deficit.

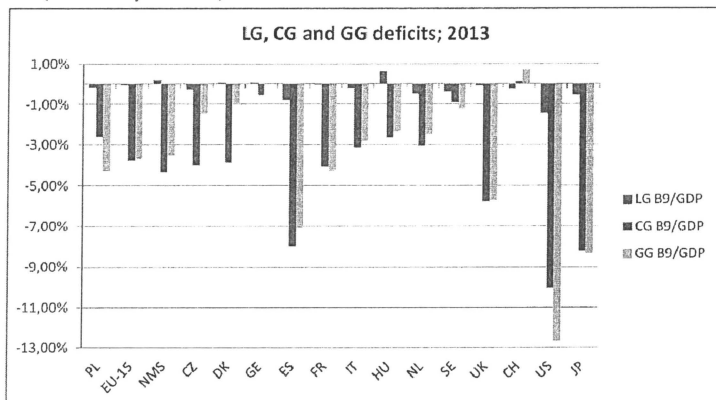
Figure 13b. Net borrowing/net lending of the local government sector in relation to GDP



6.2. Financial balance of the local government sector and the general government sector

In 2010 general government sectors in all analyzed countries, except Norway and Estonia, generated deficits. The local government sectors generated deficits in all countries, except Sweden, Ireland, Rumania, Bulgaria, Estonia and Lithuania (the surplus in relations to GDP was negligible).

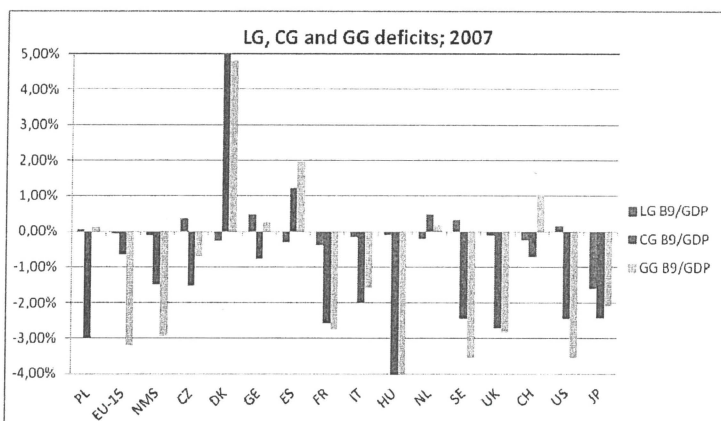
Figure 14a. Share of the local government and the central government sectors in the general government sector deficit, 2013 (U.S. and Japan – 2011)



Source: the authors' calculations based on Eurostat and OECD data

The largest contribution of the local government sector to the deficit of the general government sector is in Hungary (19%), Netherlands and Poland (above 15%), Italy and Czech Republic (nearly 11%), and in the U.S. (above 12%). However, the local government sector share in the deficit of the general government sector is several times smaller than the share of the central government sector, while the role of the local government sector in redistribution of public funds remains comparable to the central government sector.

Figure 14b. Share of the LG and the CG sectors in the general government sector deficit, 2007



Source: the authors' calculations based on Eurostat and OECD data

7. Debt of the local government sector

The widely accepted and implemented rule of construction budgets with deficit yields a possibility and facilitates financing select expenditures with liabilities and sale of financial assets (privatization). Liabilities of the general government sector (public debt) include debt, loans, securities and other obligations.

The data in the Eurostat and OECD databases enable to construct indicators regarding indebtedness of the local government sector and to some extent the indebtedness structure.

Public debt of the local government sector, in majority of cases, results from the sector obligations to finance particular units of the sector (their negative balances). In general, not taking into account revaluation of individual components of debt, we can state that an increase in indebtedness in a given year results from negative balance of the LG sector, and a decrease in indebtedness – from a positive balance (surplus). Public debt is defined consistently with the Protocol of the excessive deficit procedure and implementing acts – as a nominal value of liabilities (loans and securities), at the end of the reporting period (calendar year), after consolidation. *Net* financial balance is defined as loans extended or loans made, and appear in reports as balancing records B.9 of the capital account.

6.1. Debt of the local government sector in relation to GDP and the sector total revenue

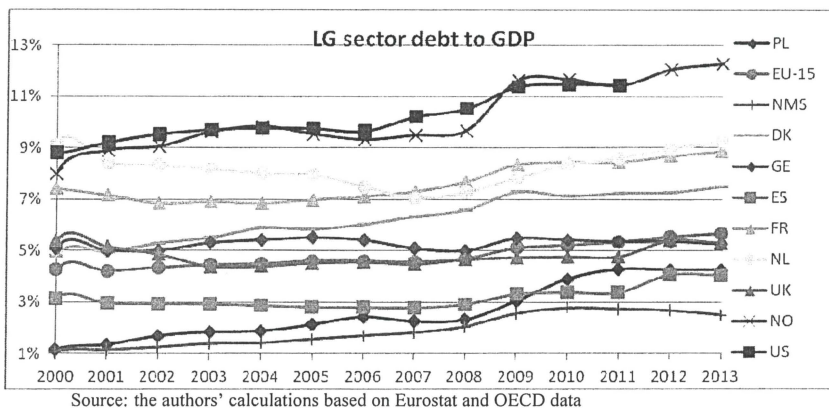
The ratio of the local government sector debt to GDP strongly varies among countries. Traditionally, countries with high value of the ratio include the U.S., Norway, France and the Netherlands, where the local government sector debt, in all years of the analyzed period, exceeded 7% (in Norway - 12% starting 2009). Italy (since 2005) and Denmark (since 2009) joined the group. In Finland and Latvia the ratio exceeded 6% over 2009-2011. Starting 2006 the local debt to GDP ratio rose in all analyzed countries – in both the old and the new member states of the EU.

During 2007–2010, in the old EU15 countries, the average local debt to GDP ratio increased from 4,6% to 5,2% and further to 5,3% in 2011, while in the NMS countries the ratio rose from 1,8% to nearly 2,8% and decreased in 2011 to 2,7%. In Poland the local debt rose from 2,2% to 3,9% and 4,2% GDP in 2011. The increase of the sector debt to GDP ratio

in EU15 in 2011 can be explained by the GDP decline (Greece, Portugal), or its very slow rise (Ireland, Spain, Italy).

The average increase rate of the nominal local government debt was very high in the NMS (21,3%), while the rise in the countries of EU15 was much lower - nearly 6,5%.

Figure 15. Ratio of the local government sector debt to GDP



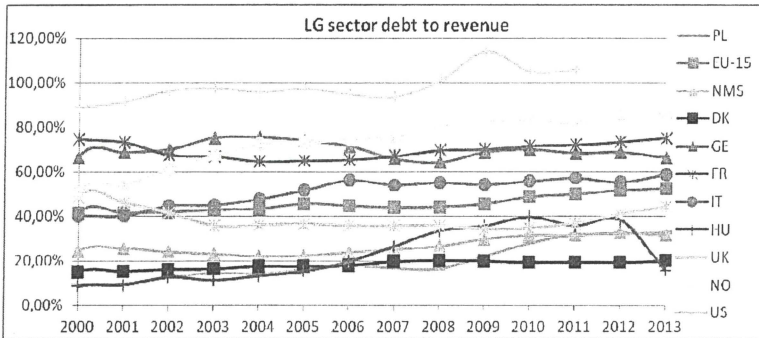
Source: the authors' calculations based on Eurostat and OECD data

The ratio of the local government sector debt to its total revenue is much more interesting – it shows countries, in which the local sector carries out an expansive debt policy (debt to GDP shows local government sector debt policy, but only in relation to the whole economy).

Debt is the largest source of financing local government sector investment in the U.S. In 2008 the local debt exceeded 100% of its revenue, in 2009 the share equaled 114% (105% in 2010). OECD does not publish data regarding local government sector debt in Japan, where the debt in relation to total revenue of the sector is extremely high. Debt plays a very important role in local government sector of Norway; in 2010 and 2011 the ratio of the sector debt to its revenue approached 90% (87% in 2011). In Portugal, the local government sector debt exceeded 92% in 2011 (87% in 2010). Local sector uses debt extensively in France, Germany and Belgium, where the debt oscillates around 70% of the revenue (in Germany the ratio fell in 2011 to 68,2% from 69,7% in 2010). In Netherlands, Italy, Spain, Ireland and Latvia the debt to revenue ratio of the local government sector exceeds 50%. In 2011, it correspondingly equaled: 53,5%, 54,3%, 56,5%, 55%, and 57%. The average debt constituted nearly 50% of the local government sector revenue in all EU15 countries. However, in the old EU15 countries the changes in the ratio were minor, with exception of Portugal (it changed from 42,5% in 2000 to 92% in 2011) and Italy (40% in 2000, and nearly 55% in 2011).

In new member states the ratio value changed multiple: in Poland it rose from 9,8% in 2000 to 31,6% in 2011, in Hungary – from 9% to 39,5% in 2010 and 36% in 2011, in Romania - from 9% to 26,3%, in Slovenia - from 4,5% in 2000 to 20% in 2011. In very few countries the share of the local government sector debt in total revenue declined during 2000 - 2011: only in Slovakia - from 44,3% to 40% and in the U.K. from 46,5% to 36,7%.

Figure 16. Ratio of the local government sector debt to the sector total revenue

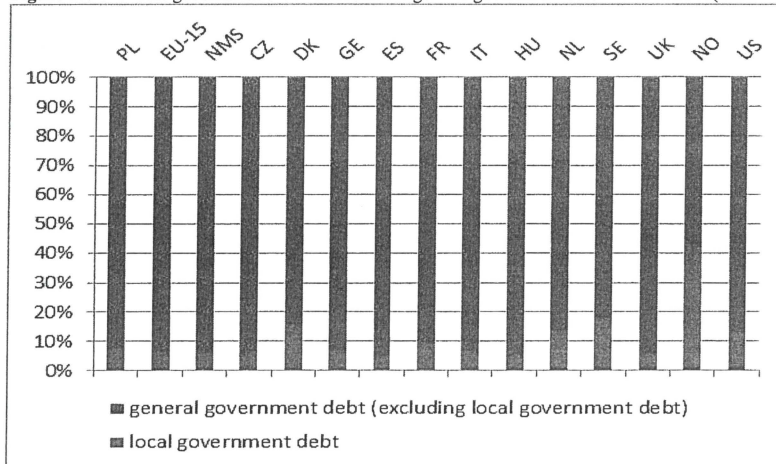


Source: the authors' calculations based on Eurostat and OECD data

6.2. Contribution of the local government sector debt to public debt

The local government sector debt constitutes a small portion of the central government sector debt in all EU member countries - does not exceed 9%, excluding Norway and Latvia, nevertheless it strongly varies among the countries. In three European countries the local government sector debt significantly contributes to the general government (public) debt.

Figure 17. The local government sector debt and the general government sector debt in 2011(2010 for the U.S.)



Source: the authors' calculations based on Eurostat and OECD data

In Norway over 1999-2011 local debt twice approached 40% of the central government sector debt (in 2001 and 2010), in Denmark the local debt in 2010 (in 2011??) equaled nearly 20% of the central debt (nearly 30% in 2007). In Estonia local government sector debt exceeds the central government sector debt (in 2011 by 8 percentage points, in 2007 - two times). This results from a low public debt in Estonia, which in 2009 (the highest public debt) only slightly exceeded 7% of GDP. In the U.S. an „explosion” of the central

government sector debt resulted in a fall of the local debt to 19% of the central debt in 2010 from 29% in 2007. In Poland the share equals 7%, similarly to Czech Republic, Spain, Italy and U.K.

7. Changes in local government sector investment expenditure over 1999–2011

7.1. Periodicity of investment expenditure and GDP

We observe periodicity in changes of GDP growth rate in many countries (excluding Sweden), and strong cyclical changes of investment expenditure growth rate in France, Spain, Hungary, and in Poland (in the U.S. the amplitude of irregular changes is much lower than in France or Hungary). The nominal value of local government sector investment expenditure in the U.S. and in Norway grows until 2009 with a rate of 6,5%; investment in these countries exhibit no periodicity.

7.2. Changes in investment expenditure

We present yearly percentage changes, over 1999-2011, of investment expenditure, operating surplus and debt in the local government sector. The changes are compared and presented in figures 18A-18G for 7 representative countries. In analysis of changes in expenditure, similarly to revenue analysis (Bitner, Cichocki 2012a), we analyze nominal data (in current prices) and present changes for these prices.

Investment expenditure in the local government sector: an average yearly growth rate in investment expenditure (over 1999-2010) is high in Hungary (13,9%), U.K. (12,6%), Czech Republic (9,7%), Spain (9,2%), Poland (8,3%), and the U.S. (5,6%, 6,4% until 2009). Local government sector investment expenditures in these countries constitute relatively high share in the total sector expenditure (above 14%). The average growth rate is also high in Denmark (6,9%), Norway (6,7%), Sweden (5,2%) and Netherlands (6%). In 2011 the local government sector investment fell in all the above EU countries excluding Sweden (10,7%), Denmark (8%) and Norway (2%). The decrease exceeds 27% in Spain and Hungary, and 13% in Cz.R.; in Poland investment expenditure fell by 0,8.

The average yearly growth rate of local government sector investment is low in France - 4% (2,3% in 2011), Italy, 1,9% (-4,5% in 2011), and Germany (-0,27%) and minus 0,4% in 2011; however, the yearly average growth rate in Germany over 2006-2010 equals 4,3%. In Japan the local government sector investments were decreasing over 1999–2010, at a yearly rate of 5,9%. During 2009–2010, as compared with 2008, the share of local government sector investment in GDP fell in Spain to 0,9% - by 45%), Cz.R. to 2% (by 20%) and Poland to 3% (by only 3%).

In countries where the local government sector investment expenditures were very low in 1999, the investment expenditure could grow faster - average yearly growth rate in Latvia and Lithuania assumed above 70%, in Bulgaria, Romania - 30%, Slovakia - 25%. In 1999 local sector investment expenditures were also very low in Hungary and the U.S. - 12,6% and 13,8% of their total expenditure, while for example in Poland the share equaled 22,8%, in Cz.R. - 17,2%, France - 21,2%, Spain - 19,1%. In addition, very low debt in 1999 (below

10% of total revenue), made it possible to extensively finance investment from debt, for example in Hungary, what resulted in the yearly average rate of 13,9%.

Debt of the local government sector: debt growth rate of the local government sector in individual countries depends on the initial value of debt in 1999 and the resulting debt service costs, the investment expenditure, and on the operating surplus of the local sector budgets, which determine the level of new debt to be issued. In the NMS countries, during the analyzed period, especially starting 2004, we observe a systematic increase in public debt of the local government sector, much higher than in the countries of the old EU; the average rate equals in NMS 21,3%, in EU15 – 6,5%). This results from extensive use of EU funds for financing investment and a necessity of securing own funds, very often from debt.

The average yearly growth rate of the local government sector debt is highest in Rumania (49,8%) and Bulgaria (38,7%), and is very high in Latvia (27,2%), Slovenia (25,6%), Hungary (23,5%) and Poland (20,7%). Among the old EU countries, local government sector debt in Portugal has the highest average yearly growth rate - 13,5%, still lower than in Estonia, Slovakia and Lithuania. Local government sector debts in Ireland (11,6%), Greece (10,7%) and Norway (10%) are the next highest in the old EU countries, comparable with Czech Republic where the average yearly growth rate of the local debt (10%) is the lowest among NMS. The debt grew very fast during 2001-2002 (in Slovenia, Romania, Hungary, Poland, Ireland, Portugal and Cz.R.), and during the 2009-2010 financial crises. The average yearly growth rate of the local sector debt over 2008-2010 equals 35% in Bulgaria and Slovenia, 28% in Poland, 22,5% in Rumania, 20% in Latvia, and 10,8% in Portugal, where it is lower than in Hungary, Slovakia and Lithuania, with growth rate of 17%. Local sectors in many countries decreased their nominal debt in 2011 (Hungary, Estonia, Cz. R., Greece and Ireland - already in 2010). Italy, Spain and Slovakia kept their local sector debt at the 2010 level.

Operating surplus of the local government sector: the operating surplus growth rate has been changing several times over 2000-2011 - from negative to positive and again to negative rate; sometimes the surplus volume, especially its percentage change were substantial. Until 2007 there were countries, in which the operating surplus of the local government sector was growing for several consecutive years (Czech Republic, 2001-2005, Germany, 2004-2007, France, 2002-2006, Poland, 2001-2008, Romania (where the surplus growth rate was much higher) and Slovenia, 2000-2007. In several countries a sharp decrease in current revenue during 2009-2010 (also in 2001, 2002), resulted in a decrease of the operating surplus – in Germany, Greece, Spain, Hungary, Poland, Cz.R., Austria. The local government sector operating surplus in 2009 and 2010 increased only in three countries: Norway, U.K. and Slovenia.

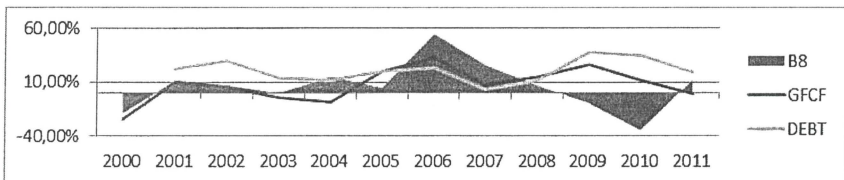
However, it is the magnitude of the operating surplus that really matters. In countries where the surplus is high, local government sector can finance large investment expenditures with a relatively low share of debt (Poland, Cz.R. and Spain). In these countries the yearly average increase rate of local sector investment expenditure exceeds 8,3%. The average value of debt to revenue ratio of the local government sector over 1999–2000 equals below 10% in Poland, 17% in Czech Republic and 50% in Spain (until 2008 the average value of the ratio equals 15% in Poland and 20% in Cz. R.). Local government sector in Spain had high

operating surplus until 2008 and a lower, but high enough surplus in 2009-2010, and since the level of local sector debt (also debt related to revenue and GDP) was lower than in France, U.S., and Germany, the investment expenditures could be high (the contribution of capital transfers from the central budget was also substantial). In Hungary high capital transfers from the central budget, and low local government sector debt in 1999 (9% of total revenue), even with the low operating surplus ensure a yearly 13,9% average growth rate in investment. The situation is different in France, the investments to a large extent are financed from debt, although over 2009-2010 the investment expenditure are high and the operating surplus is relatively high. Local government sector debt in France in 1999 and 2000 equals above 70% of the sector revenue, and the cost of debt service is very high. Although over 2007–2010 the local sector debt (also related to revenue) decreases, the investments fell in 2009 and 2010, and the yearly average investment increase rate equals only 4%. In the U.S., similarly to France, very high debt over 1999–2000 (above 90% of revenue) results in high debt service costs, which diminish the operating surplus. Maintaining a high level of the local government sector investment growth (7% over 1999–2008) is possible only by new debt issues.

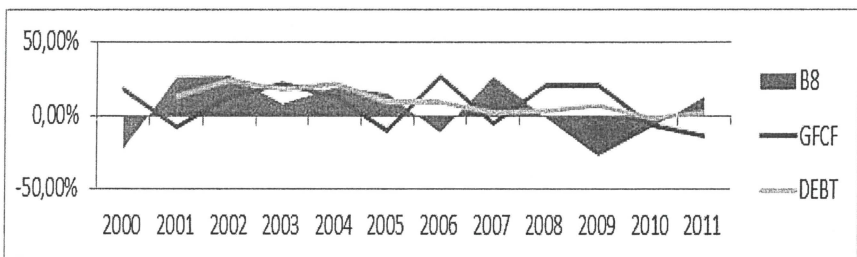
Efficient operating budget management - high operating surplus (which ensures funds for investment financing) and low initial values of local government sector debt and investment expenditures are essential in facilitating high growth in investment expenditures in the long-run. The growing debt is closely correlated with growing investment.

Figure 18.

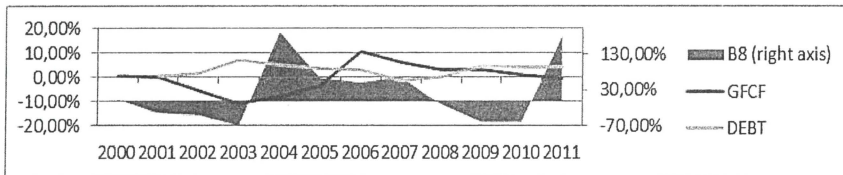
A. Poland



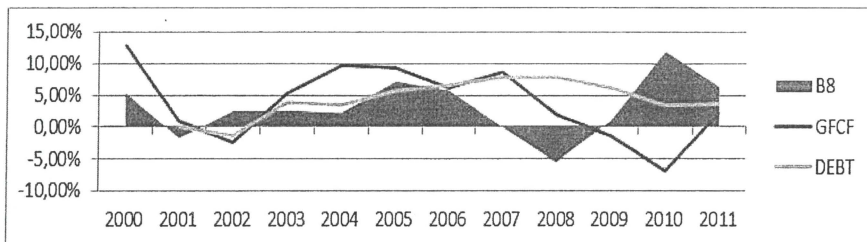
B. Czech Republic



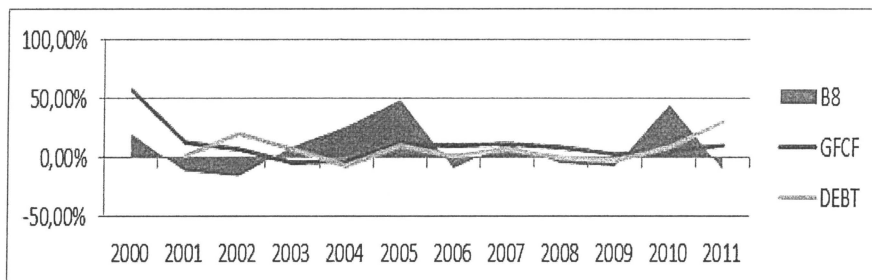
C. Germany



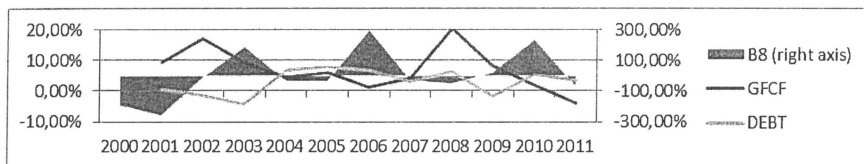
D. France



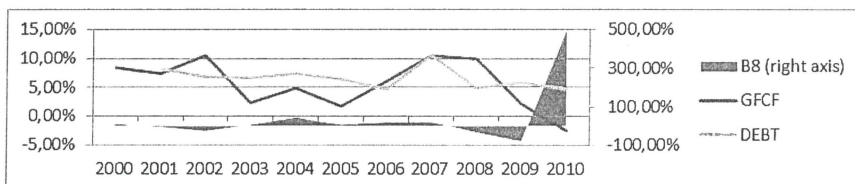
E. Sweden



F. United Kingdom



G. United States



7. Observations and conclusions

1. The role of the local government sector in the public finance sector has grown since 1999, measured by both, its expenditure and revenue share in GDP (Bitner, Cichocki, 2012a). The share of expenditure in GDP increased in majority of countries, but was strongly decreasing during 2000-2001 and 2008-2010 economic slowdowns in Czech Republic, Denmark, France, Germany, Japan, Norway, Spain, and USA.

2. The fiscal role of specific groups of expenditure in the total local government sector expenditure has not changed significantly during 1999-2010. There are major differences in expenditure structure of local government sector in countries of the “old” EU15 and in the new EU members, as well as in individual countries. Education, in the majority of analyzed countries, comprises dominant budgetary expenditure for financing its tasks and projects: in 2009 the EU average education share in total expenditure was above 21%. In the NMS the average share equals 27,5% and is significantly higher than in UE15 countries - 16%. In Poland the share equals 27%. Low share of educational expenditure in total expenditure sometimes results from institutional solutions, for instance in Spain.

Expenditure for social care constitutes, on average, nearly 14% of the total expenditure for all EU countries. In the UE15 countries they are (18,5%) much higher than in the NMS – 8% of the total expenditure. In Poland the share equals 11,5% in 2009. The social care expenditure share is high (about 25%) in Denmark, other Scandinavian countries, in U.K. and Germany.

Wage expenditure is the largest part of the total expenditure (34%), equals above 40% of the operating expenditure. In NMS the wages constitute 49% of the operating expenditure, and in EU15 - 43% .

3. In the majority of analyzed countries local government sector is the largest investor of the general government sector. The share of LG investment in public sector investment is on average much lower in NMS (around 40%, 43% starting 2009) than in the old EU15 countries - about 55%. The difference in the share value decreases as a result of a rising share in the NMS countries, but it grows again in 2011; in 2010 the share equals 45% in NMS and 53% in UE15, in 2011 - 43,4% and 53,8%. In Poland, the share equals on average 61% and is higher than the EU15 average (55,5%), although in 2011 the share decreases to 53%. In Japan the share equals 72% and in the U.S. – above 65%.

The share of investment expenditure in total expenditure of the local government sector is higher in new member states than in the old EU15 countries - starting 2007 the difference equals 6 percentage points. The share in NMS countries increases, strongly in Poland - to about 22% in 2010-2011, from 17% in 2000. In the UE15 countries the share oscillates around 16%. The highest share is in Ireland and Portugal (on average 30%), consistently high (20%) is in Spain, France and Japan (until 2006; in 2010 decreases to 14,5%). Local government sectors in Denmark, Sweden Finland and U.K. have the lowest share of the capital budget in the total budget, what results from institutional solutions - expenditure for social and health care constitute the majority of the total expenditure. In the U.S. the share equals about 14%.

4. Operating surplus ensures funds for investment financing and mirrors good financial management. In countries of UE15 we observe over 2009-2011 (especially in 2011) a strong decline in the ratio of operating surplus (and the surplus revenue in excess of operating expenditure) to revenue. The average value of the operating surplus to revenue share over 1999-2011 equals 8% (17,3% for surplus revenue), but these shares in 2009, 2010 and 2011 decrease to 6,9% (16%), 6,3% (14,6%) and 5,6% (12,5%). The decline results mainly from a fall of operating revenue (not a rise in operating expenditure). In many NMS countries, after a very strong decline of operating revenue in 2009 (from 13,7% to 10,3%), the average share recovered in 2010 to 11,3%, but declined again in 2011 to 9,9%. In Poland the operating surplus ratio declined in 2011 to 9,3% from 15% in 2009, and 17% in 2008.

The operating surplus share in revenue of the local government sector, over 1999-2011, is high in France, Slovenia, Czech Republic, Romania, Bulgaria and Poland (yearly averages equal: 17,3%, 17,8%, 13,5%, 14,5%, 14,2% and 12,8%). In 2011 the surplus strongly declined compared to 2010 in Romania, Bulgaria, France, Cz.R., Austria, and the U.K. In the U.S. the average share of the surplus over 1999-2009 equals 12,5%, in Japan – 10%. The average share of the operating surplus in revenue has systematically been higher in new member states than in the EU15 countries by 5 percentage points (4,3 p.p. in 2011).

5. Local government sector generated negative net financial balance (deficit) in many years in the majority of analyzed countries. The balances substantially deteriorated in 2008-2010 and partly improved in 2011. The causes of the negative balances vary in select groups of countries. In UE15 countries the deficits result from deteriorating operating balances of the local government sector (the share of investment expenditure in total expenditure remained stable). Prior to 2008 the average ratio of the net financial balance to revenue of the local sector in UE15 equaled -0,9%, in 2008 -1,5%, in 2009 and 2010 it equaled -3% (-1,4% in 2011). In new member states the rise in deficit continued in spite of an improvement in the local government sector operating balances: the average ratio of the net financial balance to revenue over 2008-2010 (-4,7%), was larger than for years 1999-2007 (-2,2%). A dynamic increase in investment expenditure, the rate of which exceeded the current expenditure increase rate, and the decline in revenue contributed to deficits.

In Poland, after 2007, we observe a systematic increase of the local government sector deficit, and also an increase of the deficit in relation to the sector revenue and to GDP (in 2007 local government sector in Poland showed small surplus – positive net financial balance). In 2008 the deficit in relation to GDP equaled 0,18%, year later - 1,06%, in 2010 - 1,22%, and in 2011 – 0,73%. The strong rise in the deficit was the result, similarly to the other new member states, of the unprecedented increase in investment expenditure.

6. The result of high and rising deficits is the systematic increase in public debt of the local government sector, especially fast in the new member states. In the beginning of the analyzed period the ratio of debt to GDP in NMS equaled 1,1%, in 2004 - 1,4%, in 2011 - 2,70%. The average increase rate of the nominal debt was very high - 21,3%. In EU15 countries the increase was less spectacular, equaled 6,5%; the debt to GDP ratio increased from 4,25% in 2000 to 5,32% in 2011.

General assessment of the local government sector financial condition in the new member states is positive. The ratio of the operating surplus to revenue, the basic measure of

the local government sector financial status is high. The increase of deficit and debt is generated by extensive investment, and the operating surplus is maintained at a relatively high level. It is highly probable, that in near future, the share of investment expenditure in total expenditure of the local government sector will decrease, and the high operating surplus will enable to reduce indebtedness. Local government finance in the NMS is not the source of significant risk for stability of the public sector finance. It is the structural deficit of the central government sector which, in majority of the EU countries, was the cause of initiating the excessive deficit procedure and is the real threat for financing public investments, the majority of which are implemented by the local government sector.

The financial condition of the local government sector in the EU15 countries is much worse. The average budget deficit in relations to GDP is nearly twice as high as in the NMS economies. This high deficits, in the central government sector, are accompanied by the decreasing ratio of the operating surplus to revenue, which, at the end of the analyzed period equaled only 50% of the ratio in the NMS countries. There exists a necessity of structural reforms in financial system of local governments and other institutions of the local government sector in the old EU countries.

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