

Raport Badawczy

RB/27/2015

Research Report

**Debt, expenditure structure and
investment of local government
sector in EU countries, Japan
and the U.S. – changes over
1999-2013**

K.S. Cichocki, M. Bitner

**Instytut Badań Systemowych
Polska Akademia Nauk**

**Systems Research Institute
Polish Academy of Sciences**



POLSKA AKADEMIA NAUK

Instytut Badań Systemowych

ul. Newelska 6

01-447 Warszawa

tel.: (+48) (22) 3810100

fax: (+48) (22) 3810105

Kierownik Zakładu zgłaszający pracę:
Dr hab. inż. Lech Kruś, prof. PAN

Warszawa 2015

Debt, expenditure structure and investment of local government sector in EU countries, Japan and the U.S. – changes over 1999–2013

Krzysztof S. Cichocki, Michal Bitner

1. Local government and the public sector finance

The local government (LG) sector plays a significant role in life of societies. The LG tasks implemented by institutions of the sector include economic services – water, gas, and energy supply, sewerage and solid waste treatment, roads construction and maintenance, and general purpose non-economic public services: education, health care, social care, culture, and public security. Select institutions controlled by LGs include enterprises, which activity conform to social needs and expectations (minimize market failures), or are subordinated to market rules. LGs' sector expenditures are substantial in the public (general government - GG) sector, largely contribute to economic development and facilitate inhabitants' quality of life. In 2013 the LG share in the GG sector expenditures equaled 65% in Denmark, 49% in Sweden, 41% in Finland, 34% in Norway, 31% in Italy, and Poland. The LG sector share in revenue is often lower than their expenditure share, for instance equals 26% in Norway. The LG sector is the largest public investor in many countries; its share in investment of the public sector in 2013 equals 75% in France and Italy, 65% in Denmark and the Netherlands, about 60% in the Czech Republic (CzR), Poland and Sweden. During 1999-2013 investment expenditures change cyclically in many countries. Together with these changes we observe periods of LGs' surpluses (1999-2000 and 2006-2008) and high budget deficits (2009-2010), which remain high in Greece, Ireland, Spain and Slovenia over 2011-2013. The average debt of the LGs' sector in the European Union (EU) countries is low - below 9.2% of GDP, but is lower in many countries: 2.5% in Romania, 4% in Poland over 2010-2013.

The presented analysis includes finances of LGs and of institutions which belong to the LG sector as defined in the SNA and other compatible methodologies, for instance NIPA¹. Comparative analysis, which bases on uniform data of all institutions of the LG sector, not solely on LGs, presents a complete picture of the LG sector and its role in the public sector. The data cover complexity and variety of budget programs and structures, mirror ongoing

¹ SNA – System of National Accounts; NIPA – National Income and Product Accounts, used in the U.S.

entitlements and take into account the shift from annual discretionary programs to long-term budget planning (see Irene Rubin 2015).

2. Objective and rationale

2.1. Objective and scope of analysis

The objective of the paper is a comparative analysis over 1999-2013 of the LG sectors' debt, deficit (*net* borrowing), investment expenditure and operating surplus in EU countries, Norway, Switzerland, Japan and the U.S. We study contribution of the LG's sector debt to the public debt, changes in its expenditure structure and present dominating role of the sector in public investment. The analysis includes finances of the whole LG sector - local governments and institutions of the LG sector during the period of 15 years. There are advantages of such an approach: analysis is neutral with regard to institutional problems in the LG finance sectors, which differ in the EU countries and the U.S., regarding for example budget completeness. The analysis respects a variety of relations between "basic" budgets of LGs and financial plans of LGs' institutions and also smoothies out impacts of recession and changing relationships between the state (region) and LGs. The approach uses the same methodology of national accounts, enables investigation of debt and deficit consistently with the EU excessive deficit procedure, and utilizes the same data base for the LG sector in EU and OECD countries.

Selection of the analysis period allows to compromise between two objectives: analysis of the sector long-term development, including dynamics of investment, debt, deficit and the operating surplus, and smoothing out regulatory changes in the LG finance system in select countries. Analysis of LGs finance over 1999–2013 enables observation of the local finance in periods of prosperity (1999–2000, 2003–2007), and economic crises and slowdowns (2001–2002, 2008–2011). The starting point of analysis (1999) is natural in Poland. In 1998 the LG system changed, two new LGs' levels (districts and regions) were added to the existing municipalities.

The basis for selection of countries presented in the article is the LG sector role 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 Organization of Economic Cooperation and Development (OECD) members, Norway has had the highest and Switzerland, the third highest *Human Development Index* for several years. We present

aggregate values for the EU member countries as three averages: for fifteen countries which belonged to the EU prior to 2004 (EU15), new member states (NMS) - countries which joined the EU after 2004, and for all 28 (sometimes 27) EU member countries. We use averages weighted by the share of individual countries GDP in the total EU GDP, as published by Eurostat. We study and describe all EU countries (EU28). However, for clarity of presentation, in figures we present results only for select EU countries. The old UE15 usually represent: Denmark, Germany, Spain, France, Italy, The Netherlands, Sweden and Great Britain (UK); the NMS - Poland, CzR and Hungary. LG sector revenue and operating expenditure are analyzed in Bitner and Cichocki (2012) and Bitner, Cichocki and Sierak (2013, 53-80).

2.2. Methodology and data

The analysis bases on uniform comparative data released by international institutions: Eurostat Dissemination Database: (formerly New Cronos Eurostat database) - for the EU member states, Norway and Switzerland, and the SourceOECD database - for the U.S. and Japan. We refer also to another data set providing information on local governments receipts and expenditures, the U.S. Bureau of Economic Analysis (BEA), as international data using national accounts methodology consolidate the U.S. LG sector with the state government sector. the U.S. The BEA data are prepared in the framework of NIPA statistics, and can be compared with the data collected by Eurostat. To obtain data on LG debt it was necessary to refer to the data published by the U.S. Census Bureau, as they are not accessible from the BEA. There are some discrepancies between two above methodologies, particularly with regard to delimitation of local government (BEA) and the LG sector (Eurostat). Select Eurostat data, and the OECD data had to be compared with the IMF Government Finance Statistics (GFS) database and appropriately verified². Thus, we implement three methodological standards ESA2010 for the EU member states, Norway and Switzerland, SNA2008 for Japan, and NIPA for the U.S., similarly to Bitner and Cichocki (2012). ESA2010 methodology is used for the excessive deficit procedure criteria by the European Union Treaty art. 126³, and within framework of the Stability and Growth Pact.

² We take into account methodological differences between systems of national accounts defined by the SNA and ESA2010, and methodology used by GFS. Verifications include cases of obvious errors in the Eurostat database; for example the gross fixed capital formation of the GG sector in Italy, in 2002 equals 22.468 million (m) euro and 24.497 m euro in the LG sector; a similar error regards fixed assets of the GG sector in the U.K. in 2005, and the LGs' sector debt in Norway in 2006.

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

3. Bibliography

Literature regarding LG finance is not extensive, and a thorough comparative analysis is seldom. Basic methodological issues of LG expenditure, revenue and regional accounts are described in the UN System of National Accounts (1993), the European System of Accounts ESA2010, the GFS Manual (2001) and Schwarting (2006). They are comprehensively discussed in several publications, for example in the Studies in Methods series prepared by the UN Statistics Division - National Accounts: A Practical Introduction (2003). There exist comparative studies of LG finance based on the above methodology. Dexia, (2008 and 2012) presents a solid comparison of local finances and expenditure, but the level of aggregation is high and the analysis ends in 2007 (2010). The second report of the United Cities and Local Governments, 2010 is significant, but it analyzes over 100 states on all continents and presents very aggregate data. The results are general, similarly to the reports of 2008 and 2009 regarding the financial crisis.

International comparison of local government finance data are included in select studies devoted mainly to fiscal institutions and rules. Ter-Minassian (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 et al. (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 regarding the impact of global financial crisis on LG finance, (Canuto and Liu 2010), and in reports by the Council of European Municipalities and Regions (2009). Swianiewicz and Łukomska (2010, 12-14) discuss normative regulations regarding revenue, expenditure and debt in Poland, and the impact of these regulations on LGs' operation. They, and Bitner and Cichocki (2012) also present international comparisons of revenue and emphasize the role of operational surplus in LGs finance management. Wildavsky (1961) discusses issues of incremental budget changes, and argues that because of political reasons incremental increases in budgets are associated with so called punctuations - random changes in both the nominal budget and the budget's structure. Breuning (2006) presented a comparative study of budget punctuations and indicated other reasons of budget punctuation. Interesting paper of Breuning and Busemeyer (2012) demonstrates, based on national data of Denmark, France, Germany and the U.S. that

investment change faster than operating expenditure in times of financial crises and changes of governments.

4. Local government sector investment expenditure over 1999–2013

4.1. Basic information regarding investment budget

The general principle of the LG sector finance, valid in the majority of analyzed countries' public sectors, is a division of the budget into operational (current) budget and capital (investment) budget. The division usually plays an important legal function, and 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 capital and various transactions, including debt, should exclusively serve investment financing (Dafflon 2002, Cichocki 2013).

We present analysis of investment expenditure of the LG sector and the GG sector, their shares in GDP and in total investment of economies in European countries, Japan and the U.S. Comparison of the LG and GG sectors' investment makes it possible to value LGs' role in generating GDP, and is an important starting point to thorough analysis of LGs' debt and deficit. The cost of debt service in relations to total revenue of the LG sector is discussed in Bitner et al. (2013, 249-260) and Cichocki (2013, 272-290). The analysis also facilitates comparisons of changes in investment and operating expenditure in times of financial crises and changes of governments (Breuning and Busemeyer 2012).

4.2. Investment expenditures

Investment contributes to the *gross fixed capital formation* (GFCF) – a category implemented in national accounts. The GFCF is the total value of fixed assets acquired by an institutional LG's unit in a given year (a reporting period) minus the value of fixed assets which were disposed of during that period. The GFCF mirrors the value of both, 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, disposal as sales, and both are associated with barter transactions, in-kind transfers, and financial leasing. The LG sector share of expenditure which are not investment expenditures in the GFCF is very low, does not exceed 2%. Differently to traditional considerations, we assume that the operational balance

(the result) does not equal *net* savings (they do not include changes in the inventories and *net* acquisition of valuables).

We analyze four indicators regarding investment expenditure: the share of investment implemented in all sectors of the economy in GDP, the share of the GG sector investment in the economy total investment, the share of the LG sector investment in its total expenditure and in the GG sector investment. We utilize data from the Eurostat, the OECD and GFS databases.

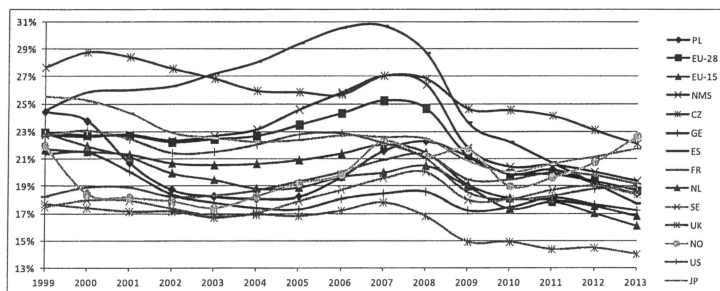
4.2.1. The role of investment in generating GDP

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. *Gross* accumulation includes: the GFCF changes in inventories and in net wealth. Production activity of the GG sector units, and of the LG subsector is marginal, therefore the value of changes in their inventories is negligible, usually does not exceed 1% of GFCF (Bitner and Cichocki 2012).

The share of investment in GDP in the EU countries oscillates between 15% - 25%, only in the U.K., Ireland and Greece, the share was lower over 2009-2013. In Spain, the CzR and Romania the investment were exceptionally high starting 2005. In Spain, the investment share in GDP equaled 28% over 2004–2008, exceeded 30% in 2006 and 2007, but decreased to 17.7% in 2013. In CzR, until 2008 the share oscillated around 27%, equaled 24% over 2009-2011 and 22% in 2013. In Romania the share exceeded 30% in 2007-2008, and 24% over 2009-2013. Traditionally, investment share in GDP is high in Japan, on average equals 22%; 21% over 2009-2013. In 2013 the highest investment share in GDP presented Romania, Norway (22.6%), CzR, Japan (21.7%), Austria (21%), Bulgaria (20.7%) and Switzerland (20%), where the share has remained stable for several years. In Sweden, France and Austria the share remained stable at correspondingly 18%-20%, 19%-21% and 20%-22%.

The lowest share of investment in GDP is in Ireland, 10.7% in 2013, below 12% in 2010. In the U.K. the share, on average, is below 17%, 14.0% in 2013. In Greece the share equals 12% in 2013 (26.6% in 2007). The share of investment in GDP in the NMS, equaled 19.4% in 2013 and was higher by 2.5 pp. than in the EU15 countries; it exceeded 20% over 2009–2012 and was higher than in the EU15 countries by 2 pp. (4 pp. over 2006–2008). In Poland, the share over 2002-2005 was lower than in the EU15, became higher starting 2006, equaled 22% in 2008, 20% in 2011, and 18.5% in 2013 - below the NMS average (figure 1).

Figure 1. The share of the economy investment in GDP



Source (the same for all figures): authors' calculations based on Eurostat, OECD and the U.S. data

The economic recession of 2008-2010 resulted in a strong decline of the investment to GDP share in 2011 and 2013 in many countries. In 2011, in comparison with 2007 the strongest decline is observed in Ireland (58%) and Greece (43%). In 2013 the decline remained at 58% in Ireland, increased in Greece, to 54.3%, and Spain to 42% (33% in 2011). In Bulgaria the decline equaled 25% in 2011 and 28% in 2013. In Denmark and the U.K. the share decreased by 20%, 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 – 6.3% in 2011 and 14.5% in 2013. The countries with the lowest decline in the investment share, similar to that of Poland in 2011 include: Italy, Japan, Norway and the Netherlands (in Norway and Hungary the share rose in 2013). In 2009 one observes a decrease of 4% in investments in Spain, in Japan (3%), Denmark (2,6%), Switzerland (1%) and the U.S. (0,4%). In 2010, in Spain and Denmark investments increased, but declined in Poland, CzR, Japan, and the U.S. Due to large rise in the GG sector investment the economic recession in select countries of the NMS (Bulgaria, Romania) was relatively weak.

4.2.2. Contribution of the GG sector to the economy investment

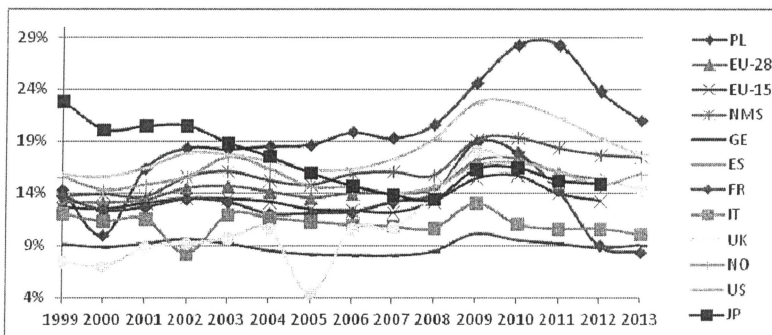
In the majority of countries, we observe an increasing share of the GG sector investment in the economy investment, which decreased over 2012-2013⁴. In the U.S. the share grew from 15.6% in 2000, to 22.7% in 2010 (declined to 17,7% in 2013), in EU15 countries the share increased from 12% to 15.7% in 2010 (13.7% in 2013). The increase of

⁴ We present data for the GG and LG sectors and for the central government sector (CG). Investment of the social insurance sector (sis) is negligible compared to the GG. In Poland, over 2000-2013, yearly average investment share of the sis, equaled about 1.2% of the GG sector investment.

the share in the NMS is spectacular - from 13.7% in 1999 to 19.4% in 2010 and 17.5% in 2013. In Poland the share equaled 14.3% in 1999, 28.3% in 2010-2011 and 21% in 2013 (figure 2). In 2009 a strong increase of the share was associated with the “rescue programs” implemented by the U.S. government - in the U.S. of 3.5 pp., the EU15 – 2.2 pp. and the NMS – 3.5 pp.

The share is low and stable in Germany (9%), Denmark (below 9% until 2009, 13.5% in 2013), Italy – 10% in 2013, Spain and France 10% in 2012, and 8.4% in 2013. In 2005 the share decreased sharply, but remained above 14% (18% in 2009, 14.2% in 2013). In Ireland, the share was low until 2006 (14%), equaled 19% in 2001, increased to 28% in 2010, declined to 17.4% in 2012 and 16.6% in 2013. Greece maintained the GG investment share at 15% level (11.4 % in 2011, 16% in 2012 and 2013).

Figure 2. Share of the GG investment in total investment of the economy



4.3. Local government investment expenditure

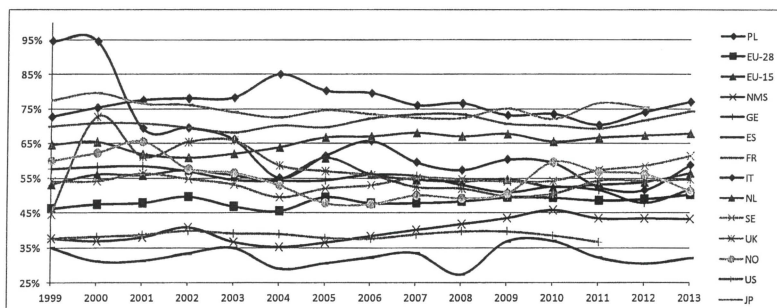
Investment expenditure of a LG, on average, constitutes 14%-22% of its total expenditure. The share is higher in the NMS than in the EU15 countries by about 6–8 pp. Many NMS countries, also select EU15 economies over 2015-2022, will apply for the EU funds to finance local infrastructure. The NMS will try to maintain high investment to narrow the infrastructure gap between them and the leading EU countries. The LGs will remain the major investor of the public sector in many European countries.

4.3.1. Share of the LG sector in the GG sector investment

In the majority of analyzed countries the LG sector is the largest investor of the GG sector, with an exception of Greece, where the share of the LG in the public sector investment equaled, on average, about 20% (26% over 2009-2011 and 32% over 2012-2013). The average share is low in Spain (about 30%), Austria, and the U.S. (about 40%). In the NMS the average share is low in Bulgaria (below 30%), Estonia (43% in 2013, 29% over 2010-2011), Hungary (below 40%; 60% over 2010-2011) and Slovakia (41% in 2013). In Poland, the average share equals about 60% (58.8% in 2013) and is higher than the EU average (50%). In 2011 - 2012, the share in Poland decreased to 52%. The average share is high in Italy (about 70%; 77% in 2013), France (74.2% in 2013), the Netherlands (68% in 2012-2013), and Japan - about 75% (figure 3).

The average share of the LGs' sector in the public sector investment is lower in the NMS (40%; 43% over 2009-2013, 38% in 1999) than in the EU15 countries (55%; 60% in 2005, 56% in 2013, 54% in 1999). Starting 2007, the difference between the NMS and EU15 countries decreased to 10 pp. in 2009-2012 and 13 pp in 2013 (18-20 pps. prior to 2007).

Figure 3. LGs' share in the GG sector investment

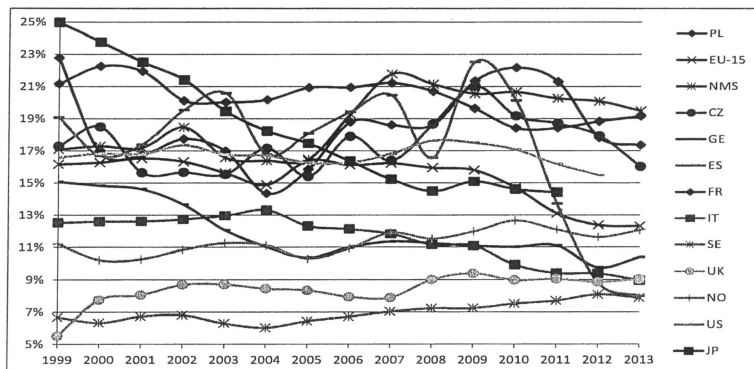


4.3.2. Share of investment in total expenditure of the LG sector

Investment expenditure and its share in total expenditure of the LG sector strongly varies among the analyzed countries. There are no general trends of these changes. The lowest share is observed in Denmark, Sweden, Finland, Austria and the U.K. (similarly to the share of investment in GDP). However, these low shares mostly result from institutional solutions.

In the Scandinavian countries the “size” of the LG sector is much larger than in other EU countries. The LG sector revenue, over 2007 – 2013, constitutes over 37% of GDP in Denmark, 25% in Sweden, 20% in Finland and 14% in Norway. In addition, expenditures for social care and health protection constitute the majority of the total LG sector expenditures in these countries. The share of revenue in GDP in Germany equals about 8%, in the CzR – 11%, in Poland and the U.K. – 13%.

Figure 4. Share of investment in the total LGs expenditure



The share of investment in the total LG sector expenditure is higher in the NMS than in the EU15 countries. The difference is about 8 pp. in 2012-2013 and 6 pp. over 2007-2011. In 2007 the share in the NMS increased to 22.4%, and remained at the 21% level until 2013. The share is consistently high in Portugal, France and Slovenia (about 18%), Romania (above 22% from 2007), Greece (about 21% until 2010, 18% in 2012-2013), and Poland (21% over 2009-2011, 17.5% in 2012-2013). In Spain the share equaled about 19%, but decreased to 13.5% in 2011, 9% in 2012 and 8% in 2013. In Japan the share decreases from 24.8% in 1999 to 14.7% in 2009 and 14.3% in 2013.

4.3.3. Structure of the LG sector expenditure

The LG expenditure’s structure is defined by *The Classification of Functions of Government (COFOG)*⁵ which recognizes the following functions: 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 -

⁵ ESA 2010 ch. 23, 541-543.

education; 10 – social care. In figure 5, for select EU countries, we present, the LG sector expenditure structure - shares of a given function expenditure in the total LG expenditure. The shares determine fiscal role of tasks and projects implemented in a given area by all units of the LG sector in 2012⁶. In figure 6 we compare the LGs' expenditure structures of 2004 and 2012 calculated as weighted by Eurostat arithmetic averages for EU27 countries.

LGs' expenditures for financing educational tasks and projects are dominant in the majority of the 32 analyzed countries. In 2012 the average EU27 share of these expenditures in the total expenditures was 20.6% (20.8% in 2009, 18.8% in 2004). The share is very high in Estonia and Slovakia (39%), Latvia, Lithuania, Slovenia and Bulgaria (above 34%), the CzR, the Netherlands, the U.K. and Poland (29%). It is exceptionally low in Greece (1.7%), Spain (3.1%), Italy (7.3%) and Portugal (9.6%). 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 the sector of federal „states”⁷ and units of the CG sector. In the NMS, in 2012 (2004) the share of expenditure for education is on average significantly higher - 26.7% (29.5%) than in the UE15 countries – 15.7% (16.1%).

Figure 5. Structure of LG sector expenditure; COFOG, 2012

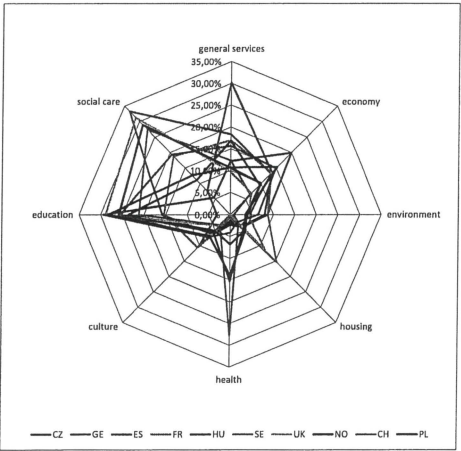
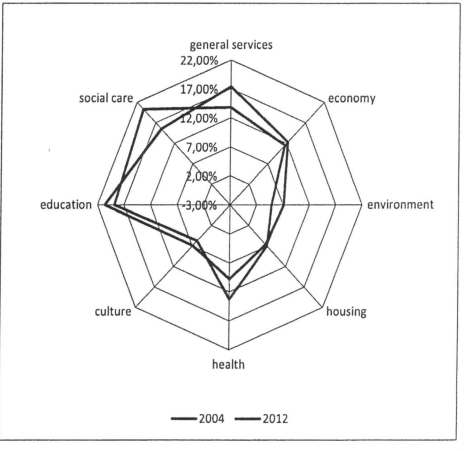


Figure 6. Structure of the largest LG sector expenditure; COFOG, 2004 and 2012 comparison



Source: the authors' calculations based on Eurostat data

⁶ 2012 Eurostat data were available at the end of 2014.

⁷ S.1312 data category in ESA 2010.

Expenditures for general public services, including LG's units administration and services of general character (planning, statistical services, debt transactions and data processing), belong to the second group of fiscal importance (17.4% of the total expenditures in 2012). The average share of these expenditures equals 33.8% in Greece, 30% in Spain and 26.5% in Portugal and is six times higher than in Denmark (4.4%) and Ireland (5.2%), four times higher than in Lithuania (6.8%) and the Netherlands (7.4%), and three times higher than in the U.K. (9.7%), Poland, Norway and Slovenia (10.7%). In 2012 (2004), in the EU15 countries the average share equaled 17.1, in the NMS – 17.7%.

In 2012 expenditures for social protection (old age, family and children) constitute, on average, 15.5% of the total expenditure in the EU27 countries. These expenditures are much higher in the EU15 countries (21% of the total LGs' expenditure) than in the NMS – 8.7%. Social care expenditures are very high in LGs of Denmark, 57.6% of total expenditures, Germany, 33.3%, the U.K., 31.3%; Norway, 29%, Sweden, 27.4% and Finland, 26.6%. In Poland, the share equals 12.6% (11.5% in 2009, 11.2% in 2004).

In 2012 the EU27 LGs' expenditure for „economic issues”, including communication and transport, equals 11.3% of the total expenditure. In the EU15 countries - 12.3% and the NMS - 10,1%. The economic activity of LGs is high in the CzR, 20% of total expenditures, Ireland, 18.7%, Romania, 18%, and the Netherlands, 17%. The share is low in Denmark, 4.3%, Sweden, 6.4%, and Finland, 7.2%.

The LGs' expenditures for health care, on average, equal 9.8% of the total LGs' expenditure and vary strongly among countries - are high in Italy, 47%, Finland, 31%, Sweden, 28%, and Denmark, 23%. The share is very low in the Netherlands, France, Slovakia, Spain and Germany (below 2%). In Poland the share equals 14%. LGs in Greece, Ireland, and the U.K. do not participate in financing health care. In 2012 the share of expenditures for health care is higher in the EU15 (10.7%) than in the NMS countries (8.6%).

Expenditures for culture and leisure (recreation) are relatively low. The average share for EU27 equals 6.9% of total expenditures (6.5% in Poland), only in Spain, France, Luxemburg and Cyprus exceed 10%. LGs' expenditures for public order are low, the EU27 average share equals 2.8%, in EU15 – 3.7%, NMS – 1.6%, Poland (2.1%). The share is high in Belgium (13.8%), the U.K. (9.3%) and the Netherlands (6.8%).

There are major differences in the expenditure structure of the LGs' sector in individual countries, however, some changes in the structure over 2004-2012 can be observed. The largest changes concern social care, health, general services and education (figure 6).

The LGs' share of social care expenditures in the total expenditure decreased in 2012 in comparison with 2004, from 20.3% to 15.5% (strongly in the *old age* subarea – in the CzR, Greece and Ireland, and in the *social exclusion* subarea in CzR and Ireland). The share of expenditures for *health care* decreased from 13.1% to 9.8%, but it rose in Italy to 47.3%, by 4,7 pps. The share of educational expenditures increased by about 2 pps., to 20.6% (in the Netherlands to 29%). The expenditures' share in the *general public services* area increased to 17.4% by 3 pps., (major changes are observed in planning, centralized databases and data processing, statistical services and debt transactions subareas)⁸. Debt transaction costs increased in Norway, by 84%, Hungary, 61%, Sweden, 48% and the U.K. - by 31%. LGs expenditures in the area of economic activities increased in 2012 by 1 pp – to 12.3%. An increase is observed in the environment area, from 6.3% to 7.2%. In 2012 the share of expenditure for recreation (6.9%) was slightly higher than in 2004, but decreased in comparison with 2009. In Norway equaled 5.5% (6% in 2009, 5.2% in 2004), the CzR, 7.2% (7.5%, 7%), Poland, 6.8% (7.5%, 6.5%), Spain 10.2% (12.2%, 10.9%) and Denmark, 2.3% (2.5%, 2.7%)

The employment expenditure constitutes the largest portion of the total LGs expenditure. The average share is very high in Belgium, Norway, Lithuania (about 53%), Slovakia, Finland, Hungary and the U.S. (45%), Sweden (42%). The share decreased in Poland, from 42.3% to 41.7% in 2013, Greece, from 44% in 2010 to 36.7% in 2013 and Hungary, from 49% in 2009-2010, to 31% in 2013. In Slovakia, the share equaled 45% in 2007, 41% in 2009, 47% in 2013. The share is low in Germany, 25%, Italy, France Japan and Portugal, about 30%. In 2012-2013 the share increased in Spain to 33.5% and the CzR to 36%, from 29% and 30.5% earlier. The average shares equal 35% in the EU15 countries and 36% in the NMS.

⁸ All average values cannot be cited, because Eurostat does not publish data for subareas in several countries - Austria, Germany, Poland, Romania, Slovakia and Switzerland.

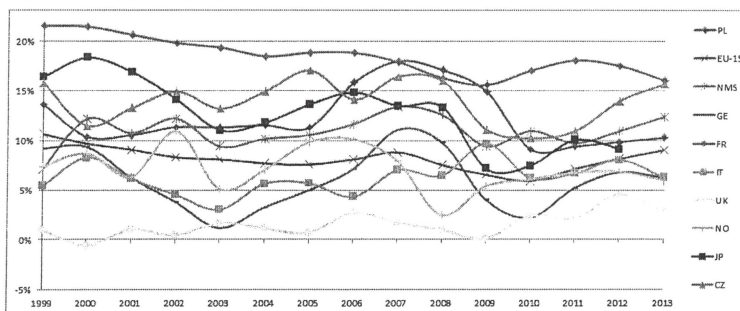
5. Surplus of the local government sector

5.1. Operating surplus

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

The LG sector operating surplus to revenue, over 1999-2013, is very high in France, Slovenia, Romania, CzR and Poland (yearly averages equal: 18.5%, 17.2%, 15.7%, 14% and 12.3%). The average share is low in Ireland, below 1%, the U.K., 1.5%, Denmark (3.1%; 3.9% in 2011-2013), Finland, Sweden, Germany, Ireland, Lithuania and Hungary (below 6%), and in Norway (7%). It was negative in Portugal over 2009-2011, Spain over 2010-2011 (-3.9%, -4.8%), and in Greece (-1.4%) and Slovakia (-2.7%) in 2010.

Figure 7. The operating surplus share in revenue of the LG sector



In 2008–2009, in comparison with 2007, the LG sector's operating surplus to revenue ratio decreased by 5-8 pps. in: Spain, Portugal, Germany, Japan, the U.S. (9.6% in 2007, 2.3% in 2009, 2.9% in 2013). In 2010 the ratio decreased in Germany (to 2.3%), Italy and Hungary (to 1.9%) and Poland - from 17% in 2008 to 9% in 2010 and 10.3% in 2013. In 2011, compared with 2010, the surplus ratio declined in Bulgaria (from 13.4% to 6.5%, 12% in 2013), and the CzR (16% in 2008, 11% in 2011, 16% in 2013). The operating surplus recovered in 2013 in many countries (figure 7). In Switzerland the average operating surplus

⁹ The surplus of the LG sector, as defined in the system of national accounts, corresponds to *gross savings* (B.8G) minus a change in inventories (P.52–53).

share in revenue over 1999-2012 equals 12%, in Japan – 12.7%, the U.S. - 7.5%, in spite of a large decrease over 2009-2013.

The average value over 1999-2013 of the operating surplus to revenue was higher in the NMS (11%) than in the EU15 countries (8.2%); in 2013 - 12.4% and 9% correspondingly. In 2007-2008 the difference equaled 5 pps.

5.3. The LG sector and the CG sector

The CG sector operating surplus to revenue ratio was negative in 16 out of 32 analyzed countries. In 2013 it equaled 15.7% in Greece and 14.5% in Slovenia. The CG sector operating balance was negative in every single year of the analyzed period in Portugal, Poland, France and Greece. Economic recession of 2008-2010 resulted in a substantial decrease of the CG nominal revenue, while the real expenditures increased in many cases as a result of fiscal incentives introduced by governments (a small decrease in investment was compensated by a solid increase in current expenditure). This resulted in strong operating budget imbalances, and generation of operating deficits. During 2009–2010 declining CG sector operating balances were observed in the majority of analyzed countries, especially strong in Greece (15% of GDP in 2009), the U.S. (10%), Ireland (12% and 30% in 2010), Portugal (9.5%), Spain, France and Japan. The only countries, in which the recession had very small impact on the operating balance were Norway, with the surplus of 11% GDP, and Switzerland (1% surplus). In Switzerland the CG operating surplus to revenue ratio was the highest among all countries analyzed over 1999-2013, equaled 23% in 2008 and 18% in 2009-2010. The financial situation measured by the operating surplus to revenue ratio, is much better in the LG sector, than in the CG sector.

6. Deficit and debt of the LG sector

6.1. *Net borrowing / net lending*

In all countries during 15 analyzed years the LG sector generated both deficits (negative *net* financial balances)¹⁰ and surpluses, which mostly occurred in 1999–2000 and 2006. However, in 2006 the LG sector in Estonia, Slovakia, and Latvia generated substantial

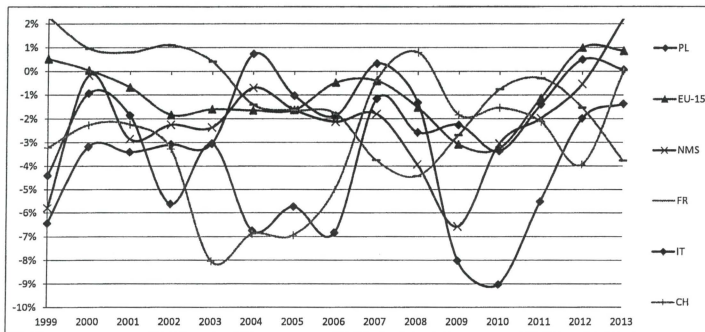
¹⁰ *Negative net* financial balance is defined as loans made and loans taken, and appear in reports as balancing records B.9 of the capital account. It corresponds to *net* borrowing.

deficits, in spite of their positive operating balances – as a result of a step increase in investment expenditure, which to a large extent were financed from the EU Funds.

In many countries the LG sector deficit was greater than 1% of GDP – in Norway (over 2008–2010), the U.S. (2009) and Poland (2009–2010), where after 2007, a systematic increase of the LG sector deficit and its share in the sector revenue and GDP is observed (in 2007 a small budget surplus occurred). In 2008 and 2013 the deficit to GDP ratio equaled 0.19%, but in 2010 increased to 1.14%. In Poland and Norway the deficits can be attributed to increases in the investment expenditure. The investment to total expenditure ratio rose in Poland by 20% yearly over 2008–2011 (17.5% in 2013), in Norway - by 12% yearly over 2007-2013.

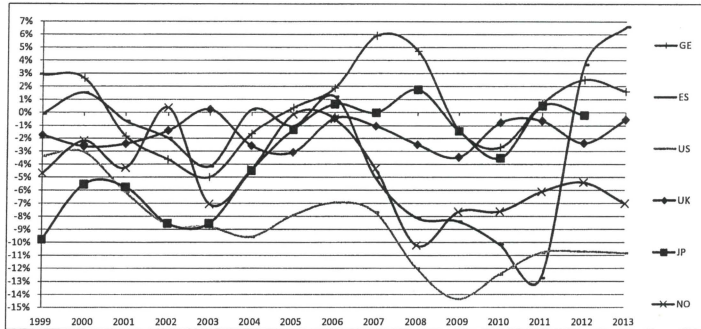
The causes of deficits in 2008 and 2009-2010 vary in select countries. In the UE15 countries the deficits resulted from deteriorating operating balances of the LG sector. The investment share in total expenditure remained stable. Prior to 2008, in the EU15 countries the *net* lending to revenue average ratio of the LG sector was positive, equaled 0.9%, but in 2008 turned negative – the deficit equaled 1.5% revenue (3.1% in 2009-2010).

Figure 8a. *Net borrowing/net lending* of the LG sector in relation to GDP



In the NMS it was the dynamic growth in investment (100% faster than in the EU15 over 2004–2008), and the decline in revenue, which contributed to the LG sector increasing deficits. The rise in deficit continued in spite of an improvement in the LG sector operating balances: the average ratio of the *net* lending to revenue over 2008–2011 equaled 3.9%, and was larger than over 1999–2007 (2.2%) and 2012–2013 (1.4%).

Figure 8b. *Net borrowing/net lending of the LG sector to GDP*



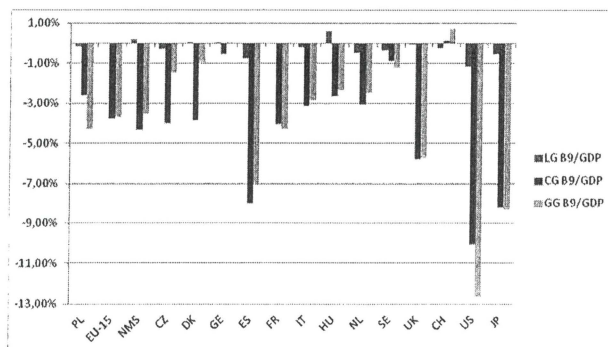
In Japan in 2008 and 2009 the LG sector deficit to GDP ratio equaled 2% GDP, but in 2012 was reduced to zero. In 2002–2003 the deficit ratio was high (figure 9b.) as a result of a sharp decline in revenue and operating surplus (by 25% in 2003 compared to 2001). The investment expenditure also declined, but to a lesser extent. In Japan the LG sector reallocates half of public funds and even a small decline of the sector operating surplus, can generate substantial rise in deficit.

6.2. Financial balance of the LG and the GG sectors

In 2013 the LG sector generated deficit in many countries, the largest in Norway and Finland (0.9% GDP), Estonia, France and Latvia (0.5%). Hungary observed 2.6% GDP surplus. The CzR, Bulgaria, Spain, Portugal and Germany generated small surpluses of 0.2%-0.4% GDP, Austria and Italy had balanced budgets. However, the LG sector share in the deficit of the GG sector is several times smaller than the same share of the CG sector, while the role of the LG and the CG sectors in redistribution of public funds remains comparable. In 2013 the largest contribution of the LG to the GG sector deficit was in the CzR, Sweden and the Netherlands (about 20%), but their deficit was low (1.5% and 2.5% GDP). In Spain and the U.K. the LG deficit share equaled 11%, but the deficit itself was high (7.1% and 5.7 % GDP). In 2012 the GG sector deficit share in GDP is high in the U.S. (8,5%) and Japan (6,6%), while the share of the LG equals 1,02% and 0,55% GDP. In 2010-2011, the GG sectors generated deficits in all analyzed countries except Norway (11% GDP surplus), Estonia and Switzerland. In 2013 only Norway generated 11% surplus.

In 2013 in the UE15 countries the LG sector average deficit equaled 0.05% GDP, the CG sector – 3.8% GDP and the GG sector - 3.7% GDP. In the NMS countries the LG sector generated surplus of 0.2% GDP, the CG sector - deficit of 4.3% GDP and the GG sector - 3.6% (figure 9).

Figure 9. The LG and the CG sectors shares in the GG sector deficit, 2013 (the U.S., 2011; Japan, 2012)



Remark: B9 denotes budget deficit

7. Debt of the local government sector

The widely accepted and implemented rule of construction budgets with deficit yields a possibility of financing select expenditures with debt. It also facilitates sale of financial assets. Liabilities of the GG sector (public debt) include bonds, loans, securities and other obligations. Public debt of the LG sector, in the majority of countries, results from the sector obligations to finance particular units of the sector (their negative balances).¹¹ An increase in the LGs indebtedness in a given year results from a negative balance of the LG sector, while a decrease in indebtedness – from budget surpluses (excluding revaluation of individual components of debt). The data in the Eurostat and OECD databases enable construction of indicators regarding indebtedness of the LG sector and the indebtedness structure. Debt indicators are described in Kavanagh (2007, 147-155) and Cichocki and Leithe (1999).

¹¹ Public debt is defined in the Protocol of the excessive deficit procedure and implementing acts as a nominal value of liabilities at the end of the reporting period (calendar year), after consolidation.

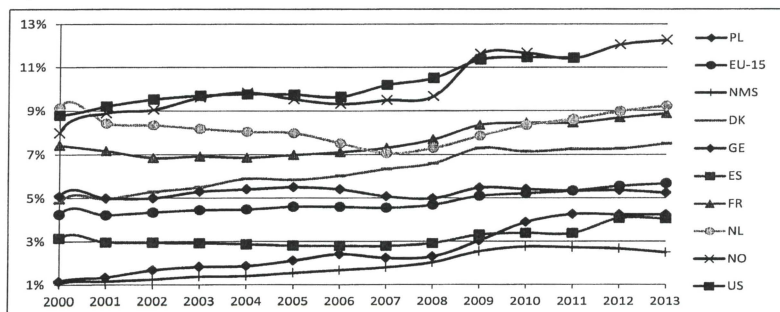
7.1. The LG sector debt in relation to LG's revenue and GDP

The ratio of the LG sector debt to GDP strongly varies among analyzed countries but was constantly high in the U.S., Norway, France, the Netherlands and Italy - above 7% GDP, 8% starting 2009 (11.5% in Norway). In Denmark the ratio exceeded 7%, in Finland and Latvia 6% over 2009-2013. It was increasing in all countries starting 2006.

During 2004–2013, in the EU15 countries, the yearly average LGs' debt to GDP ratio increased from 4.4% to 5.7% (by 27%), while in the NMS the ratio rose from 1.3% to 2.5% (by 85.8%). In Poland the LGs' sector debt to GDP increased from 1.9% in 2004 to 4.1% in 2013 (by 121.8%). The average, over 2000-2013 yearly increase of the LG sector debt to GDP equals 2.8% in the EU15 countries, and 12% in the NMS (figure 10). The increase of the ratio in the EU15 over 2010-2011 can be explained by the GDP decline (Greece, Portugal) and its very slow rise in Ireland, Spain and Italy. In 2013 the lowest debt to GDP ratio was in Bulgaria, Lithuania (below 2% GDP), the CzR, Hungary, Romania, Slovenia and Slovakia (below 3% GDP). The 2000-2013 average increase rate of the nominal LG debt equaled 21% in the NMS, and 6.5% in the EU15 countries.

The debt to GDP ratio shows the LG sector debt policy related to the whole economy, while a ratio of the LG sector debt to its total revenue mirrors the LG sector expansive debt policy. In Portugal, the LG sector debt equaled 90% of revenue in 2012-2013. In 2013 debt was extensively used by LG's sector in Norway (86% of revenue), France (75%), Belgium (72%), Germany (66%; 75% in 2004) the Netherlands, Ireland, Spain and Latvia (60%) and Italy (58%).

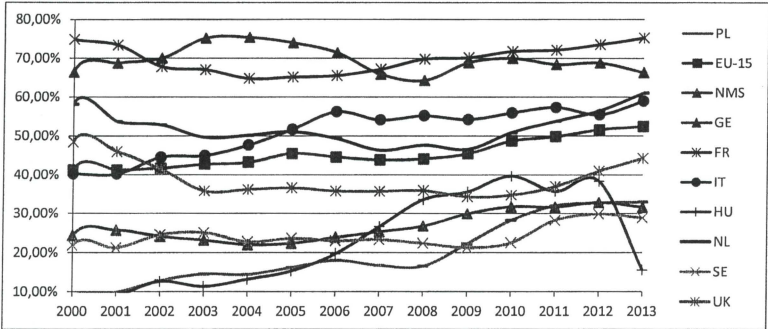
Figure 10. Ratio of the LG sector debt to GDP



In 2013 in the EU15 countries the average LG's sector debt constituted 52.3% of the revenue (41.2% in 2000). The debt to revenue ratio changed over 2000-2013 by 27%, with an

exception of Portugal (42.5% in 2000, 89% in 2013) and Italy (40% in 2000, 58% in 2013). In the NMS the ratio changed by 29.5% (24.4% in 2000, 31.6% in 2013), but in select countries increased drastically. In 2000 and 2013 the share equaled: in Poland 9.8% and 32.9%, Hungary - 9% and 15.6% (38.3% in 2012), Romania - 9% and 22.8%, and in Slovenia – 4.5% and 22% (figure 11).

Figure 11. The LG sector debt to the sector's total revenue



During 2000-2013 the LG sector debt to revenue ratio declined only in Slovakia, from 44.6% to 34.8% and the U.K., from 48.4% to 44% (34.7% in 2010). In Germany in 2013 the ratio reached the 2000 level of 66% (equaled 75% in 2003-2004). Debt is the largest source of financing the LG sector investment in the U.S. The LG' sector debt exceeds 110% of its revenue (144% in 2011, 140% in 2010).

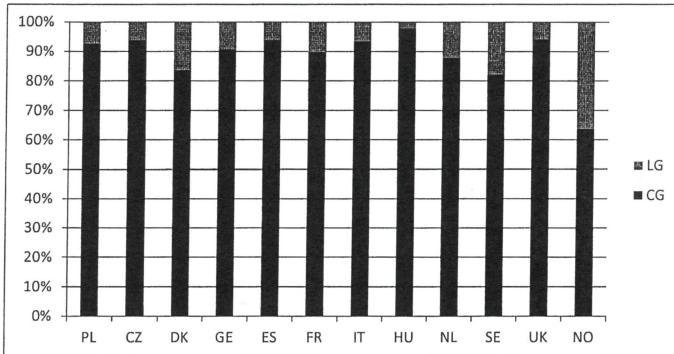
7.2. The LG, CG and the GG sectors debt

The LG sector debt share in the GG sector (public) debt is small in all EU countries - does not exceed 9%, except in Norway, Denmark, Estonia, Latvia and the Netherlands.

In Norway over 1999 - 2013 the LG sector debt was very high (17.5%-28% of the GG debt over 2000 - 2010) and 40% in 2012-2013. In Denmark the LG debt equaled 30% of the CG debt in 2007 and 20% in 2010 and 2013 (23.3% 16.7% and 16.8% of the GG debt). In Estonia public debt is low, below 7% GDP, except in 2009, and the LG sector debt twice exceeded the CG debt (in 2011 and in 2007). In 2013 the LG sector debt equaled 18.9% of the GG debt in Sweden and 12.5% in the Netherlands, where the LG debt to GDP was the highest (9.2%). In 2013 in Latvia the LG sector debt share in the GG debt equaled 15.3%, in Poland - 7.3% (8% of the CG debt), similarly to CzR, Italy and the U.K. In the U.S. in 2010 an

„explosion” of the CG sector debt resulted in the fall of the LGs’ debt share in the GG to 18.3% and 17% in 2011, from 29% in 2007.

Figure 12. The LG sector debt and the GG sector debt in 2013



8. Rate of change in the LG investment and operating expenditure

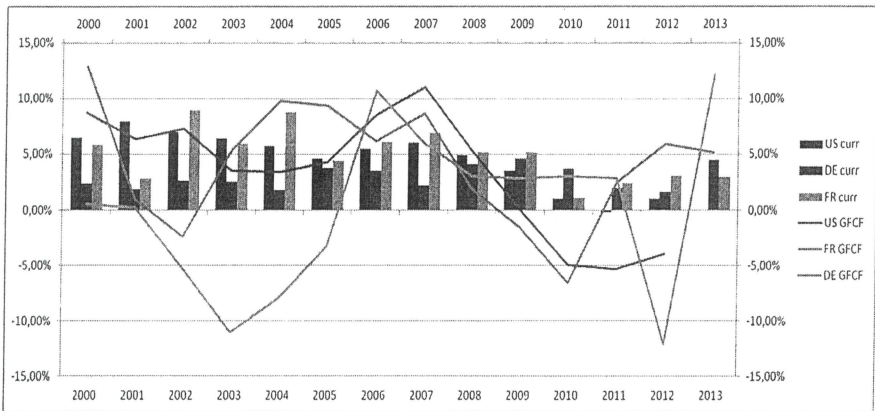
The most acute changes in investment and operating (current) expenditure of the LG sector can be observed during economic crises, or in times of government changes. However, the rate of investment expenditure change is usually faster than the rate of operating expenditure change (see figures 13 and 14). The increase in investment expenditure was also more dynamic than the rate of current expenditure (Bitner, Cichocki 2012). Breuning and Busemeyer (2012) also showed that investment of the GG sector change faster than the sector’s current expenditure.

In 2003 the LG’S GFCF in Germany changes much faster than its current expenditure. In 2006 in all three countries, and in 2007 in France and the U.S. the investment grow faster than the current expenditure. The decline of investment is also much faster than an increase of current expenditure in Germany (in 2012) and the U.S. (in 2011), as well as an increase in investment in France (2011 and 2012). In Poland, the growth of investment in 2009 and 2010 is much faster than the growth rate of current expenditure. In the CzR - in 2009 the growth rate, and in 2010 the decline rate of investment is faster than the current expenditure growth

rate. In 2012 both, in Poland and in the CzR the decline rate of investment is faster than that of the current expenditure, and in 2013.

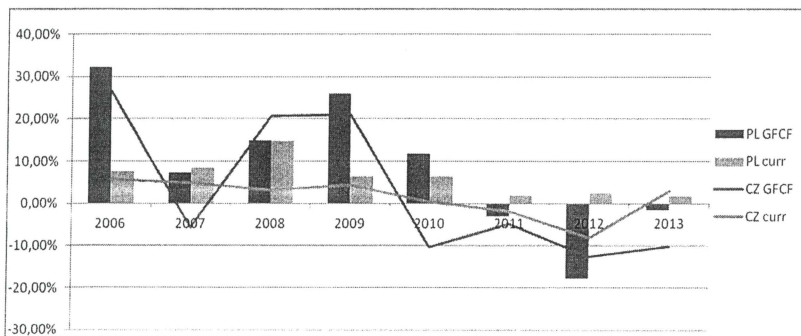
The increase in the LG investment expenditure was more dynamic than the rate of current expenditure in many other countries (Bitner, Cichocki 2012). Breuning and Bussemeyer (2012) also showed that investment of the GG sector change faster than the sector's current expenditure in Germany, France and the U.S.

Figure 13. LG investment and operating expenditure: the U.S., Germany, France



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

Figure 14. LG investment and operating expenditure: Poland, the CzR



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

9. Observations and conclusions

Select results regarding local government finances and debt in the EU countries, both in the NMS and the EU15, are contrary to widely repeated opinions in popular publications. The comparisons of investment, debt, deficit and operating surplus over a 15 year period gives a good bases for observations and recommendations and is a departure for thorough analysis in select areas of LGs' finance. A process is taking place across the public sector which debilitates social and economic efforts of the local government sector. It presses the LG sector "to do more with less" and might be the cause of a decrease of expenditure in areas of health and social care in EU countries. One should look anew at the LGs and the CG sectors tasks and expenditure regarding health, social care, environment, education and security - reevaluate standards and procedures to improve the structure of financing the public sector in the EU countries. Eight observations are formulated which result from the analysis.

1. The role of the LG sector in the public finance sector has grown since 1999, measured by both its expenditure and revenue share in GDP. The share of LG expenditure in GDP increased by 2-3pps in majority of countries, but was strongly decreasing during 2008-2010 and 2000-2001 economic slowdowns; see also Bitner and Cichocki (2012). In 2013 the LG share in the GG sector expenditures equals 65% in Denmark, 49% in Sweden, 41% in Finland, and 31% in Norway, Italy and Poland. However, the LG sector share in revenue is usually lower, sometimes much lower, than their share in expenditures. There are not enough funds for LGs' own tasks and administratively delegated projects.

2. The LG sector is the largest investor of the GG sector in the majority of analyzed countries. The share of LG in public sector investment is on average much lower in the NMS (40%, about 43% starting 2009) than in the EU15 countries (55%). The difference decreased as a result of a rising share in the NMS countries (narrowing the infrastructure gap), but it grew again starting 2011. In 2010 the share equals 46% in the NMS and 52.5% in EU15 (43.2% and 56.4% in 2013). The LG share in investment of the public sector is high in France, Italy and Japan in 2011-2012 (75%), Denmark and the Netherlands (65%), Sweden, the CzR, and Poland (about 60%). In the U.S. it equals 35% in 2011.

The average share of investment in total expenditure of the LG sector is in the NMS (18.8%) higher than in the EU15 countries (15.6%) - by about 5 pps. starting 2007. In select NMS countries the share was strongly increasing prior to 2012, but decreased in 2012-2013; in Poland: 17% in 2000, 22% in 2011, 17.4% in 2013, CzR – 17.3% in 2000, 21% in 2008,

16% in 2013. In the UE15 countries the average share is high in Ireland and Portugal (30%), France and Spain until 2010 (20%). In 2013 it decreased in Spain to 8%, Germany to 10% (15% in 1999) and in Japan to 14.5% after 2006 (20% earlier). The share is low in Denmark (4%), Sweden, Finland and U.K (9%) as a result of institutional solutions - expenditure for social care and health care constitutes most of the LGs' total expenditure. In the U.S. the share equals about 16%.

3. The LG's sector expenditure structure (expenditure in groups of specific activity – COFOG - in the total LG's sector expenditure) differs among the old EU15 countries and the new EU members, and between these two groups of countries. fiscal role of Financing educational projects usually dominates budgetary expenditures. In the CzR, Estonia, Latvia, Poland, Finland, Sweden and the U.K., the LG sector finances most educational tasks, but in Greece and Spain only less than 5%. In Spain it results from institutional solutions. In 2012 the NMS average share of educational expenditure in the total expenditure was significantly higher (26.7%) than in the UE15 countries (15.7%). The EU average equals 20.6%, in Poland - 29%.

Tasks in the area of health care are financed differently in individual countries. LGs in Italy, Denmark and Sweden spend over 95% of their expenditure for health care. In Germany, Spain, France and the Netherlands the LGs' share in financing health is below 5%. Expenditure for social care is much higher in the UE15 countries (18.5% of total expenditure) than in the NMS (8%). The average share in all EU countries equals 14%. Social care is predominantly financed by LGs in Denmark and other Scandinavian countries, the U.K. and Germany (about 25% of expenditure). Units of the LG sector also finance many public tasks in the area of environment protection, housing construction, culture and leisure, economic development and security. The LG sector in the Netherlands and the U.K. implements half of tasks in the area of public order, in France, Germany and Spain above 22% (15% in other EU countries). The fiscal role of specific groups of expenditure in the total LG sector expenditure changed during 2004-2012. The largest decrease in 2012 in comparison with 2004 took place in social care (from 20.3% to 15.5%) and health care (from 13.1% to 9.8%). The largest increase occurred in general services (planning, centralized databases and statistical services, and debt transactions costs), by 3 pps. to 17.4%, and in education - by 2 pps. to 20.6%.

Wage expenditure constitutes 35.5% of the total LGs' expenditure (above 45% of the operating expenditure). In the NMS the wages are higher (48% of the operating expenditure)

than in the EU15 (41%). The highest wages are in Belgium, Lithuania, Norway and Slovenia (60% of the operating expenditure).

4. The operating surplus of any budget ensures funds for investment financing and mirrors good financial management. The average value over 1999-2013 of the LGs' sector operating surplus to revenue ratio was higher in the NMS (11%) than in the EU15 countries (8.2%); in 2013 - 12.4% and 9%. In 2007-2008 the difference equaled 5 pps.

In the EU15 countries over 2009-2011 we observe a strong decline of the LG sector operating surplus to revenue. The value of the ratio in 2009, 2010 and 2011 decreased to 6.6%, 6% and 7.1%. The decline results mainly from a fall of operating revenue (not a rise in operating expenditure). In the NMS, the operating surplus ratio declined in 2009 to 9.4%, but recovered to 12.4% in 2013 (11% in 2010). The operating surplus share in revenue over 1999-2013 is high in France, Slovenia, Romania, the CzR, Poland, Latvia, the Netherlands and Bulgaria, yearly averages equal: 18.5%, 17.2%, 15.8%, 13.5%, 12.3%, 11.1%, 9.1%, and 7.9% (12.2% in 2013). In 2010, compared to 2009, the surplus strongly declined in Romania, Bulgaria, CzR., Austria, and the U.K. The average ratio over 1999-2013 equals 1.5% in the U.K. (0.1% in 2009, 2.8% in 2013), and 7.2% in the U.S. (2.9% in 2013).

5. LG sector generated negative *net* financial balance (deficit) in many years and many analyzed countries. The balances substantially deteriorated in 2008-2010 and partly improved in 2011, but not in Spain and Hungary. In 2013 LGs in Spain generated budget surplus, but Hungary, Switzerland (in 2012), France and Norway generated deficits. The causes of the negative balances vary. In the EU15 countries the deficits result from deteriorating operating balances of the LG sector (the share of investment in total expenditure remains stable). In the NMS a dynamic increase in investment, the rate of which exceeded the current expenditure increase rate, and the decline in revenue contributed to deficits. In Poland, after 2007, the rise in deficit, similarly to other NMS countries, was the result of an unprecedented increase in investment expenditure. The average ratio of the *net* financial balance to revenue of the EU15 LG sector equals 1%. In 2008-2011 the deficit equaled 1% - 3.2% revenue, in 2012-2013, the EU15 countries generated budget surplus (1% revenue). In the NMS in 2012 the LGs generated deficit in spite of improvement in the sector operating balances (in 2013 the NMS generated 2.2% surplus). The average ratio of the *net* financial balance to revenue equaled -2.2%, the average over 2008-2010 (-4.5%), over 1999-2007 (-2.2%).

6. A systematic increase in public debt of the LG sector, especially fast in the NMS is the result of high and rising deficits. In the NMS, in 2000 the debt to GDP ratio equaled 1.1%

(1.4% in 2004, 2.7% over 2010-2012, 2.5% in 2013). The debt to GDP ratio in EU15 increased from 4.26% in 2000 to 5.7% in 2013, in the NMS - from 1.06% to 2.5%. The average yearly increase rate of the nominal debt (21% over 1999-2013) was very high, while in the EU15 countries it equaled 6.5%.

7. The LG sector financial condition, measured by the ratio of the operating surplus to revenue, is better in the NMS than in the EU15 countries. The increase of deficit and debt is generated by extensive investment, and the operating surplus is at a relatively high level. In near future, most probably, the LG sector share of investment in total expenditure will decrease, and the growing operating surplus in the NMS will enable reduction of indebtedness.

8. The LG sector finance and indebtedness, especially in the NMS, is not the source of significant risk for public sector finance stability. In the majority of the EU countries the structural deficit of the central government sector is the real threat for financing public investments and growing public debt. It was also the cause of initiating the excessive deficit procedure in several countries. The average LGs' sectors budget deficit in relations to GDP in the EU15 is nearly twice as high as in the NMS economies. High deficits in the CG sector, are accompanied by decreasing operating surplus to revenue, which, in 2013 equaled 70% of the ratio in the NMS (50% in 2010). There is a necessity of structural reforms and new arrangements in the LG and the GG sectors' financial system, especially in the EU15 countries.

References:

- Bitner, Michał, and Krzysztof S. Cichocki. 2012. Revenues and Operating Budgets of Local Government Sector in EU Countries, the U.S. and Japan over 1999-2011. Report, RB50/2012, Systems Research Institute, Polish Academy of Sciences, Warszawa.
- Bitner, Michał, Krzysztof S. Cichocki and Jacek Sierak, [Polish]. 2013. *Standards for Local and Regional Debt Management and their Impact on Infrastructure Financing*. Systems Research Institute, Polish Academy of Sciences, BS series, 71. Warszawa. <http://www.ibspan.waw.pl/kscichocki/index.php>
- Breunig, Ch. 2006. The more things change, the more they stay the same: a comparative study of budget punctuations. *Journal of European Public Policy*, 13:7, 2006, pp. 1069-1085.
- Breuning, Christian, and Marius R. Busemeyer. 2012. Fiscal austerity and the trade-off between public investment and social spending, *Journal of European Public Policy*, 19(6): 921-938.

- Boogert, G. H. den, A. Cachet, F. B. L. Meer, van der, R. M. Noppe and L. Schaap. 2005. Draft Report. Regional Governments in France, Germany, Poland and Netherlands”, Rotterdam.
- Canuto, Otaviano, and Lilli Liu. 2010. *Subnational Debt Finance and the Global Financial Crisis*. The World Bank Economic Premise. Report no. 13, May.
- Cichocki, Krzysztof S., [Polish]. 2013. *Finance and Debt Long-Term Management in the Local Government Sector*. Systems Research Institute, Polish Academy of Sciences, BS series, 74. Warszawa, <http://www.ibspan.waw.pl/kscichocki/index.php>
- Cichocki, Krzysztof S., and Joni Leithe. 1999. Report. Gmina Financial Aid Indicators, Local Government Partnership Program, USAID, Warszawa.
- Council of European Municipalities and Regions. The Economic and Financial Crisis. Impact on Local and Regional Authorities. March 2009.
- Dafflon, Bernard (ed.). 2002. “Local Public Finance in Europe. Balancing the Budget and Controlling Debt”, Cheltenham UK, Northampton MA USA.
- DEXIA. 2008. Sub-national Governments in the European Union. Organisation, Responsibilities and Finance. Report.
- Ebel, Robert D., and John E. Petersen (eds.). 2012. *The Oxford Handbook of State and Local Government Finance*, Oxford University Press.
- Friedrich, Peter, Joanna Gwiazda and Chang W. Nam. 2003. “Development of Local Public Finance in Europe”, Center for Economic Studies, the Ifo Institute Working Paper no. 1107, December.
- International Monetary Fund. 2001. Government Finance Statistics Manual.
- Kavannah, Shayne C. 2007. *Financing the Future: Long-Term Financial Planning for Local Government*; Government Finance Officers Association, Washington D.C.
- Rubin, Irene. 2015. Past and Future BUDGET Classics: A Research Agenda. *Public Administration Review* 75(1): 25-35.
- Swianiewicz, Paweł., and Julita Łukomska, [Polish]. Spowolnienie gospodarcze a sytuacja finansowa samorządów terytorialnych”, *Finanse Komunalne*, 5/2010:
- Schwarting, Gunnar. 2006. *Kommunales Kreditwesen. Haushaltsrechtliche Grundlagen – Schulden-management - öffentlich-private Partnerschaften*”, Erich Schmidt Verlag, Berlin.
- Ter-Minassian, Teresa (ed.). 1997. *Fiscal Federalism in Theory and Practice*, IMF Report, Washington D.C.
- United Cities and Local Governments. 2010. *Local Government Finance: The Challenge of the 21st Century*. Second Global Report on Decentralization and Local Democracy.
- Wildavsky, A. 1961. The political implications of budget reform, *Public Administration Review*, 21(4): 183-90.





