REGIONAL DIFFERENTIATION OF REVENUES COLLECTED BY LOCAL GOVERNMENTS OF LITHUANIA

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Abstract. The article focuses on the issue of municipal funding from revenues collected by local governments and the state budget of Lithuania. In addition, it offers an evaluation of the Lithuanian practice in this field, discusses used methodological approaches and overviews practical experience of other countries as well as the relevant theory. Furthermore, it considers theoretical issues of local tax and tax distribution between levels of local government. Finally, it gives general principles of tax distribution and administration. The results of this investigation point to fundamental problems, relating the misbalance in funding of local governments with regional differentiation. The growth in disparities of municipal revenues demands a better redistribution of income, which includes an increasing amount of grants. However, the current system used for funding of local governments limits possible solutions that could address these problems. It should be considered that in 2009–2013, the lowest amount of municipal income per resident was identified in Vilnius County; whereas the highest amount was found in Utena (2009), Alytus (2010–2012) and Šiauliai (2013) counties.

Keywords: local government revenue, general grant, regional differentiation.

JEL Classification: H2, H6, H7.

1. Introduction

One clear trend in the development of the state government is to develop the independency of municipalities and expand their functions. This gives rise to additional difficulties in the field of funding. The problem is particularly complicated, because the economic potential of municipalities is highly different, which determines unequal opportunities to receive income and provide services to the public. These relevant problems can be addressed with the help of a universal method called *the interbudgetary redistribution of funds* which is known and, probably, broadly applied in many countries. This function of the method is also discussed in the *European Charter of Local*

Self-Government. It aims to allocate additional revenues required by municipalities to implement the assigned functions (conferred obligations).

Scientific studies show that issues of local budget formation are becoming an important financial and economic research object, which is reflected in papers of the following authors: Wenli (2011), Shoup (2004), Alm, Buschman, Sjoquist (2014), Cal, Garrey, Renner, Clyde (1987), Whitney (2013), Bartle, Kriz, Morozov (2011), Zhang (2013), Haug, Nerre (2005). Lithuanian scientists also deal with matters of local self-government, among whom are Davulis, Peleckis, Slavinskaitė (2013), Astrauskas, Striškaitė (2003), Baltuškienė (2004), Astrauskas (2011), Bivainis (2005), Naraškevičiūtė (2008) and others.

This research aims to reveal theoretical and practical aspects pertaining to revenue formation in Lithuanian municipalities considering regional differentiation.

The following objectives were formulated for the research:
1. To overview literature of Lithuanian and foreign authors on revenue formation in Lithuanian municipalities.
2. To investigate the change in revenues collected by local governments by regions in the period 2009–2013.
3. To analyse the amount of the state budget allocated to municipalities.

The following methods were used to conduct the research: the analysis of legislation and documents, comparative and logical analysis, calculation of arithmetic mean, induction, generalisation, analysis of statistical data, applying the calculations of variation width (R), variation coefficient (VK) and variation mean (V).

2. Survey on theoretical sources of revenue collection by local governments

The Law on the Methodology of Determination of Municipal Budgetary Revenues establishes the municipal budget as well as determines three local revenue sources: tax revenue, non-tax revenue, and grants from the state budget (Fig. 1). Revenues are allocated to municipalities in accordance with the Law on the Budget Structure.

The first two kinds of income may be called as own income, while the last one – grants – are state designated funds for municipalities to deliver their functions. The unutilised balance of the latter is to be returned to the state budget at the end of a year (Davulis 2009).
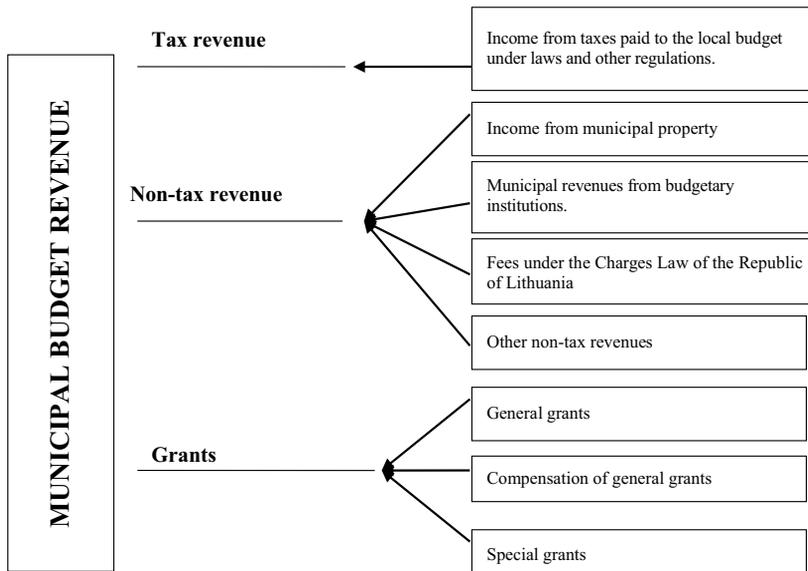
Fig. 1. Sources of municipal budget revenues of the Republic of Lithuania
(Source: prepared by the authors, on the basis of Lietuvos Respublikos savivaldybių… 2013).

The basics of interbudgetary relationships are discussed in publications by Tiebout (1956), Musgrave (1959) and Oates (1972). Investigation of theoretical and applied work and practices has lead Oates (1999) to three most important objectives associated with reallocation of funds:

1. to compensate for external effects arising from the fact, that a part of administrative territorial units receive some benefits from the activity of other administrative territorial units;
2. to equalise budget revenues of the lower tier;
3. to eliminate difficulties caused by disadvantages of the tax system to sustain a harmonious development of administrative territorial units.

According to their nature, reasons behind the first and second objective are impartial, while the third objective is based on partial reasons.

The budget system of Lithuania has two tiers, namely, the *state budget* and *municipal budget*. The Law on the Budget Structure of the Republic of Lithuania (Lietuvos Respublikos biudžeto… 2004) describes state and municipal budgets in the following manner:

− *state budget* – the plan of state budget revenue and assignations, approved for the budget year by the Seimas of the Republic of Lithuania.
− *municipal budget* – the plan of municipal budget revenue and assignations, approved for the budget year by the municipal council.

Compared to three-tier budget systems that are particular to large countries (e.g. Australia, USA, Canada, Russia, Germany, etc.), the he two-tier budget system leads to a relatively simpler reallocation of revenues between budgets (Butkevičius, Bivainis 2009). In Lithuania, the state budget revenue is allocated to municipal budgets for the following purposes:

1. to equalize disparities between the actual and planned tax revenue;
2. to reduce disparities in expenditure structure;
3. to carry out functions designated by the state to municipalities;
4. to organise education of children, youth and adults;
5. to implement programmes approved by the Seimas and Government; and
6. to compensate the changes in municipal budget revenue and expenditure, which arise because of decisions taken by the Seimas and the Government.

Currently, the main legislation, governing the redistribution of revenues between budgets are the Law on the Budget Structure of the Republic of Lithuania and the Law on the Methodology of Determination of Municipal Budgetary Revenues.

According to the Law on the Methodology of Determination of Municipal Budgetary Revenues, *general grants* from the state budget are allocated for the following purposes (Table 1):

− to equalise disparities between actual and planned revenues from personal income tax paid by municipal residents, provided the prognosis shows the lack of funds into the state budget;
− to equalise the disparities in municipal expenditure structures, resulting from objective factors which are independent of municipal activity, provided the prognosis shows the lack of funds into the state budget.

The special purpose grants for municipal budgets are allocated:

− according to the established method for calculation of funds required for the implementation of functions assigned by the state to municipalities;
− according to the established method for calculation of funds required for the implementation of the independent municipal function, i.e. to organise general education for children, youth and adults;
− to carry out the programmes approved by the Seimas and the Government.

General grant compensations (GGC) are allocated to municipal budgets for compensation of changes in revenue and expenditure in relation to decisions, made by the Seimas or the Government.

The amount of grant for a municipality is approved by the Law of the Republic of Lithuania on the Approval of Financial Indicators of the State Budget and Municipal Budgets.

Table 1. The aim and criteria of state budget appropriations allocated to municipalities (Source: prepared by the authors with reference to Law on the Methodology of Determination of Municipal Budgetary Revenues)

Aim of the grant	Criteria for supporting the municipalities	Formula
To equalise disparities between the actual and planned revenues from personal income tax paid by municipal residents	Supporting municipalities with a lower actual tax revenue per capita for the last month compared to the actual average tax revenue of all municipalities.	$L_{1i} = G_i \cdot h \cdot (x_f - x_{if}) - (BD_{1i}/12)$, 1) a part of funds allocated to the municipality L_{1i} in order to equalise disparities between the actual and planned tax income; 2) population of the municipality G_i; 3) x_f – actual average revenue per capita collected from tax in all municipalities for the last month; 4) actual revenue per capita collected from tax in the municipality x_{if}; 5) a part of general grant, allocated from the state budget to the municipality BD_{1i}, in order to equalise disparities between the actual and planned tax income; 6) h – 0.9 – equalisation coefficient, which determines the amount of funds allocated for each municipality in order to equalise disparities between the actual and planned tax income.
To equalise the disparities in municipal expenditure structures	Allocated to a municipality considering the weight of certain demographic, social and other indicators that impact on objective changes in the revenue structure of the municipal budget.	$L_{2i} = L_2 \cdot \sum_n K_n \cdot E_{ni}$ 1) a part of funds, allocated to the municipality L_{2i}, in order to equalise disparities in expenditure structure; 2) K_n – coefficient, denoting the influence of demographic, social or other `n` indicator on the structure of expenditures of all municipalities $(\sum_n K_n = 1)$; 3) a part of demographic, social or other `n` indicator, belonging to municipality E_{ni}, calculated in accordance with the formula $E_{ni} = R_{ni} / \sum_i R_{ni}$, here is the meaning of `n` indicator of municipality R_{ni}. When counting E_{ni}, R_{ni} is taken only of those municipalities, of which a part of tax income, which is approved in the appendix of this Law is of 100 percent.

3. Analysis of Lithuanian local government revenues by regions in 2009–2013

This chapter is devoted to the analysis of local government revenues by regions in the period 2009–2013. The income is going to be calculated per capita in order to see differences in allocation of grants and collection of taxes by region.

In the period 2009–2012, the average income per capita increased in all munici-palities except for Vilnius City Municipality (here, the income fluctuated by rising and declining each year); however, the year 2012 marked the start of declining income in most municipalities (except for Šiauliai and Vilnius City municipalities). The financial crisis and economic slowdown of 2009 resulted in the lowest income per one resident of all ten municipalities (Table 2).

Table 2. Income per capita in counties in 2009–2012 (LTL thousand)
(Source: prepared by the authors with reference to calculations and data from Statistics Lithuania)

Year County	2009	2010	2011	2012	2013
Alytus	2.158	2.283	2.482	2.585	2.528
Kaunas	1.918	2.114	2.221	2.328	2.259
Klaipėda	2.085	2.142	2.384	2.448	2.470
Marijampolė	2.048	2.081	2.328	2.351	2.302
Panevėžys	1.975	2.113	2.297	2.334	2.330
Šiauliai	2.125	2.245	2.429	2.549	2.546
Tauragė	2.172	2.230	2.391	2.488	2.479
Telšiai	2.111	2.261	2.406	2.468	2.380
Utena	2.235	2.265	2.397	2.500	2.445
Vilnius	1.856	1.851	2.018	1.969	2.004
Average (V)	**2.068**	**2.159**	**2.335**	**2.402**	**2.374**
Variation width (R)	**0.379**	**0.432**	**0.464**	**0.616**	**0.542**
Variation coefficient (VC)	**5.78**	**6.08**	**5.71**	**7.33**	**6.82**

During the analysed period (2009–2013), the income of Vilnius City Municipality per capita was the lowest and barely reached LTL 2000 (this amount was reached in 2011 and 2013), while Alytus County had one of the highest incomes and has already exceeded LTL 2500 in 2012. This could have happened because compared with other municipalities, the part of personal income tax (PIT) transferred to the budget of Vilnius City Municipality was significantly lower and amounted to 42% until 2014 and 48% since 2014, while the majority of municipalities received 100% (Table 3). In addition, some impact could be explained by regional differences in involvement of residents in the labour market.

Table 3. Allocation of income tax by municipalities in 2014 (LTL thousand)
(Source: prepared by the authors with reference to Lietuvos Respublikos 2014 metų… 2013)

Name of municipality	The amount of personal income tax in municipality	The part of personal income tax	Allocation of income tax	
			to the state budget	to the municipal budget
Vilnius	1 074 184	48	558 576	515 608
Kaunas	409 560	94	24 574	384 986
Klaipėda	202 744	86	28 384	174 360
All	**1 686 488**		**611 534**	**1 074 954**

In the period 2009–2013, the highest income increase per capita was noted in 2011 (the average of 8%). It was observed in the counties of Marijampolė (10.87%) and Klaipėda (11.30%). During the analysed period, the calculated coefficient varied from 5.71 to 7.33%; however, it did not exceed 10%. Therefore, it can be stated that statistically, there is little variation.

A similar situation may be observed when analysing the distribution of income tax per capita according to regions. According to Table 4, the lowest amount of income tax is allocated to Panevėžys and Šiauliai counties (respectively, LTL 869 and LTL 793 per capita). However, after increasing the part of collected income tax in Šiauliai and Panevėžys municipalities up to 100 per cent, the worst place, since 2011, goes to Vilnius.

According to Table 3, Vilnius County receives the lowest part of income tax amounting to as little as 48 per cent, whereas the majority of municipalities get 100 per cent (except for Kaunas with 94 per cent and Klaipėda with 86 per cent). However, from 2015, the methodology for allocation of income tax to municipalities will be amended. According to the new methodology, municipalities will no longer receive a particular share of income tax, but a percentage corresponding to this tax. According to calculations of the Minister of Finance, the new methodology should provide municipalities with approx. LTL 150–170 million of additional revenue next year. This method remained in effect until 2011 (for 10 years) and later was adjusted because of the crisis.

Table 4. Income tax per capita by county in 2009–1013 (LTL thousand)
(Source: prepared by the authors with reference to calculations and data from Statistics Lithuania)

Years County	2009	2010	2011	2012	2013
Alytus	0.997	0.927	0.776	0.833	0.847
Kaunas	0.943	1.002	0.850	0.920	0.912
Klaipėda	1.068	1.072	0.830	0.896	0.914
Marijampolė	0.916	0.818	0.743	0.796	0.806
Panevėžys	0.869	0.853	0.792	0.853	0.847
Šiauliai	0.992	0.943	0.802	0.863	0.866
Tauragė	0.907	0.793	0.791	0.834	0.825
Telšiai	0.931	0.869	0.711	0.785	0.780
Utena	1.051	0.899	0.839	0.882	0.894
Vilnius	0.930	0.865	0.666	0.700	0.730
Average (V)	**0.960**	**0.904**	**0.780**	**0.836**	**0.842**
Variation width (R)	**0.199**	**0.279**	**0.184**	**0.220**	**0.184**
Variation coefficient (VC)	**6.711**	**9.397**	**7.509**	**7.630**	**7.018**

The amount of collected income tax depends on the tendency of tax income to change. In terms of the total revenue, this tax amounts to more than 30% of revenue in a region; consequently, it has a significant role in the formation of municipal budgets.

According to Figure 2, Lithuanian municipal revenue mainly consists of tax income and grants from the state budget.
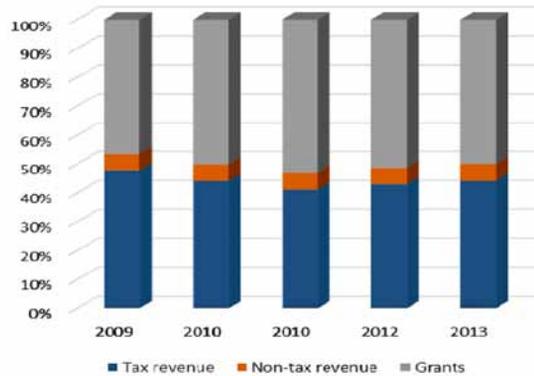
Fig. 2. Dynamics of Lithuanian municipal revenue in 2009–2013
(Source: prepared by the authors, with reference to calculations and data from Statistics Lithuania)

During the analysed period, grants amounted to more than 50% of the total revenue and in 2009, they reached nearly 60%; whereas tax and non-tax revenues did not reach 40% of the total revenue. In 2013, the largest share of grants in municipal budgets were observed in counties of Tauragė and Alytus (approx. 58%); while the smallest share belonged to Klaipėda, Vilnius and Kaunas counties (40–45%).

According to Figure 3, the portion of grants in municipal revenues was at a slight decline since 2010; correspondingly, tax and non-tax revenues increased. This demonstrates that economic growth results in greater revenues from taxes; consequently, less grants are required from the state.
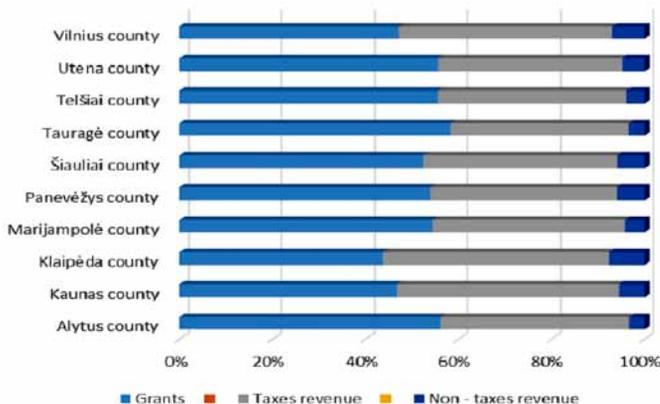
Fig. 3. Revenue structure of Lithuanian municipalities by county in 2013
(Source: prepared by the authors, with reference to calculations and data from Statistics Lithuania)

However, there continues a tendency that almost a half of the revenue is received on the grant basis. According to Davulis (2009), Civinskas and Tolvaišis (2006), the higher is the level of state grants in the revenue structure, the less independent is a municipality.

During 2009–2013, Vilnius County received the lowest amount of grants per capita from LTL 819 to LTL 1029. The highest amount was in Alytus and Tauragė counties and varied from LTL 1164 to LTL 1487 per capita (Table 5).

According to the calculated variation width, the biggest difference between received grants per capita was in 2012 and reached LTL 511. In addition, the variation coefficient amounts to more than 10%, which shows disparities in the allocation of grants for regions. In 2009, regional disparities of allocated grants per capita were the lowest (approx. 11.33%) and in 2010 – the highest (14.60%).

Table 5. Grants per capita by county in 2009–2013 (LTL thousand) (Source: prepared by the authors, with reference to calculations and data from Statistics Lithuania)

Years County	2009	2010	2011	2012	2013
Alytus	1.044	1.272	1.450	1.487	1.421
Kaunas	0.872	0.998	1.090	1.100	1.058
Klaipėda	0.856	0.904	1.104	1.097	1.083
Marijampolė	1.036	1.172	1.335	1.299	1.252
Panevėžys	1.007	1.162	1.317	1.291	1.254
Šiauliai	1.020	1.187	1.338	1.352	1.335
Tauragė	1.164	1.329	1.449	1.470	1.446
Telšiai	1.102	1.295	1.420	1.417	1.325
Utena	1.066	1.249	1.379	1.421	1.363
Vilnius	0.819	0.862	1.028	0.976	0.948
Average (V)	**0.999**	**1.143**	**1.291**	**1.291**	**1.248**
Variation width (R)	**0.345**	**0.467**	**0.422**	**0.511**	**0.498**
Variation coefficient (VC)	**11.329**	**14.459**	**12.214**	**13.654**	**13.330**

The highest tax income per capita in 2009–2013 was observed in Klaipėda County. It varied from LTL 1068 to LTL 1199 per capita (Table 6). Estimation of tax income per capita according to the calculated variation width (from LTL 199 to LTL 299) and variation coefficient (from 6.7 to 9.4%) demonstrates that statistically, regional differentiation is lower than according to the grants allocated per capita. Consequently, the variation width did not exceed LTL 290 and the variation coefficient did not exceed 9%; whereas the allocation of grants for regions according to the number of residents exceeded LTL 500 and the variation coefficient was more than 10%. This could have been influenced by a different number of residents and companies in counties, size of municipalities in the territory, amount of wages and other factors that have a direct or indirect impact on tax income. The smallest regional differentiation was in 2009, when the variation width reached only LTL 199 per capita (VC – 6.7%). The biggest differentiation was in 2012, when the variation width reached nearly LTL 300 per capita (VC – 8.9%).

The part of non-tax income is quite minor in the total revenue: during the years 2009–2013, it did not reach 10% of the total revenue. According to Figure 3, the major part of non-tax revenue was observed in Klaipėda County in 2013, which may be due to fees paid by the State Enterprise Klaipeda State Seaport Authority.

Table 6. Tax income per capita by county in 2009–2013 (LTL thousand)
(Source: prepared by the authors, with reference to calculations and data
from Statistics Lithuania)

Years County	2009	2010	2011	2012	2013
Alytus	0.997	0.927	0.934	1.007	1.025
Kaunas	0.943	1.002	1.011	1.084	1.076
Klaipėda	1.068	1.072	1.083	1.167	1.199
Marijampolė	0.916	0.818	0.878	0.944	0.955
Panevėžys	0.869	0.853	0.871	0.938	0.936
Šiauliai	0.992	0.943	0.952	1.055	1.060
Tauragė	0.907	0.793	0.842	0.934	0.950
Telšiai	0.931	0.869	0.889	0.949	0.965
Utena	1.051	0.899	0.895	0.965	0.966
Vilnius	0.930	0.865	0.851	0.868	0.918
Average (V)	**0.960**	**0.904**	**0.921**	**0.991**	**1.005**
Variation width (R)	**0.199**	**0.279**	**0.241**	**0.299**	**0.281**
Variation coefficient (VC)	**6.711**	**9.397**	**8.308**	**8.877**	**8.602**

Table 7. Non-tax income per capita by county in 2009–2013 LTL thousand)
(Source: prepared by the authors, with reference to calculations and data
from Statistics Lithuania)

Years County	2009	2010	2011	2012	2013
Alytus	0.123	0.089	0.096	0.091	0.082
Kaunas	0.109	0.121	0.120	0.144	0.125
Klaipėda	0.173	0.179	0.197	0.184	0.187
Marijampolė	0.102	0.099	0.116	0.108	0.095
Panevėžys	0.105	0.105	0.109	0.104	0.139
Šiauliai	0.121	0.124	0.140	0.141	0.150
Tauragė	0.109	0.117	0.100	0.084	0.083
Telšiai	0.085	0.106	0.097	0.102	0.090
Utena	0.126	0.124	0.123	0.114	0.116
Vilnius	0.110	0.129	0.139	0.125	0.138
Average (V)	**0.116**	**0.119**	**0.124**	**0.120**	**0.121**
Variation width (R)	**0.088**	**0.090**	**0.101**	**0.100**	**0.104**
Variation coefficient (VK)	**19.861**	**20.518**	**24.265**	**24.915**	**28.271**

Statistically, the variation of non-tax revenue per capita in 2009–2013 is large enough (20–30 proc.). From the point of view of statistics, non-tax revenue per capita is not homogeneous and a differentiation between counties exists, which may be the result of different payment amounts determined by separate municipalities, or the rates applicable to this type of income.

In 2009–2013, the highest non-tax income per capita belonged to Klaipėda County and ranged from LTL 173 to LTL 197, whereas the lowest non-tax income belonged to Telšiai (2009), Alytus (2010–2011) and Tauragė (2012–2013) counties. Klaipėda and Vilnius counties collect higher non-tax revenues as they are centres of attraction for tourists: resort towns of Klaipėda, Palanga and Neringa, the port and the capital city of Vilnius.

4. Conclusions

Lithuanian budget has two tiers. It enables municipalities to dispose of their budget: they can independently use revenues allocated by the state and acquire some financial resources to ensure the fulfilment of assigned tasks. However, it should be noted that the municipal financial management is very complicated and governed by various laws that restrict the autonomy of local governments.

It was found that the growth of municipal revenue disparities demands a better redistribution of income, which includes an increasing amount of grants. However, the current funding system applicable to local government does not promote the search for a solution to these problems.

The analysis demonstrated that in 2009–2013, the lowest amount of municipal income belonged to a resident of Vilnius County, whereas the highest amount belong to a resident of Utena (2009), Alytus (2010–2012) and Šiauliai (2013) counties.

The research revealed that the collection of income tax depends on trends of personal income tax changes. According to the percentage of personal income tax in the total income, this tax is responsible for more than 30 per cent of the total income, which shows its significance in the formation of local government budgets.

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