

ECONOMIC CRISIS AND LOCAL GOVERNMENTS BUDGET IN ESTONIA

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ABSTRACT

The system of local governments financing, which is used in Estonia is based on personal income tax and supports paid by the state. A system of that kind creates enormous inequality between the local governments. The continuing decrease of income taxes and the increase of tax-free minimum arises the role of state supports. Central government reduced essentially the part of income taxes assigned for local governments and supports in 2007–2010. That's why the municipalities met a difficult economic situation. The greatest costs for municipalities is education. Government has taken a course to abolishing rural schools. As the analyses demonstrate the schools are enormous source of incomes for municipalities. Therefore the abolishment of schools would made the financial situation of municipalities worse even more. A special method wasn't created for the analysis. The classical economic means – tables, indexes and marginal analyses were used.

KEYWORDS: *local government, income tax, economic supports*

JEL CODE: H610.

Introduction

The aim of this paper isn't the analyses of the essence of local governments, their additional functions or the division of their functions between state government and local governments. The essence of the local government and its functions in a concrete state are determined by the constitution of a state. In this field different states have got different practices. There is a different amount of local government's level in Europe: one (in Finland), two (Sweden, Denmark) and even three (Italy). We originate from the present situation of Estonia. There are 226 local governments in Estonia with its 1.3 million people. It's obvious that there isn't any reason for a two-level (or moreover, three-level) local government system in small Estonia. The question lies, how the functions are divided between the central power and the local governments and how these small local governments can manage with their tasks. That's why the additional functions of local municipalities have got an essentially smaller amount than in most EU member states. For example, the ratio of employees between the central level, regional level and local level is 23.9:11.9:56.7, respectively in Denmark and the ratio of state and local governments are 22:78 in Finland. So, the structure of central government is almost the same in two-level and three-level local government systems – 23.9 and 22, respectively. Since also the GDP per person in Estonia is 2–3 times lower (according to the method used to calculate) then in most of these countries, it is clear that the local governments play a slightly smaller role in Estonia. In Estonia the local governments are not responsible for health care, employment, law enforcement and rescue services. Regardless to the fact that the proportion of the local government's function has slightly increased in the last few years, their role in education and social care is limited.

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If we observe the financing of local governments, then we originate from the division of functions between the central government and local governments *de facto* and from the situation, wherein the local governments can solve their problems. The problem is especially actual in connection with the economic crisis of 2007–2010 and its influence on the financing of local governments.

With an end-to-end budget the local governments are looking for a way to cut expenses. In almost all of the local government the biggest expense is education: schools, pre-school facilities and also extra-curricular facilities such as sport schools, Bobby clubs etc. It has initiated an understanding that school is a significant financial burden to the local government's budget. Let us set a hypothesis – school brings into the local government's budget at least as much as it takes. Regarding pre-school facilities the picture isn't as clear – these do not exist in all of the local governments (especially in the smaller ones) and the level of expenses varies significantly. Also, since the statistics for pre-school facilities is incomplete, despite the relatively large analogy of the situation we will not examine them.

In scientific literature (but also in media etc) this issue has not been studied according to our data. A special methodics wasn't created for the analysis. The classical economic means – tables, indexes and marginal analyses – were used. The analysis is based on data from years 2004–2010 as the information from 2011, time as the paper was written, was published only partially.

In the interest of the clarity of the analysis the first step is to observe the financing system for local governments of Estonia. The proportion of individual income tax and equalisation fund (those financial channels that depend on school) in the local governments total income will be shown in it. We will observe the local government expenses to schools to prove the hypothesis. Sums added to the local governments budgets due to the existence of schools will be analysed more closely. In the last case it is also important to find ways to evaluate indirect, mediated gains.

1. The financing local governments in Estonia and Europe

There are 226 local governments in Estonia with its 1.3 million people. The number of the citizens is between 92 in Ruhnu parish (it was just 68 persons a few years ago) up to almost 400.000 in Tallinn. It's obvious that there isn't any reason for a two-level local government system in Estonia. The question lies, how the functions are divided between the central power and the local governments and how these small local governments can manage with their tasks. The concentration of the power into Tallinn (together with the problems of the financing of the local governments) is the reason why the role of the local governments is considerably moderate than it's used to in Europe. The economical importance of the local governments is relatively moderate in Estonia, it forms about 8–9 % of the GDP (Ulst, 2002: 465) and 6 % for some of them (Riigieelarve, 2004: 23–49). The same index was 23 % in Finland, 25 % in Sweden and even 33% in Denmark in 1995 (Raju, 2010: 348). As GDP per person in Estonia is 2–3 times lower (it depends on the method of the estimation) than in these states, so it's obvious that the role of the local governments in Estonia is much more moderate. The local governments of Estonia don't vouch for health, employment, security, and lifesaving service. Despite of some improvement of their role in recent years their role is limited in education and social welfare services. But there's a lack of financial aids even for such a limited amount of functions; the system of their financing is unsatisfactory. Different systems of financing of local governments are used in Europe. Conditionally, these systems could be divided into two groups. According to the first system the local government gets its revenues from the entrepreneurship of the region. The plus of the system is the interest it makes to the development of the entrepreneurship – the more developed the entrepreneurship is, the bigger are the revenues of the local government.

Table 1. The structure of the incomes of the local budgets in Estonia

	2007		2008		2009		2010	
	Million euros	%	Million euros	%	Million euros	%	Million euros	%
Incomes	1288	100	1454	100	1292	100	1270	100
Taxes	676	52,5	794	54,6	692	53,6	650	51,2
Personal income tax inside it	630	48,9	734	50,5	634	49,1	585	46,1
Land tax	35	2,7	48	3,3	48	3,7	51	4,0
Other taxes	11	0,9	12	0,8	10	0,8	14	1,1
Equalization fond	92	7,1	92	6,3	70	5,4	70	5,5
Block grant from state budget	208	16,1	240	16,5	221	17,1	230	18,1
Other state grants	94	7,3	100	6,9	45	3,5	52	4,1
Transfer from foundations	24	1,9	26	1,8	69	5,3	69	5,4
Economic activity	151	11,7	153	10,5	151	11,7	153	12,0
Others	43	3,4	49	3,3	44	3,4	46	3,6

Source: The author's calculations based on the Ministry of finance homepage. <http://www.fin.ee/>

According to the second system the local governments get the main part of their incomes from the taxes based on properties (tax for a real estate, tax for a car, tax for a bicycle, tax for the land, and tax for the heritage) and from several compensations for the use of the natural resources (as the payment for the usage for fishing, water, local building materials etc), it makes no difference whether they are called taxes, fees or somehow else. In Estonia the proportion of these taxes and payments is currently 3.5 % from the total revenue of the local governments (Table 1 and 2).

In Estonia the sources for local governments' incomes according to the Local Government Financial Management Act are: 1) tax revenues; 2) revenues from sale of goods and services; 3) received support; 4) others. This group forms the main income source for local governments and it includes personal income tax, land tax and the fee for using natural resources. The distribution has changed repeatedly since these taxes were set. Local taxes were set by the local governments in accordance to the law. In this case the inspector of taxes is the local government, but with a contract the duties can be transferred to the revenue office's county division. The local governments have been allowed to set taxes since 1996. The sources of income for Estonia's local governments are versatile and there about 100 units of income source positions can be found in reports. Generally the local governments' incomes are divided as shown in table 1. As it is visible, the main source of income is personal income tax, which is a divided tax. That means that the sums go partly to the state and partly to the local governments according to the persons registered place of residence. From the 2007 by the system of financing of local governments of Estonia first of all the local governments get a part of the income tax from the persons of their territory, which is equal to 11.9 % of the gross income. Unfortunately it was repeatedly cut during the economic crisis: in 2009 it was 11.3 %, in 2010 11.39 %, in 2011 11 % and in 2012 11.4 %. This cutting of the rate of allocations enhanced the sums going to the local governments (Table 1). The share of local taxes in local governments' budgets is modest, advertisement tax and road and street closure tax are more widely used; also, parking charge is remarkable in bigger cities (Table 2).

The local governments get a significant part of their incomes from the state budget in addition to personal income tax. These sums are either single-purposed (table 1 block grand) or for local governments with a lower base of income as an equalisation fund (Table 1 equalisation fund).

Table 2. Local taxes in Estonia 2010

Local taxes	Animal tax	Sale tax	Advertisement tax	Road and street closure tax	Parking charge	Boat tax
Local governments using taxes	1	3	47	19	8	1
Income from local taxes (thousand euros)	3	5544	37 019	19 072	79 727	68

Source: Ministry of Finance. <http://www.fn.ee/?id=11191>

In addition to the income tax the local governments get an essential part of their revenues of the budget as transactions from the state budget. These sums are dedicated or support funds for the local governments of lower revenue basis.

2. Problems in personal income tax base financing

The financing system of the local governments, which basis on the personal income tax, contains unavoidably several dissensions in Estonian conditions. The amount of the functions of the local governments in Estonia is smaller than it is considered to be right in Europe; and that's in spite of their certain extension. The extension of the functions of the local governments unavoidably enlarges their expenses.

First of all, the difference between the smallest and the greatest salary is continuously growing, so the difference inside the income tax per person differentiates among the local government units. In 2004 the difference was 501 euro (the largest in Viimsi – 567euro and the smallest at Peipsiääre – 66 euro) or 8.6 times. In 2007 it was 9.5 times or 953 euro (The biggest in Viimsi – 1064 euro per person and the smallest at Peipsiääre – 111 euro per person. In 1999 it was 4.3 times (by the calculations of the author according to the data from Estonian Towns Union). The difference would be even more if a greater part of the personal income would be left to the local county governments.

Another problem, which exasperates the usage of the income tax as the main source of revenue, is the rise of the untaxed minimum. Today the untaxed minimum is so little in Estonia that it can't carry on its social functions. Also, the amount of the present untaxed minimum of Estonia isn't in accordance even with the minimal conceptions, which have been developed in European Union. Therefore, Estonia will unavoidably meet the enlargement of the untaxed minimum, which will decrease the main component of the local governments' revenue basis – personal income tax. The first possibility to relieve the total inequality is to differentiate the proportion of the income tax, which will be left to the local governments (the interest rate). These local governments, which have got a higher average salary on their territories, get a smaller per cent from the personal income tax on the basis of the system and the other way round: these local governments, which have got a lower average salary on their territories, a bigger per cent. A system of this kind equalizes (in some amount) the level of the revenues of the local governments.

The differentiation of the per cent of the separation of the personal income tax in the budgets of the local governments makes problems first of all to these local governments, who are proceeding from one group to another. A situation may arise where the incoming income tax of the local governments is decreasing together with the rise of the salary. Therefore the delimitation of the groups makes problems. And certainly, 10–20 greatest local governments of the biggest group (among them is Tallinn, too) are against a system of that kind.

The differentiation of the part, which goes to the local governments from the income tax doesn't solve the problems, which come from the rise of the untaxed minimum. (Once more it has to be stressed that the rise of the untaxed minimum will be unavoidable in the next years.)

3. The cost basis and revenue basis financing

The financing of the local governments has been tried to be approached as according to cost basis, so according to income basis. Both the positions have got their supporters. But we haven't found considerable works of economical theory, which would analyse the problem according to Eastern European states.

The budgets of the local governments were compiled according to cost basis in Estonia until 1995 i.e. they were paid from the expected costs of a concrete local government. It was difficult to bring them out, so the estimation of the level of the costs of the next year was practically done through a principle – the level of the costs of the last year plus some growth percentage. If a local government succeeded in “uprising” the percentage of the costs in one year, then a comfortable life was ensured for many years.

In order to liquidate a situation of that kind, which is characteristic to socialistic controlled economy and would stimulate economic mismanagement, it was decided to transit to the financing of the local governments according to the revenue basis i.e. it's the variance, which was in use with some modifications until 2003 and which critics has been given before. The system was frequently tried to be improved in 1996–2002 (the planned own revenue per person of the last period was replaced with the real revenue, the method of the estimation of the real amount of population was improved etc). These improvements have led to the demolition of the system according to the revenue basis. The example of the latter ones are the living allowances, which are given to the local governments according to the cost basis; the money for the municipal schools etc. All together they can be compared with the money divided according to revenue basis (Kohalike, 2004). So, *de facto* we've reached a situation wherein the local governments are financed as according to cost basis, so according to income basis.

A question, if a financing according to cost basis or according to revenue basis has been arisen in the last years.

As it has been said, the local governments are as about the cashiers while paying living allowances etc as they get money from the state and pay it according to the laws. The problem of a budget – cost basis or revenue basis – doesn't matter that part of the budget of the local governments – this part of revenues can be only according to the cost basis. The problem if according to cost basis or according to income basis has been actual in the estimation and the assurance of the own revenue per person; that's been especially actual while finding out and dividing the amount of the equalization fund. The principle of dividing the fund was dominantly according to the revenue basis in 1996–2002. The less the own revenues per person of a local government (personal income tax, land tax, operating payment for the natural resources) were – the more money from the equalization fund was given. If the inland revenues arose, the sums from a concrete relief fund for the local government lessened at once. That decreased the motivation of the local governments to increase their own revenues per person. Another insufficiency of the formula used in 1996–2002 to divide the relief fund was its total separation from the costs. The essential level of costs per person could be and is different among the local governments. It depends on the aged and sexual structure, the dispersion of the settlements (so, the length of the communications – streets, roads, technological settings etc) and other factors. The formula of the relief fund ignored these factors.

The division of the equalization fund is based on a new formula since 2003. It's trying to integrate the cost basis (which was used before 1995) and the revenue basis (1996–2002) approaches. The support T allocated from the budget equalisation fund (here in after equalisation fund) to a local government budget shall be calculated as follows: (Ministry of Finance <http://www.fin/ee/index.prp?id>)

$$T = (AK - AT) \cdot k,$$

Where:

$$AK = \sum_{n=1}^6 C_n * P_n$$

$$AT = (TM_{2009} + RM_{2009}) * 0,5 + (TM_{2008} + RM_{2008}) * 0,3 + (TM_{2007} + RM_{2007}) * 0,2 + \frac{MM}{ARVEST}$$

T	–	size of the budget equalisation fund in the specific local government;
AK	–	calculated average operating expenses of the specific local government;
AT	–	calculated revenue of the specific local government;
k	–	coefficient of level of support;
C_n	–	the number of children (0–6 years of age), number of school-age children (7–18 years of age), size of the working population (19–64 years of age) and the number of elderly persons (more than 65 years of age) according to the data in the population register, the calculated length of local roads and streets (roads with solid surface by coefficient 0.26, city streets by coefficient 0.74; roads with non-solid surface by coefficient 0.047) in kilometres according to the national register of roads and the weighted average number of disabled persons who are taken care of and to whom caregiver services are provided according to the caregiver’s allowance report last three years at the specific local government;
P_n	–	calculated average operating expenses in euro per child, school-age child, person of working age, elderly person, disabled person who is taken care of and person to whom caregiver services are provided and per kilometre of the calculated length of local road and city street in local governments;
$\sum_{n=1}^6 C_n * P_n$	–	the total amount of the number of children, school-aged children, persons of working-age, elderly persons, the weighted average number of disabled persons who are taken care of and to whom caregiver services are provided in the specific local government multiplied by the calculated length of local roads and city streets in kilometres adjusted by coefficients and the calculated average operating expenses of local governments in euro calculated per unit in respect of each corresponding indicator;
TM	–	receipt of personal income tax at the specific local government in 3 last years, respectively, multiplied by 11.4% and divided by the calculated income tax rate for the local government in force in the relevant year
$\frac{MM}{ARVEST}$	–	calculated land tax in the specific local government;
RM	–	receipt of the extraction tax for the mining right and the fee for the special use of water in the specific local government in last 3 years

The formula doesn’t satisfy all the problems arising from weak revenue basis of many local governments, that’s in spite of its complicatedness, which also makes its usage more difficult. Its usage offers to delay the cardinal reforms in the creation of the local governments’ revenue basis in 3–4 years, but it doesn’t solve the existing problems. That’s why the new searches for financing the local governments are especially important.

4. Economic crisis as a reducer of the budgets of local governments

The economic crisis, which captured Europe in 2008–2010 and hasn’t still ended in some states, influenced the economic situation of local governments, particularly their budgets. The governments of majority states proceeded from the necessity to support the local governments as the governing institutions, which are the nearest to people in a situation of that kind (EN-EERP, 2010). As Estonian state budget essentially decreased and the role of local governments in the total expenses of public sector decreased, so it’s obvious that the budgets of local governments decreased much more than the budget of central government. Also, it took place under the conditions wherein the role of local governments in the expenses of public sector is the lowest in Estonia.

The decrease of the incomes of the budgets of the local governments is especially obvious if the structure of the decrease of tax funds from table 1 would be observed. The individual income tax decreased the most in 2008–2009; it forms the biggest part of tax incomes of local governments. To top it all, the central government decreased the part of individual income tax for the local governments from 11.93 % gross profit to 11.4 %, it means by 4.45 %. The state saved its budget by increasing taxes (Table 4).

Table 3. Estonian state budget and local budgets 2007–2010

	2007		2008		2009		2010	
	Million euros	Growth rate	Million euros	Growth rate	Million euros	Growth rate	Million euros	Growth rate
State budget	5250	+12,1	5537	+5,4	5477	+1.1	5610	+2,4
Local budgets	1288	+8,9	1454	+11.9	1292	-11,2	1270	-1,8

Source: the author's calculations based on the Ministry of Finance homepage. <http://www.fin.ee/>.

The excises and turnover tax were increased, but not the individual income tax; it means, the taxes coming in the budget of central government not for the local governments, were increased. Also, the sums paid from the budget to support the local governments were essentially decreased by the state. The sums paid for local governments from the equalization fund were 92 mil euro in 2007, 92 mil euro in 2008, 70 mil euro in 2009, 70 mil euro in 2010 and 71 mil euro in 2011 (Table 1).

Table 4. Rates of the main taxes in Estonia in 2008–2010 (per cent)

Taxes	2008	2009	2010
Social benefits tax	33	33	33
Income tax	21	21	21
VAT	18	19 ¹	20
Percentage of excise tax in retail sales	12.9	17	17.5
Unemployment insurance tax (employer)	0.30	0.88 ¹	1.25
Unemployment insurance tax (employee)	0.60	1.73 ¹	2.5

¹measured average of the year's real tax rates

Source: Homepages Ministry of Finance. <http://www.fin.ee/index.php?id=233>

It's generally considered in Europe that the economic crisis has finished in spite of still existing problems. The same has been repeatedly declared by Estonian government. But there aren't any changes in planning incomings among state taxes in 2011. The amount of incomes in local budgets from individuals has been left on the level of 2009, it's 11.4 %. The excises for tobacco products and the excise for electricity will arise among from the taxes but these won't influence the budgets of local governments directly. Also, the sums coming in from the equation fund won't increase. Consequently, the level of the budgets of local governments will still remain lower than it was before the crisis for a long period.

As Estonian state budget was "saved" by support from EC and the rise of tax rates (Table 4), the local governments' budgets continued to decrease.

5. School's direct impact to local governments' budget

School is a place, where the financing is not based on incomes but on costs. Schools economic expenses and the salaries of the teaching staff are paid from the state budget according to the amount of students. State budget is used to finance bigger investments as well – renovating schools or building new schools. As the local government here so-called the cashier the minimal possible expenses from the local governments to school is 0. The local governments' have got back in the last few years 11.4 % of total income from salaries. Estonian local governments altogether spent 553 million euros on schools (12 million for primary schools, 144 million for secondary schools, 386 million on high-schools and 11 million on schools for adults) in 2010, which was almost 30 % of the total budget of local governments (Kohalike, 2011).

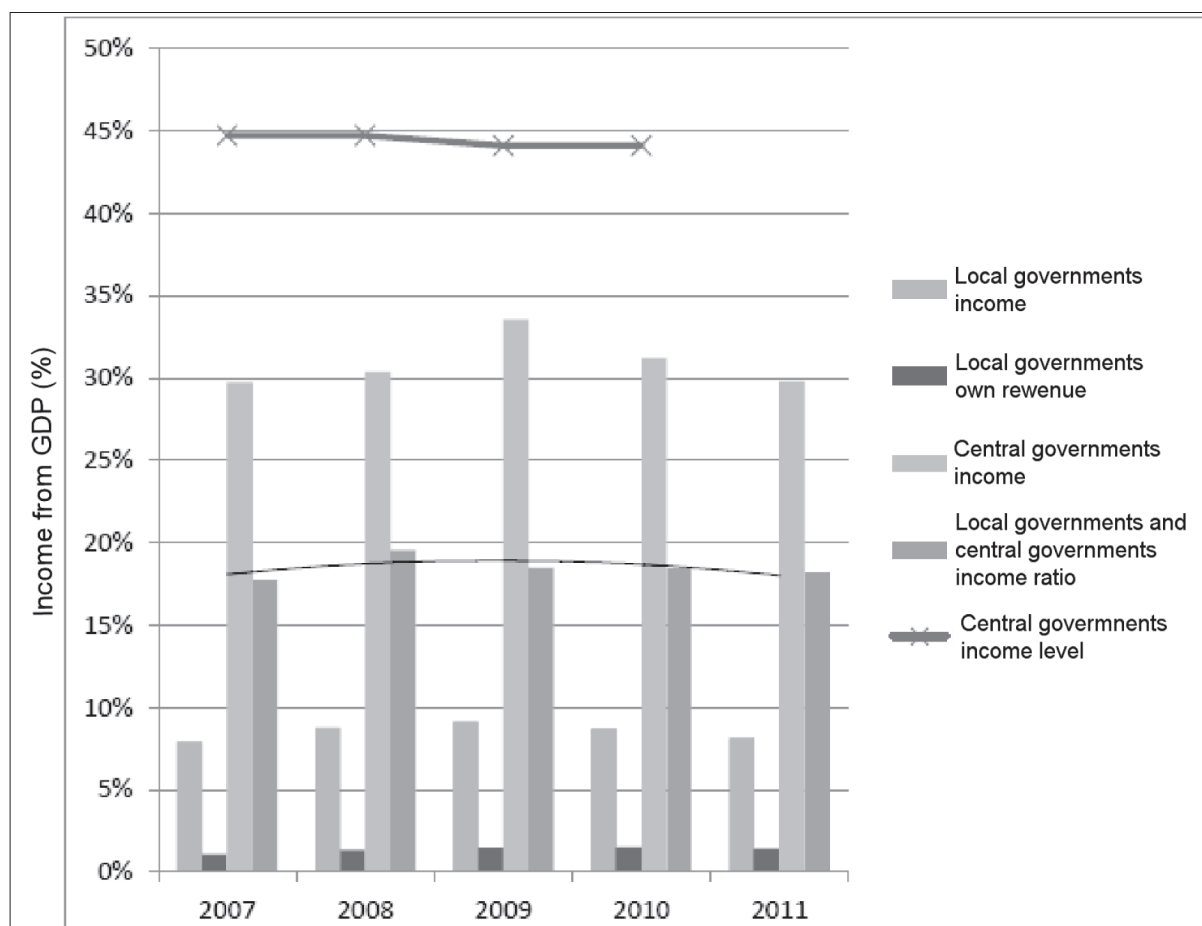


Figure 1. Local governments and central government income in Estonia 2007–2011

Source: Ministry of Finance. <http://www.fin.ee>

Initially, it seems that the local government is just the cashier regarding this money – the money comes from state budget and goes out as well. Although the local governments do not have anything to say in spending this money there is still a direct financial interest from the local governments – the income tax paid from this money goes to the local governments according to the formula below. Therefore it can be said that thanks to the schools the local governments directly received of the salaries in those expenses multiplied by 11.4 %.

There is no official statistics to show how much of the finances spent for schools consist of salaries (at least according to our data). However, it is possible to find it in few local governments based on their input data. The city of Tartu spent 14.1 million euros on schools, out of which 10.7 million euro or 79.7 % (authors calculations based on input data) on salaries in 2010. Using the same method for calculation this percentage in the town Viljandi was 80 % and in Ülenurme parish 80.1 %. As the deviations were very small then by the usage of 80 % as average and by considering the possible mistakes it is possible to say that the salaries from school added approximately $553 \times 0,8 \times 0.114 = 50.4$ million euros (according to the author input data to the local governments' budgets in 2010). In reality this sum is bigger; it's based on ceteris paribus principle, the additional income in the form of salaries for employees of school catering, heating and other facilities providing service for schools. This issue will be studied more closely below.

The situation is more complicated with pre-school childcare and sport and hobby schools (extracurricular activities). Their funds do not come from the state budget; the finances spent on the personal income tax go to the budget of local government's. On extracurricular activities in 2010 the local governments spent 49.1 million euro and on pre-school childcare 108.6 million euro (Kohalike, 2010). The fact, which makes calculations difficult, is that accountancy for these is different from comprehensive schools; that's why it is even

more complicated to bring out the expenses on salaries. In Tartu it was approximately 71–72 % in 2010; the accountancy did not make it possible to study this data with enough accuracy (Tartu has its own agenda done extra analyses which helped here in Viljandi and Ülenurme). Based on the data from Tartu it can be said that return income from these sums was in 2006 at least $(49.1+108.6) \times 0.7 \times 0.114 = 12.6$ million euros. Extra incomes from the salaries for people working for companies providing services for schools have not been considered here either. The extra indirect incomes from income taxes from the investment sums from the state budget are extremely important. However, in these local governments (especially in the smaller ones), wherein new schools have been built with state funds these sums have been highly significant in some years. It's regardless to the fact that these smaller local governments had to use the services of builders from abroad.

There can be one conclusion. Due to several reasons mentioned here in the next few years the local governments funding system, which is based not on personal income tax has to be cardinally reformed (Raju, 2007). Therefore, the budgets of local governments need extra income sources at least to the extent of 50–60 million euros to compensate the loss of return incomes during this reform.

However, the schools effect on the budget of local governments is only positive. Regardless to the size of the coefficients the formula includes an inconsistency. This inconsistency exists with the salaries of teachers as well. The bigger they are, the smaller is the sum from the compensation fund. Therefore, the income from the salaries of teachers and other staff related to schools decreases the sums coming from the compensation fund (AK in the formula above). At the same time it is all AT in the formula considered as the variable. This means that finally everything depends on the variable, which is more significant in finding Tn. The variable AT for the last year's income tax is calculated with the coefficient of 0.5 (earlier coefficients were respectively 0.3 and 0.2), it is clear that the level of earnings of constant rises, the difference AK–AT (which is the most important factor for calculating the compensation fund's size) are due to school (salaries of people related to school) positive. Hence the conclusion – school brings to the local government more incomes then expenses from the equalization fund. It can be applied to those local governments that get extra finances from the equalization. As for those local governments that do not get finances from equalization fund, every euro from income taxes is simply an addition to the budget. (NB! Approximately 40 % of the population in these local governments!) The rest have to be taken into account if the income from personal income taxes increases the sums from equalization fund would decrease according to the formulas coefficient k, which has so far been 0.9. This value for the coefficient means that from every euro from income taxes the return fund's sums will be decreased by $0.9 \times 0.5 = 0.45$ euros in the following year, the year after that by $0.3 \times 0.9 = 0.27$ euros and in the third year by $0.2 \times 0.9 = 0.18$ euro. So, the statement, that the local governments should not increase their own revenues because it automatically decreases the sums from revenue fund by 90 %, isn't corrects.

In conclusion I would like to stress that all the calculations above have been made without considering indirect incomes (income tax from institutions providing services for schools) and without income tax from single payments from the state budget (particularly for building and renovating schools). These revenues will be studied below.

6. School as the indirect increasers of the revenues of local governments

Most of the people related to schools get their salary from the state and a smaller proportion from the budgets of local governments. Teachers and headmasters get their salary from the state; the rest of the school staff – economic staff (cleaners, workmen, heaters etc), extracurricular activities guidance, speech therapist, psychologist etc. get their salary from the local government. Schools pay for contract work (mostly repairing works in the summer period in addition to those mentioned above). The school functions as a mediator for trading (this is where most of the money is spent) and for catering staff the school is being heated and supplied with water; also, school uses transport (mostly buses), school is a considerable mediator that offers work for the bank etc. From all these and other not mentioned payments the personal income tax goes again to the budget of local government's.

The amount of the income tax from these indirect payments that support the budget of local government is difficult to calculate. However, let us try to bring out this sum at least approximately.

It is useful to divide these payments into two factors in order to find the growth of local governments budgets based on these indirect incomes. One can be named second level complementary incomes. This includes the income tax from services provided directly for schools, such as payments for bus companies for using the bus for a field trip. Others are extremely indirect incomes such as income taxes from a cashier who was paid in relation to the fact that a teacher paid for merchandise to the cashier with their salary. It is possible to find the first one with somewhat specific results and the second one probably not.

As pointed out previously the local governments spent on education in 2010 was 553 million euros. Approximately 80 % of it went to salaries. The schools paid 19 million euros for several services. In addition the local governments paid 5 million euros for several assistance services, 7 million euros for students' buses and 10 million euros for other expenses (not the schools staff). So, the local governments paid 41 million euros for these services (author calculations, Rahandusministeeriumi, 2010). To add 17 million euros from pre-school education and 8 million euros for sports and hobby schools we can see that the local governments paid 63 million euros related to education. Based on how much the salaries form GDP, which was 47.7 % in 2010 the payments as salaries from the sum were 30 million euros from which the income tax to the local governments (11.4 %) was 7.9 million euros. Certainly, this calculation is approximate but considering that the bills the schools pay divide among different fields – transport, heating, school supplies, catering etc. – it is possible to assume that the average proportion of salaries is not very different from Estonian average.

It is much more difficult to bring out how much the sales increased for banks, retail trade etc. in relation to the schools. In any case the personal income tax to the local governments could not have been smaller then from direct bills. Therefore, it can be said that the actual return income to the budgets of local governments due to schools is at least 60 million euros bigger. New funding system means must be found to compensate that amount as well during the transition to.

Schools earn some money themselves. Incomes from educational institutions' economic activities were 44 million euros in 2010 (Kohalike, 2010). It increased local government's incomes, too (minus the expenses made to earn it).

7. The influence of children on the coefficients of equalization fund

As stated above, those local governments, whose income is below 90 % of the average of state, average income gets extra payments from the equalization fund. The amount of school age children is included to the formula above to calculate equalization fund. So, the number of children effect the size of equalization fund, is included. Certainly, the formula doesn't state whether these children really attend school in the territory where they are registered or if they attend a school at all; but simplifying, as we did above, we can consider them as schoolchildren with only a minor mistake in the calculations (at least calculating the average because if they do not attend a school in their home parish with a few small exceptions on the territory of another local government).

There is a multiplication $C_n \cdot P_n$, where C_n is the amount of people in the age group on the territory of local government (in our calculations schoolchildren are of age 7–18) and P_n is calculated by the average operating expenses in euros per child, school-age child, person of working age, elderly person, disabled person who are taken care of and persons to whom caregiver services are provided per kilometre of the calculated length of local road and city street in local governments, in the formula. Local government's income is subtracted from the sum of all the age groups' multiplications. The difference is the base for finding the equalization fund's sum for the local government.

Since a large amount of the sum of child related expenses comes from the state budget, there is a double effect here. The sum includes almost 100 % school related expenses – the other expenses, such as playgrounds etc, play a marginal role in the budgets of local governments. The coefficient P_n in the age group 0–6 is 13.133, in 7–8 it is 10.443, in the age group 19–64 it is 4.325 and in 65+ it is 6.285. It means that every child

gives twice the money the adult does. The specific sum depends on the difference between expenses and incomes in the local government's budget. Considering the differences in the coefficients in 0–6, 7–18, 19–64 and 65+ age groups it becomes clear that due to the children almost 40% of the compensation fund is divided (Don't forget that part of these funds are divided by the road network on the local government's territory.

8. School's incomes are bigger than costs

Let us try to compare the sums going to the budgets of local government's budgets (and coming from them) that are related to schools. We will exclude the finances, wherein local governments are merely the cashier such as teacher salaries, which come directly from the state budget and for which the local governments can't chip in.

As mentioned above, the expenses of local governments for schools that were not covered from the state budget in 2010 were 373 million euros. The existence of schools directly increased the budget of local governments from extra income taxes by 313 million euros. At least 640 million euros of income tax is added to this from salaries of several service providers. The local governments are on the positive side with this calculation alone as about managing schools. This means that expenses made to schools are smaller than the (extra) income received due to schools.

The sums that the local governments receive regarding single significant payments from the state budget to build and renovate schools are not considered here (the income tax from the salaries of the builders goes to the budget of local governments). Also, the money schools receive for several services is actually an extra income for the local governments (in 2010 44 million euros) (Rahandusministeerium...). With this sum the expenses made to provide the services would certainly have to be deducted, but the current system for reporting can not differentiate it.

Those local governments that do not get payments from compensation fund 1 can't longer be analysed. However, for those, which get payments from compensation fund 1, the extra incomes from the fund are linked to the income tax from the salaries paid through schools, and the amount of school-aged children. The income tax decreases payments from the fund $0.5k$ in the first year, $0.3k$ in the second and $0.2k$ in the third where k is a coefficient of 0.9. Therefore it is less than the common opinion of 90 %.

Conclusions

1. The possibilities of the local government's financing system of Estonia, which is based on personal income taxes, are running down. Unavoidably accompanying great differences in the levels of income tax and consequently the local government's revenues and the unavoidable rise of the untaxed minimum demand a cardinal and rapid reform of the present system.
2. Leaving a bigger part from the income tax to local governments can't solve the problem of the weakness of their revenue basis and groundlessly great difference. Even if the part will be risen up to 100 %, the weakness of most local governments' revenue basis would not be solved. At the same time the difference between the local government revenue levels rises essentially (that will intensify even more together with the essential rise of the untaxed minimum).
3. The congruence of the cost basis and the revenue basis of the financing of local governments has been arisen in the last years. There aren't any considerable works of economic theory, which would analyse the problem according to the situation of Eastern European states.
4. The economic crisis of 2008–2010 was directly expressed in the financial situation of local governments. Majority of European states considered it necessary to support financially the local governments as the governing institutions, which are the closest ones to people. The relative importance of local governments in total expenditures of public sector increased as a result of it in many states in these years.
5. The income tax, which is got from the wages paid by school, is a source of move funds from the state budget to the local governments' budgets due to it. The extra sum of money from income taxes thanks

- to the payments made in all children's institutions in 2010 was even with incomplete calculations more than 650 million euros.
6. The amount of money to the local governments thanks to the existence of schools in 2010 was at least 40 million euros. In addition to the abovementioned facts all the local municipalities, which doesn't get any compensation from compensatory fund, get additional profit due to schools. The additional income forms a remarkable percentage of the decrease of compensatory fund's 1 sums for the local municipalities getting profit from compensatory fund. School has got a dual influence on the sums of compensatory fund 1. As the formula of the sums of compensatory fund income has coefficients, which put the incoming sums into dependence from the age division of the population, so the local municipalities, who'll have more children, get more assignments due to greater coefficient in age group 0–6 years. The wages paid in schools and pre-schools increase the profit.
 7. In addition local governments receive extra revenues thanks to schools otherwise they receive compensation from the equalisation fund. In those local governments which receive payments from the equalisation fund this extra revenue from income taxes decreases the amount from the equalisation fund. The school has two effects on the payments from the equalisation fund. There are coefficients in the formula for calculating the equalisation fund that link the sums with age groups, then thanks to the coefficients in age groups (0–6 13,133; 7–18 10,44; 19–64 4,33; 65+ 6,28) those local governments with more children receive more revenue. That's way the salaries in schools and children's institutions increases their own incomes. From the equalisation fund (in 2010 90 million euros) those local governments get more revenue if their own income per person is smaller. But the revenue for local governments didn't decrease with the coefficient 0.9 as it is widely thought but significantly less.
 8. Incomes from educational institutions provided services added 45 million euro to the local government's budgets. With the current accounting system it is not possible to bring out which part belongs to school and which from the educational institutions.
 9. Costs of pre-school institutions are dominantly covered from local governments' budgets (they are not compensated directly from the state budget). That's why the costs of pre-school children's institutions are bigger to the local governments then the revenue regardless to parents' participation. The current accounting system is practically impossible for bringing out those costs.

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EKONOMINĖ KRIZĖ IR SAVIVALDYBIŲ BIUDŽETAS ESTIJOJE

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Santrauka

Estijoje taikoma savivaldybių finansavimo sistema paremta pajamų mokesčiu ir centrinės valdžios teikiama parama. Tai lemia didelę nelygybę tarp savivaldybių. Besitęsiantis pajamų mokesčio mažėjimas ir neapmokestinamo minimumo kilimas didina centrinės valdžios paramos įtaką. Centrinė valdžia 2007–2010 metais gerokai sumažino tiek pajamų mokesčio dalį, skirtą savivaldybėms, tiek tiesioginę paramą. Dėl to savivaldybės pateko į sunkią ekonominę situaciją. Didžiausios išmokos savivaldybėms skiriamos švietimui, vyriausybė ėmėsi mažinti mokyklų skaičių kaimo vietovėse. Analizė parodė, kad mokyklos yra didelis savivaldybių pajamų šaltinis, todėl tolesnis jų skaičiaus mažinimas tik dar labiau pablogintų savivaldybių finansinę padėtį.

PAGRINDINIAI ŽODŽIAI: *savivaldybės, pajamų mokestis, ekonominė parama.*

JEL KODAS: H610.