

Szent István University  
Gödöllő  
Faculty of Economic and Social Sciences

Doctorate School of Economic Sciences and Organisation



**FUNDING ASPECTS AND CONDITIONS OF EDUCATION AT LOCAL  
GOVERNMENTS**

Thesis

**Csiszárík – Kocsir Ágnes**  
**Senior Assistant Professor**

**Consultant: Dr. habil Borszéki Éva**  
**Senior Lecturer**

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Name of doctorate school: Szent István University  
Faculty of Economic and Social Sciences

Special field of the doctorate school: Economic Sciences and Organisation

Head of doctorate school: Dr. Szűcs István  
University Professor, Head of Department  
Szent István University, Gödöllő  
Faculty of Economic and Social Sciences  
Institute of Economic Analysis and Methods

Dissertation supervisor: Dr. habil Borszéki Éva  
University Lecturer  
Szent István University, Gödöllő  
Faculty of Economic and Social Sciences  
Institute of Finance and Accounting

.....  
Signature of director of the institute

.....  
Signature of dissertation supervisor

## 1. BACKGROUND AND OBJECTIVES

In Hungary the organisation, funding and possible changes of the public local governmental system (a local governmental system) has been a debated issue since the major changes in the political system. Local governments have been playing a very important strategic role in the national economy especially in elementary education, health care, local and regional development, moreover in the development of local and regional economies. These areas have often been criticised, especially at a domestic level, however, the quality of elementary education has been evaluated internationally as well. Earlier objectives and reforms have not been realised yet despite several research projects, action plans and programmes which have been elaborated and supported by calculations. The failure of reforms can be explained in several ways, eg. a global approach regarding the state budget was missing from the plans, therefore it was not clear from what sources some missing income could be budgeted for. The “holes in the financing system” resulted in resistance of local leaders and stakeholders towards any kind of reforms, consequently the present day local governmental system was forged 20 years after the regime change, which can be criticised in many ways. As Attila Ágh puts it, it is a “container of conflicts”. This container has almost been filled when the new structure was implemented even at the beginning of the regime change, however, it is very saturated owing to the continuous delegations of tasks. These tasks mostly meant assignments which could not be centrally resolved, as they would have been objected to by the general public. Most of the tasks obligatorily conducted by local governments belong to this category. After all, the task has remained undone while local people resisted, the only change is that the local governments have to deal with the situations by any means instead of the local governments. The result of this weird situation is the deterioration of services, indebtedness and hopefulness, which can characterise the majority of approximately 3,200 local governments. The Hungarian local governmental system can be regarded as unique, since it is a kind of alloy of the Mediterranean and Scandinavian models and as such it empowers a wide range of local governmental authorities while the whole system is financially dependant on the state. In the course of years, the percentage of state financing has been decreased in both its real and nominal values (it has been proved by several essays and research projects), on the other hand, the missing percentage cannot be financed for by many settlements, as they do not have a relevant income from local taxpayers. Mainly small settlements are hit in the hardest way, where the situation is even more crucial due to the missing financial resources financed by the taxpayers and which can be used for managing unemployment, social benefits and daily operations –including the educational system.

Inappropriate management of local governmental duties has caused several problems. Continuous delegations of tasks leading to new laws and decrees have made the system completely unclear, while the local governmental law only refers to a few as obligatory. One of them is the provision of primary education. The main purpose of my research is to deal with the background, financial situation as well as priorities in the affecting factors of this task since there has been a growing demand for such services in even small settlements so that women can keep their jobs and go back to work when having children. I will not be dealing with secondary education in detail, firstly because it is not an obligatory task, secondly because of the high proportion of non-governmental service providers. At the same time it is important to note that because of the lack of the financial support of the county more and more local governments have to maintain secondary educational institutions in order to serve the needs of the public in a better way.

In my view primary education is a key strategic sector in every settlement and country. Without a solid foundation neither the secondary nor the tertiary education can function well. Apparently students have to be taught to write, read and count perfectly well at elementary schools, and not at secondary schools. Unfortunately, the results of various international and national surveys prove rather the opposite. Students are performing more and more unsatisfactorily, in many cases the lack of basic skills reach unprecedentedly low levels, which is further deteriorated by the inappropriate situation of teachers. To sound out all the reasons and factors in the background is a quite complicated and complex process, which I will partly be focusing on.

Due to the above-mentioned factors the financial crisis, which broke out in 2008 and has made a very

detrimental effect on the whole world, has caused a great number of problems for the local authorities, too. Owing to the decrease in state finance the majority of local governments had accumulated huge debts, which were used for both developments and their operations. Because of the rise in credit costs some local governments had faced crucial financial problems. In their cases the only resolution for cost-cutting seemed to be either a decrease in the range of services or the drop in their standards. Usually the first step is that local governments give up the development of the infrastructure in their settlements, then they even cease providing for their institutions. Some of the small settlements do not have their own general practitioners any longer, let alone their kindergartens or schools, which logically further increases the problems in a village or little town by their not being able to prevent their youth leaving for a better living while they would be the potential taxpayers in the future. During my university and PhD courses I have been focusing on the challenges that the local governments have been facing, which have been voiced by the local leaders in various studies, interviews as well as conferences.

All these have made it obvious for me that the whole almost 20 year old sector, just like a young person, is about to choose its career path. Out of all the mandatory tasks conducted by local governments I have selected education for my study because in my opinion this is the key factor that can help us catch up with the European Union and face the challenge of the global competition. Unfortunately, according to international surveys<sup>1</sup> Hungary is not doing very well recently. As I see it, it is too late to start the development of human resources at a workplace. Tertiary education should not be used for it either, but primary education, as without appropriate funding any kind of development may easily end with a fiasco. The primary actors in the reinforcement of elementary level education are undoubtedly the local authorities, since the foundation can only be made solid due to the tasks represented and conducted by them. In my dissertation I will be focusing on these ideas, while also dealing with the factors in local education policies, the local aspects of financing education as well as the recent problems in the management of education. See the figure below for the theoretical complexity of my research.

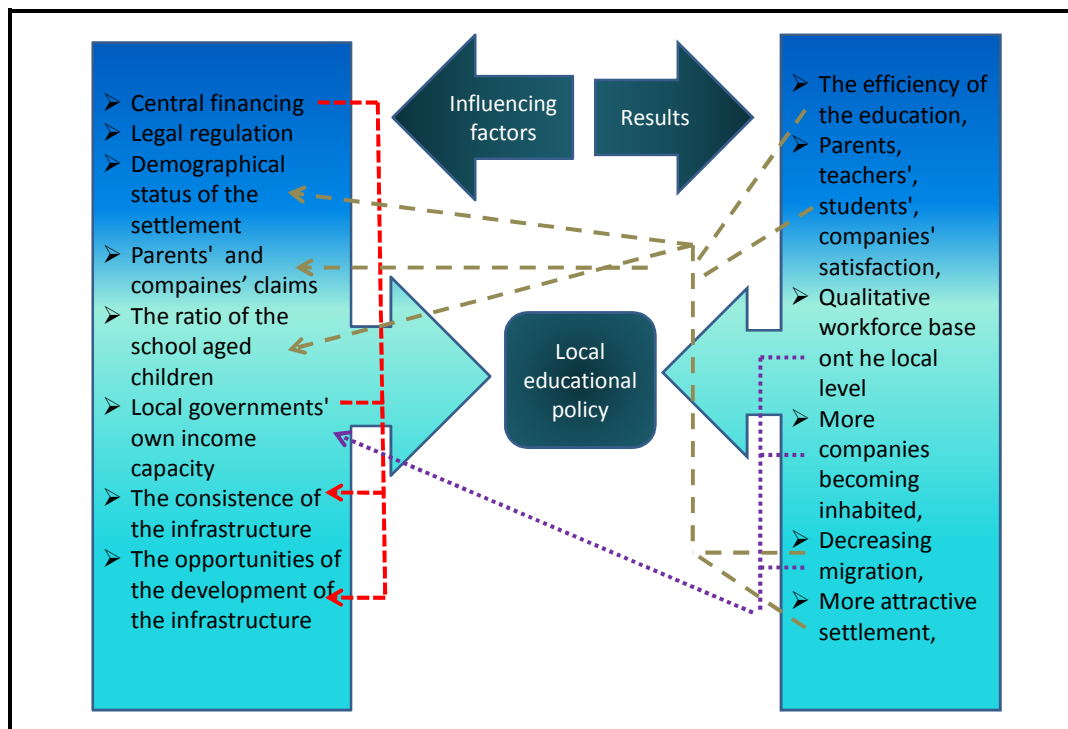


Figure 1.  
Theoretical complexity of research  
Source: by author

<sup>1</sup> Primarily based on PISA test results.

During my research in connection with the local educational system I carried out an analysis of educational services, local tax system and debt, infrastructural background and development as well as problems with the system based on the kind of settlement, number of inhabitants and children involved in education. I have set the following objectives of my research:

- O.1. Based on questionnaires, I will point out the priorities in deciding factors in local educational policies and its complexity as well as the factors falling into the same categories. Furthermore, I will deal with the problems of the central educational policy and Hungarian state education, furthermore with their evaluation by local authorities.
- O.2. I will examine the changes in the financial sources in education in relation to the type of settlement, the number of inhabitants, the ratio of kindergarten and school children. I will point out the complexity within educational financing and analyse the infrastructural background of the educational system, as well as the planned sources of development in the various segments.
- O.3. I will survey the potential and planned supply rationalising steps and their realisations in the local educational systems. I will also be dealing with the connections between supply rationalising and the characteristics of certain settlements.
- O.4. I will describe the taxation system of local governments as well as the connection between local taxes and local educational financing. I will explore the most typical uses of local taxes, the objectives and the internal system of the various uses of taxes.
- O.5. I will map out the indebtedness of local governments, as well as the composition of debts and its changes in the future, in connection with the characteristics of settlements. I will explore the typical features of the indebtedness of local governments in relation with each segment and will point out how they determine the characteristics of settlements.

Based on the objectives of my research I have formulated the following hypotheses:

- H.1. Local governments in villages and smaller settlements tend to use state funds to a greater extent in financing education, since they have limited resources and income. On the other hand, those local governments which run institutions with greater budget, can afford to spend more on individual educational tasks, therefore the increasing number of self-maintained institutions results in a decrease in state funding.
- H.2. The education financing structure of settlements is not affected by the number of kindergarten or primary school students in a settlement, but rather the number of population, which means a local tax base at the same time. Among domestic settlements such a segment can be identified which plays the role of a regional centre. It has a middle-size population (between 10,001 and 15,000 people), most of the institutions maintained in associative forms can be found there, after the small settlements it has the highest rate of state financing in primary education while in such a settlement spends relatively little from its own financial resources on local education.
- H.3. Due to their difficulties in funding, local governments intend to use external sources for infrastructural developments, while this intention is independent of both the situation of local authorities and the number of population.
- H.4. In the local governmental educational services short-term and mid-term planning is quite typical, which means that they are determined by the kindergarten as well as the primary school population at the expense of parental demands and opinions, as well as employment figures. The bigger and therefore more financially powerful local governments can validate parental opinions and demands in a more efficient way when it comes to organisational decisions. They can also contribute to teacher training and can make a greater contribution to financing education.
- H.5. According to local governments the reforms in primary education have not really improved the situation of funding, which can mainly be seen when it comes to the evaluation of public education and the proportion of expenses covered by normatives.

## 2. RESEARCH MATERIAL AND METHODOLOGY

The basis of my dissertation is the experience that I gathered as a recent graduate while I was working as an educational consultant for the local government in Dabas (a small town South-East of Budapest). During my work I had the opportunity to have an insight into education management, daily decision-making processes and funding difficulties of local governments. The theoretical background of my research was provided by my PhD training, and later when I conducted my research whose results I regularly published in periodicals and presented at conferences. This was mostly secondary research, while I did primary research chiefly in small villages because of the higher level of helpfulness of local authorities there. This research was the foundation, which was consolidated with qualitative data pooling and interviews. In the beginning I carried out a good number of deep interviews with several mayors, notaries, educational consultants and educational personal assistants. The information gathered during these interviews have helped me work out the methodology of quantitative information pooling, the compilation of the interview questions as well as the consolidation of my hypothesis. The interviews were basically rather informal talks, and as such they served a good chance for me to familiarise myself with the real challenges which local authorities face during their daily operations. I conducted interviews at the beginning of my research, before compiling the questionnaire and also in the closing phase after the evaluation of the results in order to justify the conclusions drawn.

The second part of my dissertation, which was the review of professional literature, was conducted with the methodology of systematic research, during which I studied both the basic and up-to-date literature, which helped me draw a picture of funding and primary education. Then I was dealing with classical economic literature focusing on the given sectors which form the theoretical frame of operations<sup>2</sup>. While processing the professional literature I was mostly concentrating on the economic background in order to provide a good enough theoretical grounding. After this I continued with the presentation of the results of my research. During my research my main objective was to create a sample based on a great number of questionnaires suitable for the characterisation of the sector, which may represent the situation of the local governmental sector regarded as basis.

My quantitative research was based on the nationwide survey which I carried out in the spring of 2009. I edited a pre-tested and standardised questionnaire and distributed it. Because of the diversification of the sample the questionnaire does not include any open questions, which the respondent can answer with their own words. Therefore, the questionnaire exclusively consists of closed questions, which means that the respondents' task is only to select the best answers already provided for them by the researcher, which makes it simpler to evaluate the answers. I used this questionnaire to analyse and present the local aspect of educational services, thus the "results", partly the results of the research reflect upon the opinions of the local authorities. In these views there are several subjective elements, due to which there may be some contradictions between the central and local educational policies and financing. While compiling the questionnaire I focused on the main topic of my dissertation and tried to prevent raising issues which would have discouraged or stopped the respondents to answer them, in addition, I also avoided those questions which could have been disadvantageous for the economic interests of the authorities.

The questions in the questionnaire have been divided into four main groups<sup>3</sup>. The fifth group of questions is added to the fourth one, and it intended to deal with the legal situation of local governments, as well as with the population-kindergarten/school children ratio. The first group of questions are about educational services. These questions focus on the institutions maintained by the local governments, the forms of support for other (non-local governmental) service providers, the variety of educational funds, the state of infrastructure, the possible funds for modernisation, the priorities of factors in education management, as well as on the future intention of the rationalisation of the range of services and how it will be executed. The second part deals with funding, primarily on local taxes. In this part the present and future local taxes as well as their uses are surveyed, in order to evaluate the relevance of funding education with local taxes. The third part also examines the funding of local governments, and within this topic it deals with the indebtedness which means an increasingly crucial problem these days. Here I concentrated on debts, their portfolio, as well as the local governments' intention of using external funds in the future and its timing. The fourth part of the

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<sup>2</sup> I was dealing with the theoretical and economic contexts of the sector in the part titled the „Review of Professional Literature”, while I was focusing on recent issues in the second part of the chapter.

<sup>3</sup> The questionnaire is included in dissertation in Appendix M.2.

questionnaire is basically a list of statements which refer to management and the operation of the educational system.

The respondents of the questionnaire were guaranteed complete anonymity in order to make sure their sincerity and willingness to answer the questions. The respondents were only asked to provide the following information about themselves: legal status, the number of population and the number of children attending kindergarten and primary school, as these are indispensable for the analysis. During the sampling of the research I applied the method of quota based conscious sampling, which means intended selection, however, the sample still reflects the division and representativity of the basic majority. The main characteristic of quota-based sampling is that the questioner has to maintain a quota based on 2-3 issues. In my case these two characteristics are the legal status of the settlement and the number of population. These two characteristics are apparently available in relation to basic majority. I did not find it necessary to include the third characteristic in the quotas, which is the proportion of children, since the number and ratio of kindergarten and primary school children cannot be precisely defined in the settlements. I regarded the local governments of 3150 settlements as basic majority, therefore the research is intended for 315 local governments. During planning I took the local governments' willingness to responding into account and I also those questionnaires which are faulty or cannot be evaluated. When deciding on the sample I wanted to provide a representativity based on legal status and the number of population. I did not plan to involve any municipalities or the local governments of districts, because these figures would have distorted the results due to the great number of their institutions. During the analysis I did not regard those settlements in the basic majority as relevant whose population does not reach 500 as such villages usually do not maintain schools, therefore the sample only contains local governments of settlements with more than 500 residents. The composition of the sample is shown in Table 1:

Population between	Settlements				Towns				Cities with country rights			
	Basic majority		Composition of sample		Basic majority		Composition of sample		Basic majority		Composition of sample	
	number	%	number	%	number	%	number	%	number	%	number	%
501-1000	680	37,14	69	35,38	-	-	-	-	-	-	-	-
1001-5000	1103	60,24	119	61,03	55	20,07	11	19,64	-	-	-	-
5001-10000	46	2,51	6	3,08	101	36,86	22	39,29	-	-	-	-
10000-150000	2	0,11	1	0,51	50	18,25	11	19,64	-	-	-	-
15000 above	-	-	-	-	68	24,82	12	21,43	23	100,00	5	100,00
Összesen	1831	100,00	195	100,00	274	100,00	56	100,00	23	100,00	5	100,00

Table 1.

The composition of sample and the basic majority  
Source: own research in 2009

I conducted the research in two phases, which preceded a phase which could be called zero phase. I would like to outline the process of research as follows:

- F0. Phase
  - a. In this phase I made interviews with the leaders of local governments and office clerks in order to formulate and finalise the main areas and objectives of my research.
  - b. I prepared the questionnaire based on the interviews and determined the four main groups of questions.
  - c. I sent the questionnaire to the Association of Hungarian Local Governments which contributed to my efforts by issuing a letter of recommendation.
  - d. I carried out probationary interviews in 15 local governments, whose experiences helped me to amend the questionnaire.
- F1. Phase
  - a. The finalised questionnaire was e-mailed to every local government (first round of mailing), being aware of the willingness of local governments of participating in such surveys. I used the data base of the Ministry of Local Governments for my mailing list. One part of the settlements of between fewer than 500 residents (approximately 100 local governments) replied to my e-mail within 3 days indicating that as they do not operate any educational institutions in their settlements, thus they could not respond to the questionnaires. After the first round of e-mails I received 98 questionnaires which were properly filled

and could be evaluated.

- b. During the second round of e-mails I selected those local governments which
  - had a population of over 500 people,
  - maintained educational institutions either by themselves or together with other settlements,
  - still had not filled the questionnaire.

I e-mailed the questionnaires personally to the notaries of the settlements. In this phase altogether 158 questionnaires were returned, thus I arrived at having 257 local governments to be included in my sample.

- F2. Phase
- a. I conducted pre-planned interviews with the leaders of settlements such as mayors and notaries, also with professionals taking part in education management, office managers and department heads, as well as financial managers in order to justify my results.
  - b. This was followed by the coding of questionnaires and the validation of data, during which I applied the following programs: SPSS (Statistical Package for Social Sciences) 14.0 and Microsoft Office Excel 2007.
  - c. The final phase of my research was the evaluation of the results, which is included in the chapter titled “Results”.

Within qualitative research and with the result in the phase closing the research during deep interviews I was looking for information that I was not asked for in the questionnaire. Since the questionnaire only had closed questions the respondents had no chance to share their personal opinions in connection with local educational service provision. The interviews took 1-2 hours and raised questions which contributed to a better understanding of local education management. During the research I asked for such information in the questionnaire which could quite obviously be given. The primary issue for me was to find out information which I could not get hold of during my primary research and which could be illustrated well with figures and tables. My further objective was to point out internal connections which are very dominant in educational service provision. During quantitative research, when analysing data was based on descriptive statistics, I calculated average, standard and relative standard deviation. Besides descriptive statistics I carried out the following statistical examinations: a cross-section analysis during sample analysis, factor analysis, variance analysis as well as Chi-square tests.



### 3. RESULTS

After graduating from university I continuously followed up the current situation of local governments, with special attention to education management and funding.

I also compared the chief indexes in domestic education with the international figures, while I reviewed the advantageous and disadvantageous features of local governmental systems of other countries in detail as well. In this chapter I am not dealing with these analyses or conclusions, but those results which I concluded in the spring of 2009 with the involvement of 256 local governments. I carried out the examinations in several dimensions with regards to the given questions depending on the legal status, population, kindergarten or schoolchildren. This chapter of my dissertation focuses on the results of this analysis.

In Hungary public education funding is provided through different channels. The funding channels can be divided into two main groups: the majority – in general – is provided by the state while a smaller proportion is made up by local governmental funds. State funding is approximately 40-70% (ÁSZ, 2008) and is mostly dependent on how much a local government is able to spend per child, that is how great are the incomes of a given settlement and how the service is provided (by own institution or association). I would like to detail this in the following part. During my research I asked the respondents to divide a 100% in relation to the funding of each educational institution among state funds, own funds (loans, issuing bonds, local taxes) and other funds.<sup>4</sup> I conducted a complex analysis of the connections among state funding, legal status, the population of settlements as well as the ratio of kindergarten and school children by using descriptive statistics, cross-section analysis and Chi-square trials.

	Infant's nursery		Kindergarten		Primary school		Training college		Vocational school		Grammar school	
	N = 46		N = 250		N = 234		N = 25		N = 26		N = 27	
	$\bar{X}$	$\sigma$	$\bar{X}$	$\sigma$	$\bar{X}$	$\sigma$	$\bar{X}$	$\sigma$	$\bar{X}$	$\sigma$	$\bar{X}$	$\sigma$
State funding	63,72	16,63	62,29	16,60	60,89	15,26	69,16	13,07	71,69	13,58	74,26	15,36
Own revenue – credit	2,30	7,88	2,28	8,51	2,35	8,26	1,80	4,97	1,73	4,89	1,11	3,20
Own revenue – bond	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Own revenue – local taxes	21,61	20,45	17,58	19,36	18,76	19,57	10,48	10,33	13,12	11,04	15,93	15,60
Other	12,37	16,58	17,60	18,89	17,88	18,88	18,56	17,54	13,46	15,25	8,59	11,30

Table 2.

Average and standard deviation of the sources in educational funding according to institutions<sup>5</sup>, N = 256

Source: own research, 2009 (measuring level: ratio scale)

Based on the table above a sharp borderline can be drawn between the two educational levels<sup>6</sup>. While in primary education (infant's nurseries, kindergartens and elementary schools) state funding always remains below 65%, in secondary education (vocational schools, secondary technical schools, grammar schools) state funding may occasionally exceed 70%. As it can clearly be seen from these data, local governments do not spend their income from bond issuing on educational funds at all, which is not surprising if it is taken into consideration that such incomes – due to their high amount – are rather used for developments. The difficulties in local governmental funding are fairly obvious, too, since on average 2.5% of educational expenses generated in primary education are covered by loans the local governments take out. There is a sharp dividing line, though, between primary and secondary education when it comes to loans, as 1,8% or even lower of the latter ones is funded by loans. The funding structure shows a much variable picture if its legal status, population and institutions are examined.<sup>7</sup>

The settlements in the samples in connection with educational funds can be divided mainly into three groups on the basis of the use and ratio of the funds. The above-mentioned groups are the following:

<sup>4</sup> Other sources mean various types of funding, donations as well as the incomes of the institutions.

<sup>5</sup> Only those respondents are included in the table which in fact run educational institutions. N = the number of those local governments where there are at least one of the given institutions.

<sup>6</sup> The structure of funding secondary schools can be seen in Attachment M.17.

<sup>7</sup> In the further points of the chapter my statements are based on those samples which run the institutions themselves or in association with other local authorities. Therefore a sample always refers to those who maintain the given institution.

- One group of settlements is made up by those local governments which are able to fund the missing financial resources in primary education using their own funds. These are the “more well-to-do” settlements, which can provide reasonable funds for each student.
- Although the second group of settlements would be able to contribute to the state funds, they do not do it despite their being in possession of the necessary fund for settling the expenses, consequently they claim a greater proportion of state funds.
- The third group of settlements might have an intention of contributing to the state funds, however, they are not in possession of the financial means due to their economic situation and potentials, which results in a higher rate of state funding. Consequently, this group contains settlements (primarily villages) with smaller population.

In addition to the above-mentioned it is not supposed to be ignored that there are different costs of running infant’s nurseries, kindergartens or primary schools. Basically this can be calculated in the ratio of children/teacher, children/class, or children/classroom and also children/school. These differences are obvious when we compare groups based on both their legal status or their regional characteristics.

### 3.1. Funding infant’s nursery school education and its connection with local governments

Kindergartens can boast with the highest funding rates of all the primary educational institutions. Only 14% of the settlements in the sample run their own infant’s nurseries, which is due to its financial burden as well as the changing demands. On the other hand there is supposed to be a rise in the number of infant’s nurseries owing to the shortening of GYED (a kind of maternity allowance) and the obligation for settlements with the population of 10,000 to provide nursery school education. However, local governments will not be able to fund it by relying only on their own resources, after all it is unavoidable to raise the funds needed for this purpose. It turned out during the interviews that the managers of the settlements would prefer to delegate the maintenance of these institutions to other service providers (civil organisations, natural persons, economic associations). Examining the funding structure<sup>8</sup> of infant’s nurseries<sup>9</sup> it can be concluded that the relative standard deviation of state funding has a strong volatility (26%) regarding<sup>10</sup> the filtered sample of governments running their own or joint infant’s nurseries, which can be explained with the difference of funding structures of settlements. The relative standard deviation of the next three funds can be even higher, which means extreme fluctuation.

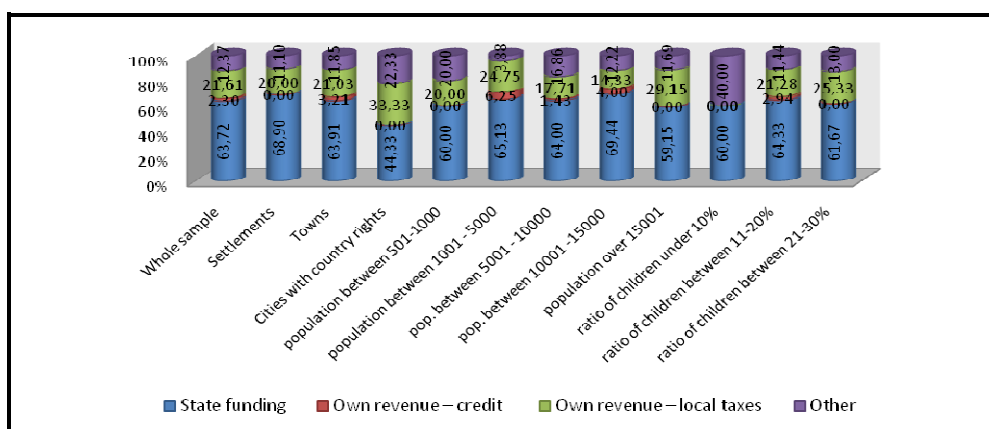


Figure 2.

Funding structure of infant’s nurseries according to their legal status, number of population and ratio of children  
Source: own research, 2009 (level of measurement: ratio scale)

<sup>8</sup> Funding structure may mean state, credit or local taxes or other funds.

<sup>9</sup> infant’s nurseries maintained by other institutions are not included in the sample, as local government could only provide occasional financial support for them and the local governments could not have access to state funds to provide the given service.

<sup>10</sup> State funds provided for kindergartens can vary between 20 and 100%.

Based on the above-mentioned it can be stated that kindergarten facilities use a wide range of funds. The groups based on the three characteristics are sharply distinguishable, there is not really much similarity between any groups. The structure and ratio of funds and the relative standard deviation of funds is a true reflection of the situation in local governments in Hungarian settlements, as they are variable and different from each other. Furthermore it can be stated that state funding is the only factor – even if to a little extent – which has some homogeneity based on certain changing elements. That is why I was examining the connections in state funding based on the above-mentioned characteristics of grouping. I applied cross-section analysis to show the connections, thus I arrived at Pearson's Chi-square test (p), as well as the value of corrected standardised residua. (AdjR).

	Chi-square value
state funding and the number of the population	p = 0,202
<i>state funding and the legal status of the settlement</i>	<i>p = 0,005</i>
state funding and the ratio of the school aged children	p = 0,644

Table 3.

The values of Pearson's Chi-square test regarding the state funding of infant's nurseries, the legal status of settlements, as well as the number of population and the ratio of children, N = 46

Source: own research, 2009 (measuring level: nominal scale)

As the values in the table above show the state funding of infant's nurseries can only be related to the legal status, there is not a statistically verifiable significant connection with the number of population and children, therefore regarding the value of these two factors, the hypothesis of independence can be accepted.

### 3.2. Funding structure of kindergartens and its connections

Kindergarten education means a priority in funding, as 98% of the responding local governments have at least one own or a joint institution. I examined the funding structure of kindergarten education – similarly to infant's nurseries – based on filtered samples. I only involved those responding local governments in my survey where there was at least one own or jointly operated kindergarten. After all the filtered sample consists of 98% of respondents which means 250 settlements. The high ratio proves the priority of kindergarten education. During the interview it was apparent that local governments tend to maintain their own kindergartens, so that the settlement can keep up their own kindergartens, even if it costs them a lot and influences the budget a great deal. The main reason is that the leaders of the settlements would like to avoid further burdening families, since it firstly means extra costs for families (eg. maintaining a car), on the other hand it is very inconvenient (have to rise early, travelling to and fro). State funding in kindergarten education is similar, however, it represents a smaller value than in infant's nurseries. A loan fund is unavoidable in this situation, however its proportion is ignorable, it amounts to only 2,3%. It is a further interesting fact that the average of the sample is that approximately the same percentage of local taxes and other incomes are used for complementation. We can see a similar situation at primary schools.

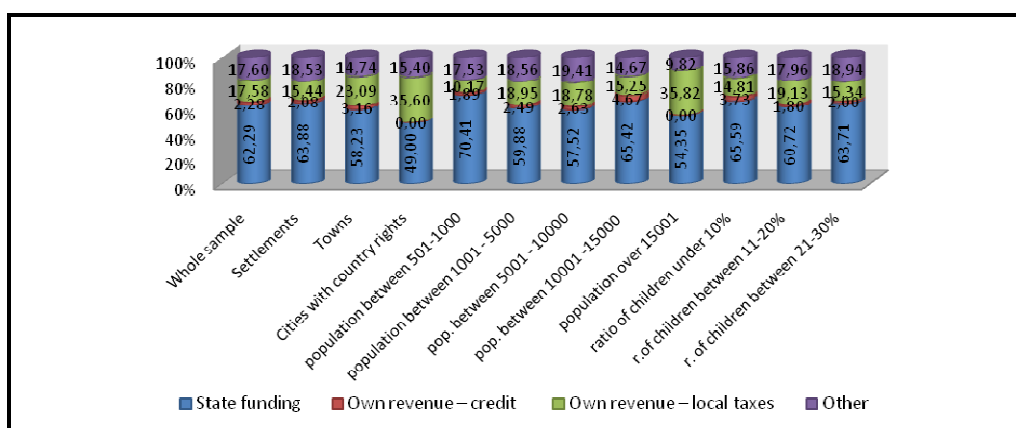


Table 3.

Funding structure of kindergartens according to their legal status, number of population and ratio of children

Source: own research, 2009 (measuring level: ratio scale)

The funding structure of kindergartens analysed according to three main factors the same conclusion can be drawn as about infant's nurseries. The differences in funding structures reflect the heterogeneity and variety of Hungarian local governmental systems. After reviewing the funding structures I compared the state funding of settlements with grouping characteristics, while I converted the previously applied ratio scale to a nominal one. I accepted or discarded the hypothesis of independence based on Pearson's Chi-square testing values.

	Chi-square value
<i>state funding and the number of the population</i>	<i>p = 0,037</i>
state funding and the legal status of the settlement	p = 0,179
<i>state funding and the ratio of the school aged children</i>	<i>p = 0,047</i>

Table 4.

The Pearson's Chi-square testing values in connection with kindergarten state funding, , the legal status of settlements, as well as the number of population and the ratio of children, N = 250

Source: own research, 2009 (measuring level: nominal scale)

The hypothesis of independence based on Pearson's Chi-square testing values can only be accepted in one case, which is legal status, when  $p = 0,179$ . With regards to the two other examined characteristics there is a significant connection between state funding and the number of population and children. In case of kindergarten education there is an obvious connection between the proportion of state funding and the population number of the settlement based on the Chi-square testing values since  $p = 0,037$ . The two segments with the highest population cannot be characterised because of the low number of samples, based on the corrected standardised residuum value, however, in the first three categories the internal connections are obvious.

### 3.3. The funding structure of primary schools and its connections

Primary school education similarly to kindergarten education is an area of key importance in the value system of local governments. However, in this case there is a higher percentage of those settlements which jointly provide the necessary funds for their primary schools. In addition, there is a greater variety of primary schools, since there is a higher proportion of elementary schools which are maintained by civil organisations, churches, local governments of the counties, as well as central organisations. I conducted the analysis of primary education – similarly to the analysis of nursery school and kindergarten education) based on the samples regarding the local governments (one or more) which maintain them. The filtered sample includes altogether 234 local governments. It was apparent during the interviews that the leaders of the settlements do their best to run their primary schools locally. Even if it is not possible to sustain the whole school, they insist on maintaining at least the junior section locally, so that both the parents and the children can be in a better situation. Primary education is regarded as a strategic area as the quality of education at a primary level is considered very crucial regarding the future studies of a child.

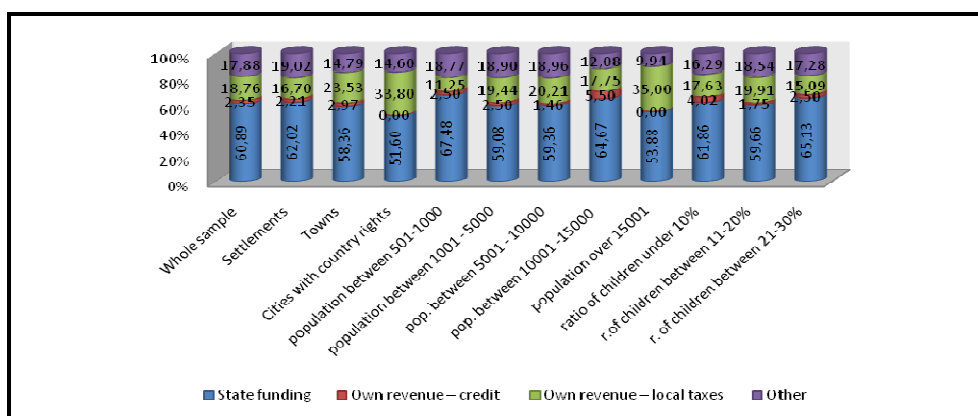


Figure 4.

The funding structure of primary schools according to their legal status, number of population and ratio of children  
Source: own research, 2009 (measuring scale: ratio scale)

The trends in primary education funding structures are more or less the same as those of creches and

kindergartens, however, the average figure in state funding is the lowest in this case. While the state funding in infant's nurseries amounts to 64% on average, in kindergartens it is 62%, this ratio is below 61% at primary schools. In primary education state funding relating to relative standard deviation is 25%, which shows that there are a lot of differences in the sample, however this value is the lowest compared with the two other values. Based on the results it can be concluded that the disparity in primary school education is not as significant as it is in kindergartens. Furthermore, it is a unique phenomenon that local governments use state funds more efficiently when they finance educational purposes, therefore the sample seems to be more balanced than at the previous levels. Similarly to the previous chapters, I also analysed the connection between state funding and population. Based on the Chi-square values it can be seen that there is only one population in which the hypothesis of independence can be discarded.

	Chi-square value
<i>state funding and the number of the population</i>	<b><i>p = 0,003</i></b>
state funding and the legal status of the settlement	p = 0,229
state funding and the ratio of the school aged children	p = 0,075

Table 5.

The values of Pearson's Chi-square test regarding the state funding of primary schools, , the legal status of settlements, as well as the number of population and the ratio of children, N = 234

Source: own research, 2009 (measuring scale: nominal scale)

It can be said in connection with the three levels in primary education that the thirty-three segments based on the three populations there is only one which can be regarded as homogenous considering the partial ratio of its state funding. This is the segment of towns of county rights in connection with nursery school education where the relative standard deviation was 9%. Besides, there are five such segments whose relative standard deviation shows an average variability<sup>11</sup>. All the other segments have a relative standard deviation over 20% regarding state funding. These characteristics prove the great level of variability and disparity of local governments. This result supports fully the statement according to which the Hungarian local governmental system is able to produce as many pictures as many local government there are.

Based on these data it can be stated that the greatest disparity in the funding structure is due to the differences in population number and legal status, the sample as a function of children ratio seems to be more balanced. This is due to the differences in tax income capacity. Cities, towns and settlements with a higher population accommodate more local businesses, which consequently means a local tax base and more job opportunities, which increases the local tax income. These settlements can offer more local financial contributions, in contrast with smaller settlements. When examining the population, the group of settlements with 10,001 and 15,000 people proves to be outstanding, which has above average state funding and loan while its tax income and other sources of educational funding are below average! These are the settlements which jointly maintain their institutions and because of their sizes they become the centres of a certain area. This means that their institutions provide education not only for children from their own settlements but also from neighbouring villages. This fact itself requires a more efficient use of state funds.

In the event of those settlements which do not have their own funds or the funds are not enough, in many cases the rationalisation of the selection of services means the solution<sup>12</sup>, which in many cases means joint educational services, or in the most extreme cases results in the closing down of the institution.

State funds seem to be used in the most efficient way by villages. This way they need to spend less local taxes on their educational services, which is true vice versa. At the same time towns with county rights are never made to take out loans to provide educational services, since their local taxes supply enough funds for them. Based on the above-mentioned, it is interesting that the settlements which own and maintain several institutions are more generous regarding their funds. This is especially true for the population between 1,001 and 10,000 people as well as in settlements of between more than 15,000 people. These figures can be used to verify my hypotheses H.1. and H.2.

<sup>11</sup> In creches the group of settlements with the population of 10,001 – 15,000 is 12%, in kindergarten education it is 16%, in elementary school education the segment of towns with county rights is 13%, the segment with the population of 10,001 – 15,000 people is 16%, while the group of those settlements over 15,000 people amounts to 13%.

<sup>12</sup> I will be dealing with the rationalisation of the selection of services in detail in the remaining part of my dissertation.



### 3.4. The use of local taxes and its background

In the following chapter I deal with the various uses of local taxes. I requested the local governments to give a score from 1-5 to the following uses based on their importance<sup>13</sup>, whose results can be seen in the table below:

Rank		average	standard deviation
1	Funding investments and renovations	3,43	48,45
1	Self financing calls for proposals	3,43	51,48
2	Funding operation	3,39	44,85
3	Funding education	3,32	46,80
4	Funding culture and sport	2,28	57,90
5	Credit repayment	2,10	83,09
6	Funding health care	2,07	63,01
7	Funding economic activities	1,75	72,81

Table 6.

The uses of local taxes, N = 256

Source: own research, 2009. (order of importance = based on the average order of importance, measuring scale: interval scale)

The settlements have a wide range of the uses of the local taxes, which is also proved by the high values of relative standard deviation. In every use the sample shows extreme fluctuation, since relative standard deviations are over 30% in every case. In the remaining part I will not be analysing relative standard deviations any further because of the above-mentioned facts.

Villages use most of their local taxes to cover their own financial contributions to other funds to a greater extent than that of the sample population. In their case it is of primary importance to provide the financial background for the operations of the settlement, whose average value is also high and above the average of the sample population. In our case financing renovation and investments only takes the third place in the list, however, it is still above the average. Funding education takes only the third place with the average value of 3.41. The importance of this purpose is above the average, therefore villages rather spend their local taxes on funding education than the rest of the sample population. Another essential difference is that education is the most highly ranked among villages especially if we compare them with towns and towns with county rights. Villages spend their local tax income on funding economic activities and health care to the least extent. The most characteristic ways of funding in towns are obviously paying own contribution to other funds and investments, however, both tasks have a value below the sample average with regards to the segment. The provision of educational services ranks the third based on the average value (3,09), however, this value is way below the sample average. Similarly to villages, funding economic activities and health care from local tax income is the least characteristic of this segment. Towns with county rights mostly spend their local tax income on financing the operational activities of the settlement. The average value of this still does not reach the value of the sample average. In our case the second most relevant area is the funding of education, however, its value is also lower compared with the sample average, moreover, it is the lowest when compared with the other two segments. Repayment of loans and contributing own funds to other external funds are the least characteristic in towns with county rights, while the latter one has a priority in the full sample.

Calling for proposal is a crucial opportunity for settlements with a small population. After all it is completely understandable that such settlements tend to spend their local tax income primarily on providing their self-financing which is above the sample average, and it has the highest value among the other segments as well. Similarly to towns with county rights, providing the financial background for education is a significant area in this segment as well, it has an average value of 3,45 which is above the sample value, and it is the highest among the other segments. This value is very similar to the ratio in villages, where only after these two objectives are renovations, investments and settlement operations funded, with more or less the same values. This segment also deals with healthcare funding and repayment of loans after dealing with previously mentioned issues.

In connection with the use of local tax income in settlements of between 1,001 and 5,000 people the funding

<sup>13</sup> Where 1 = uses the least of the funds for the given task, 5 = uses much of the funds for the given task.

of renovations and investments as well as the own contribution to external funds are regarded as the most important, as the whole sample. Settlement operational activities score the highest value in this segment. Education funding only comes after it, however, its importance exceeds the value of the whole sample. This segment also considers those areas the least relevant similarly to the segment of villages.

Settlements of between 5,001 and 10,000 people share mostly the same ranking with the previous group, the first three areas are the same, but the order is different. Self-financing ranks first, investment funding is second while settlement management is at the third place. In all these three cases the value is below the sample average. Education is undoubtedly at the fourth place in this segment, which also has a low value. The less important areas are the same as in the previous segment. Regional centres mostly finance their developments from local tax incomes. The importance of the area is significant relating to the sample average (3,92), however it is the highest among the other segments, and the funding of settlement management also has an above average value. Education is the third one, but the segment slightly underestimates its importance related to the full sample. The least important area in this case is the funding of economic activities and paying back loans.

Segments with the highest population do not rank settlement management at the first place, in their case education is at the top of the priorities, however, its value is still the lowest compared with other segments and sample average. They consider settlement management also important, and this segment is unique in a way, as this is the only one in which financing cultural and sports activities is among the first three most important objectives, although with below the average values. The least important factors are the same as in the previous case. Later I analysed the uses of local tax income based on the evaluation of the respondents by means of factor analysis. To prepare the final factor structure I have conducted two tests, as a result of which I ended up with a two- and a three-factor matrix. Because of the low number of uses I did not make a model with more factors.

Rotated factor matrix ( 1 )			Rotated factor matrix ( 2 )			
KMO value:0,84 Cumulative variance value: 58,723%	Operation, infrastructure	Educational services	KMO value:0,84 Cumulative variance value: 68,58%	Operation, infrastructure	Educational services	Funding of operation
Funding investments and renovations	0,881		Funding investments and renovations	0,823		
Self financing calls for proposals	0,781		Self financing calls for proposals	0,789		
Funding operation	0,610		Credit repayment	0,642		
Credit repayment	0,572		Funding culture and sport		0,840	
Funding culture and sport		0,852	Funding education		0,793	
Funding education		0,771	Funding health care		0,607	
Funding health care		0,659	Funding economic activities			0,892
Funding economic activities		0,443	Funding operation			0,539

Table 7.

The factor structures the using of local taxes N = 256

Source: own research, 2009 (Factor Analysis, measuring scale: interval scale)

When analysing factor structures it can be seen that there are such three factors which stay together in both tests, these are the following:

- a. Funding renovations and investments,  
Funding self-financing calls for proposals, and  
Repayment of loans
- b. Funding culture and sport,  
Funding education, and  
Funding health care

I regard the three-factor model as a final factor structure, since operation, educational services and funding are the most obviously separable in these cases. The factors can be defined the following way:

- F.1. Factors of continuous operation and infrastructure development. In this factor the funding of renovations and investments, the provision of self financing as well as loan repayment can be

found.

- F.2. The group of jobs to be done in which cultural and sports activities, education and health care are included.
- F.3. The factor of operations to which economic activities and settlement maintenance belong.

After factor analysis I used variance analysis to examine if there is any significant difference between the (minimum two) segments in the cases of groups based on legal status and population number. The results are shown in the tables below.

In the sample the groups of settlements based on legal status had significant differences only in the way local governments managed the local taxes to fund settlement operations and self-financing. Spending local taxes on settlement operations is more common in villages which show above average value, while towns and towns with county rights perform below the average, which means that they used their local taxes for funding a certain task in a smaller proportion compared with the sample average. The area is funding self-financing for calls of proposal from local taxes. In this area the villages spend a great deal of their local tax incomes for the above purposes, while towns and towns with county right use them just to a smaller extent as their values are below the average. The peculiarity of the two areas showing two significant differences is that both are among the first three, i.e. the three most important purposes of use. If the sample is further segmented based on the population number, three factors have significant differences based on variance analysis. The smallest settlements show exactly the same picture regarding the funding of renovations and investments from local taxes. It can be seen that settlements of between 1,001 and 5,000 people as well as of between 10,001 and 15,000 people tend to spend more of their local tax incomes more often than the sample average. The most populous settlements show the greatest differences compared with the average, which means the importance of other areas in this case. Settlements of between 5,001 and 10,000 people can be described the same way, however, in these cases the difference from average is not so conspicuous.

The other factor worth mentioning is loan repayment. Local tax income is spent on loan repayment in a smaller extent compared with the average by the biggest and smallest settlements. While the credits are also higher in the first case, however, the investments usually generate enough income for repaying loans. At the same time it is much more typical in smaller settlements that they pay back credits in instalments. Settlements of between 1,001 and 15,000 people use local taxes for repaying credits at a higher rate than the sample average. To recap it can be concluded that loan repayment is not really relevant regarding the full sample as well as the all the other areas.

The third area in which significant differences among the groups can be pointed out is funding self-financing for calls of proposal. Higher than average ratio can be found in the first three categories of settlements, therefore it is the most characteristic of them that the local taxes are used for providing the self-financing part. In this category of settlements local tax incomes are lower due to the lack of appropriate tax base, which makes the priority of the area understandable. In settlements of above 10,000 people the sample average is less significant.

The interesting fact about the three, statistically proved and significant differences in the uses is that the areas first and last mentioned are among the most wanted uses out of the full sample, while credit repayment seems to be the least often chosen one.

### **3.5. The current and future perspectives of indebtedness of the municipalities**

After the analysis of local taxation, there is another possible source of education financing, borrowing loans can also be taken into consideration. Therefore we analysed both the current and estimated indebtedness of the municipalities. The loans borrowed for operation and investment and the bonds issued show very diverse and different picture of all segments related to legal status and the number of inhabitants. The child ratio is again an insignificant factor in this case since it does not make any influence on indebtedness, or if does, only in insignificant measure. We conducted the analysis having taken two points of view into consideration, the functions of inhabitants and child ratio. As for the components of debt concerned, it can be stated, – based on relative standard deviation – that the sample is extremely volatile, and as a consequence of it, – just like in the previous subsection, – we do not deal with that issue.



In our times news coverage's report more and more often on alarming indebtedness and debt stocks of economic institutions, the process of which has been slightly hindered by the 2008 financial crisis. The municipalities did not remain intact or unconcerned, either. Having operational and financial difficulties, the municipalities are forced in greater proportion to borrow loans and issue bonds in order to cover their expenses. Within all loans there is significantly greater proportion of operating loans having various risks. The most important is that the loans used for just operating do not produce any payback margin, as opposed to the debt proportion spent on investment and this may project future threat of further indebtedness. One of the main goals of my research was to survey the indebtedness of municipalities and the future tendencies of it, as one of the sources of, – still a minor proportion of – operating and education financing. The indebtedness of municipalities of the sample is demonstrated in Figure 5.

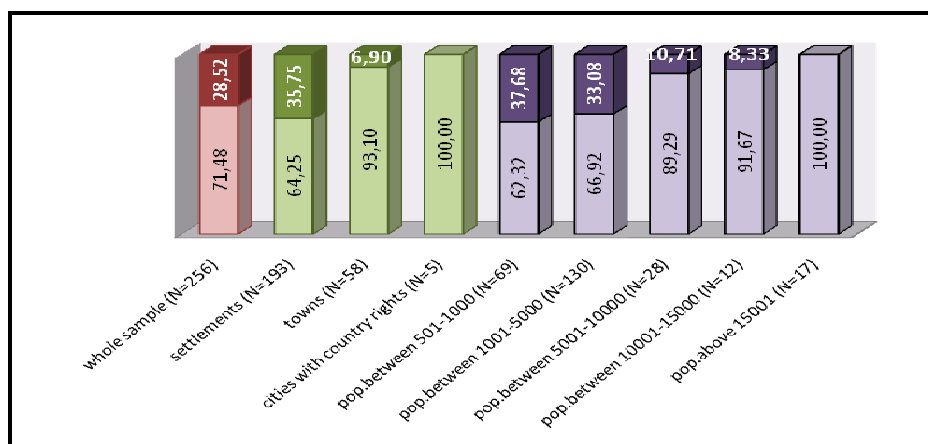


Figure 5.

The distribution of municipalities having debts, whole sample, also segmented by legal status and number of inhabitants (in %) Source: Author's research, 2009 (light colours = having debts, dark colours = without any debts, level of measurement: nominal scale)

It can be stated that in our times an increasing proportion of municipalities have to make use of external resources in order to cover their day-to-day operation and existence. 71 % of the municipalities of the sample have already used some sort of external source and most of these sources are bank loans. As segmented by legal status, the sample demonstrates that the villages have the smallest proportion of all loans. One of the reasons might be that some of these settlements do not meet the stipulated lending criteria so these settlements can hardly get any loans and if these villages ever get loans, they get it only with unfavourable conditions. Also, these municipalities do not possess stable and sufficient sources of revenues that would secure and cover their loan repayment. Therefore, their intention of borrowing is also limited. As of all towns and cities, the proportion of towns having municipal debts almost reaches 100% (93%), whilst there are no towns with county rights not having any kind of external source. It can be stated that most part of the debts of the settlements in the sample is embodied in bank loans (85%). By our time, of all bank loans taken into consideration, a great proportion of operating debts has been accumulated, reaching almost as much as 30%. The method of involving external sources by issuing bonds by the municipalities of the sample is not yet widely spread, it is accounted for only a mere 15% of all debts, and this source is mainly used for investments.

Based on the above mentioned it can be stated that ***moving upwards figures of number of inhabitants, the number of municipalities with debts increases proportionally***. The bigger the municipality with more and more inhabitants and enterprises, the more growing is both its local base for taxation and also its credit worthiness alongside with its “wish” for taking loans. So the above mentioned statements do not prove the generalization that the villages are the most indebted of all. However, it is a fact that the villages forced to borrowing operating loans, due to their insufficient revenue capacities, have to face greater risks when it comes to repayment, in comparison with larger settlements with more liquid financial capacities. It is the villages and other smaller settlements that have the larger proportion of external sources designated for operating purposes and this fact from the very beginning “entails” their future difficulties in financing. Additional characteristics of the municipalities is their strong dependence on banks since the loan portfolios of the municipalities are above average while their bond portfolios are below average (in case of which – even if to a minimal extent – they could be able to influence conditions). It can be stated that bigger towns and cities are the most active at investments and these towns' stocks of investment sources also justifies that.

The same can be told about the smaller towns and settlements with 5001 to 15000 inhabitants. Due to their better financial conditions they can also issue bonds and securities, so in their case the stock of bonds and securities conspicuously jumps to a level exceeding the sample average. The largest towns and the cities with county rights are hardly ever forced to draw in external sources for their operation, as it is also reflected in their financing of education on all levels. In their case the external sources are used entirely for financing investments. In the previous part we demonstrated the current state of indebtedness related to the municipalities of the sample. In the following section we would demonstrate the future intentions of municipalities regarding involvement of external sources. We studied and analysed the intention of borrowing loans as of the whole sample and have also mapped when and in what forms the municipalities intend to borrow the external sources. The first part of the analysis has been conducted regarding the whole sample whilst the the other part of the analysis has been projected in a more narrow way, only municipalities with the intention of drawing in external sources in the near future were taken into consideration.

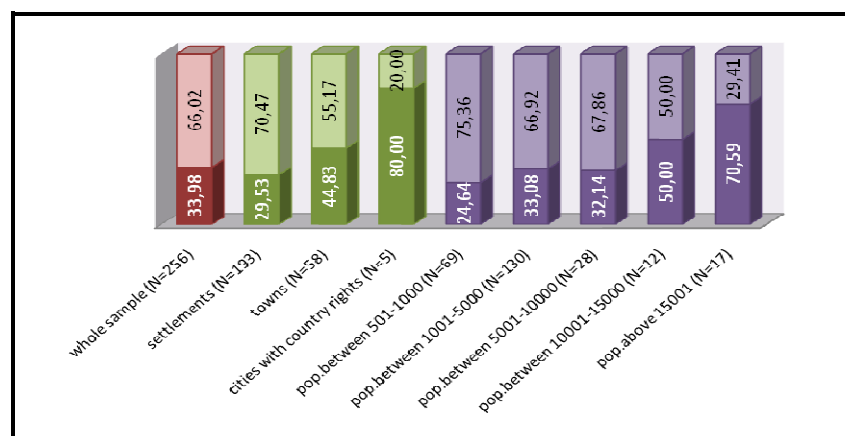


Figure 6.

The proportion of municipalities with the intention of using external sources as of the whole sample, also segmented by legal status and number of inhabitants (in %)

Source: Author's research, 2009 (dark colours = with plans of borrowing external sources in the near future, light colours = without plans of borrowing external sources in the near future, level of measurement: nominal scale)

According to Figure 6 it can be stated that the process of getting more indebted is likely to be continued in the case of local authorities, as one third of the municipalities of the sample is about to involve further borrowings. In the case of smaller towns and settlements the intention of borrowing is below the sample average level being the lowest and the indebtedness of these settlements is also below the sample average. The creditworthiness and the own revenue capacity of this segment has not improved (it has rather declined ) in the recent past, that is why the intention of borrowing has not increased either. It is characteristic for the segment that borrowings as external sources are taken only in the most necessary cases, the borrowings are postponed until the operation can be financed from other sources. The towns, almost all of them already having debts to be repaid in the future are more likely to involve further borrowings as external sources from the market. Their proportion is 45%, well above the sample average. The towns with county rights, and all of them already having debts, demonstrate the biggest willingness towards further borrowings. The common characteristic feature of the two smallest population groups is that these two are the least active in their increasing of further debt stocks. It was only one-third of all municipalities in this group that indicated the willingness to take advantages and the opportunity of borrowing. This is despite the fact that the segmented sample according to number of population and the current debts stock of these two segments showed the most favourable results (indebtedness below sample average). The smaller towns and settlements with inhabitants between 5001 and 10000 also indicate intentions of borrowing much below average, but in their case the already existing debt stock is very high ( almost reaching 90%). The debt stock of the next segment is very similar to the previous group, however in the case of these settlements there is a definite commitment and willingness towards external borrowing. The biggest commitment and willingness of involving external borrowing is characteristic for the bigger towns (exceeding 70%), far beyond sample average. It is regardless the fact that all these towns, without exception, have already debts.

Both the form and timing of borrowing shows a very diverse picture. As a conclusion it can be summed up that 34% of all municipalities of the sample is about to plan borrowing and altogether it totals 87 municipalities. In the following part we make statements according to this restricted sample. Thereafter we

analysed the connection of both the method and timing of borrowing with the number of inhabitants and legal status. The proof of this connection was conducted by using chi-square tests, the values of the result of which is demonstrated in Table 8.

Chi-square values			
		population	legal status
Bank loan	within 1 year	<b>0,026</b>	0,667
	within 1-5 years	0,221	0,862
	over 5 years	0,177	0,454
Bond issue	within 1 year	0,329	<b>0,049</b>
	within 1-5 years	0,415	0,800
	over 5 years	0,176	0,305

Table 8.

The values of Pearson's chi-square test according to the time of borrowing, the number of inhabitants and the legal status of the towns and settlements, N=87

Source: Author's own research, 2009 (level of measurement: nominal scale)

Correlation can only be demonstrated at figures of borrowing within one year, in case of bank loan at number of inhabitants, and finally in case of bond issue at legal status. The results are demonstrated in the following cross tabulation.

### 3.6. The priorities of decision-making of local education governance

In this above mentioned section we described and analysed the situation and conditions of primary education. We did not particularly intend to cover the issues of equal opportunities and integration since we consider that dissertations in the field of sociology would rightfully deal with these issues. Also, in most cases, the respondents would definitely interpret them indistinctly. Among priorities our curiosity focused on the appreciation of certain factors that can be analysed either numerically or can be interpreted objectively, (e.g. demographic characteristics, employment, technical facilities and equipment of institutions, quality and effectiveness in education, infrastructure etc.) or that can be studied through everyday interactions (e.g. surveying the opinion of the students' parents or opportunities of alternative service provision (etc.). Up to date we have processed public data of the municipalities and these statistical data can be found in published public documents, annual budgets, reports and resolutions and also in other statistical issues of the municipalities. The concepts of education of the municipalities should contain the priorities of education governance. However, this is either absent in many places or simply neglected. The overall features and description of the current state of primary education, funding or even the evaluation of the infrastructure can hardly be complete without examining the factors that were taken into account and consideration at decision-making of the municipalities. We compiled these decisive factors after an essay by Sulinova Kht published in 2006.

As for the most important factors in local education governance concerned, in order to rank these factors on a scale from one to five, we asked the municipalities with primary educational institutions to rank them<sup>144</sup>. Surveying of appreciation of factors in education and factors related to decision-making in education has been conducted in three dimensions, taken as a function of the legal status of the settlement, the number of inhabitants and the child ratio of the settlement. The priorities as of the whole sample are demonstrated in the following table. At consideration of the importance of all factors concerned it can be stated that with the exception of a single case the sample average is always above 3. It can also be stated that certain factors might be a bit overvalued by the respondents as they are trying to take all the factors into consideration, with different, sometimes a slighter, sometimes with a heavier accent. As for the relative standard deviation concerned – no statistical meaning of the values has been taken into consideration – the opinion of the municipalities is more complex and coherent in the case of budgeting, population, human factors and infrastructural factors as well. This characteristic feature of “coherence”, if translated into the language of statistics, means strong variableness (at measure of relative standard deviation). As of further factors it can be stated that the sample shows extreme fluctuation.

<sup>14</sup> 14 Legend 1 = least important, 5 = most important.

<i>rank</i>		average	V
1	<b>Municipal budget, estimated revenues and expenditures</b>	<b>4,25</b>	<b>23,76</b>
2	<b>Population of compulsory school attendance age group within the next 6 years</b>	<b>4,23</b>	<b>25,53</b>
3	<b>Effectiveness in education</b>	<b>4,14</b>	<b>25,43</b>
4	Demographic characteristics ( migration, estimated number of children, literacy )	4,11	26,44
5	Technical facilities and equipment of educational institutions	3,95	23,78
6	The parents' contentment of their children's education	3,93	23,42
7	The teachers' qualification, the opportunities of motivation	3,91	27,48
8	The population's and the parents' requirements	3,86	27,96
9	Geographical characteristics of the settlements, infrastructure	3,32	34,12
10	Employment characteristics	3,22	33,67
11	The opportunities, conditions and circumstances of alternative service provision	3,02	44,05
12	The parents' opinion on local education, the opinion of parents sending their children to other than local schools	2,96	43,12

Table 9.

Decisive factors of educational policy, N = 256<sup>15</sup>

Source: Author's research, 2009 (level of measurement: interval scale)

The table clearly demonstrates that in education governance the respondents consider the expected trends in budgeting as a factor of key importance, therefore the municipalities subordinate every decision taken by them to this factor, and this can also be unequivocally detected in respect of funding sources and developments. Another important factor is the estimated population of compulsory school attendance age group, therefore it ranks second with regard of the whole sample. There is a mere 0.02 difference between budget and the projected population of compulsory school attendance age group, this means almost equal appreciation. After this the third line of the table is the quality and effectiveness in education, being an essential issue among the priorities from the point of the quality of output, the overall knowledge of children leaving the educational system. We are confident that the importance of it will be incorporated in the mentality of the maintainers and if so, – even if by taking serious efforts – our country will be able to leave this “vicious circle”, into which it was forced through the rapid decay of the educational system. The demographic characteristics also have a significant impact since it is not the same for the municipality that the youth and the young adult generation in general of the settlement either migrates away from the settlement, also taking with their future municipal tax base and their children of school age, or, on the contrary, the youths and the young adult generation find better opportunities in their municipalities from the perspectives of employment and education.

No matter how the population of compulsory school attendance age group and demographic characteristics of a settlement are closely related to each other, municipalities tend to handle these issues a bit differently. The majority of municipalities consider the technical facilities and equipment of educational institutions also important, so this factor ranks fifth in order. If compared with the current state of these institutions, it can be stated that further developments are important for the maintainers of these institutions, the only problem is that not all of them are able to secure the financial background for it from their own budgets. Then the following features come in order one after another, including the interests of the users of services and service providers, and then come the geographical characteristics of the settlements. During the process of forming their own educational policy, the municipalities pay the least attention to the opportunities of alternative service provision, no matter how it would relief their burden of this obligatory task, as well as the municipalities do not take into consideration the opinion of those parents who send their children schooling to other than local schools. These are important factors of the quality of education. The relative standard deviation depicts an exceptionally versatile picture of the municipal system. In the case of factors respondents ranked the first eight factors one can observe strong variableness, while the last four factors show extreme fluctuation of the sample. The respondents were most uncertain answering these last issues. However, the priorities do not reflect similar characteristics as seen neither from legal status, nor from child ratio, not even from number of population. The differences are demonstrated in the following tables.

When segmenting the settlements from the point of view of child ratio it can be stated that in their case it's always the last four factors that have the greatest importance of all, and that equals with the important issues of the whole sample. For the group of settlements with the child ratio not reaching even 10% the most important is the perspectives of budget and the future population of compulsory school attendance. Both factors have an equal average figure of 4,33 which is much higher than the figures of the two other groups,

furthermore, even higher than the sample average. The group is relatively coherent as observed from these two factors, their relative standard deviation is around 20%, well below the values of other groups, but already indicating strong variableness. By relevance of factors of importance, demographic characteristics and the quality and effectiveness in education come next. The alternative service provision in educational policy is again the least important of all in this case. An interesting feature of the group is that by terms of the other two segments and the legal status, in this case the opinion of the parents sending their children to other than local schools manifests in a larger scale above the average. The group can be divided into two parts in terms of relative standard deviation, the first six factors ranked in the table it demonstrates strong variableness, while the further factors indicate extreme fluctuation. In the case of the smallest villages one can detect exactly the same problem as we have already outlined in the case of towns and settlements. This group of settlement is the most endangered of all as for migration concerned, the population's leaving these settlements is due to the lack of job opportunities and harsh living conditions. So demographic characteristics are ranked first, well above the figure of sample average (4,29). The settlements comprising this segment share a relatively coherent standpoint, which is also confirmed by the measure of relative standard deviation, indicating medium-level variableness (19%). This factor does not occur with such of an accent as for other segments concerned. The average figure of evaluation of demographic characteristics is one tenth higher than that of the evaluation of the budget, so the latter is ranked second. As for this factor concerned, the segment is not that coherent at all, which is also indicated by the relative standard deviation. The demographic characteristics are closely related to the estimated population of compulsory school attendance age group, the latter ranking third in the table, however, its value is below sample average. In their case the quality and effectiveness in education is also important but not as much as shown in the sample average. Taking into consideration the opinion and requirements of parents is about as important as opinion on smaller settlements. In their case the alternative service provision and the opinion of parents sending their children to other than local schools appeared to be also the least important factor of all. As for this segment concerned, by the relative standard deviation it turned to be strongly variable and extremely fluctuating.

Overall, it can be stated that among all segments modelled by different aspects there is solely one single segment that could be considered as a homogeneous one. It is the priority of budgeting in the case of smaller towns and settlements with a population between 10001 and 15000. Furthermore, it can also be stated that the least important factors are the opportunity and conditions of alternative service provision and the opinion of parents sending their children to other educational institutions than local schools. As for the segments concerned these were almost always the following four factors having the greatest importance of all, such as:

- municipal budget, estimated revenues and expenditures,
- demographic characteristics,
- population of compulsory school attendance age group, estimated,
- quality and effectiveness in education.

Furthermore, the municipalities also consider the parents' requirements and opinion important, however the importance of this is different by segments. On the basis of our comparison it is obvious that the issue of budget is not everywhere significant. It can be observed when examining settlements with the highest child ratio, and also when taking a look at towns with a population of 10000. In their case the demographic characteristics or the estimated population of compulsory school attendance age group is more important.

In order to group the priorities of education governance we conducted factor analysis. The aim of the factor analysis was to learn about the methods of grouping of these priorities and how the decisions are made in education governance, and also our target was to study the connection of priorities with each other at the municipalities. During the course of factor analysis at first we set up a three-factor structure, than a four factor one and in the end a five-factor structure, which can be viewed in the following table. It has been detected at the analysis of the factor structures that the following factors stock together in their movements, i.e. they are closely related to each other at local level decision making. Such factors are the following:

- a. the parents' contentment on their children's education and the requirements of the population's and the parents' requirements,
- b. the opportunities, conditions and circumstances of alternative service provision and the estimated municipal budget,
- c. the technical facilities and equipment of educational institutions and the teachers' qualification, the opportunities of motivation,
- d. the employment characteristics and the parents' opinion on local education, the opinion of parents sending their children to other than local schools,

- e. the demographic characteristics and the population of compulsory school attendance age group within the next 6 years.

The five-factor model had been considered as final factor structure since all the factors could be both clearly separated from each other and also could be exactly identified. At this structure the factors could be outlined as follows (shown by table 10.):

- F1. Contains the opportunities of educational institutions. The technical facilities and equipment of educational institutions belong to F1, both the human resources and the quality and effectiveness in education are here, being in contact with each other, so they make an influence on each other and therefore mutually form each other's values.
- F2. The group of demographic characteristics. The demographic characteristics and the estimated population of compulsory school attendance age group are closely related so they are positioned here, together with the geographical characteristics of the settlements being also closely related to. The settlements lack the appropriate infrastructure, so the population migrates from these settlements, so – lacking tax base and revenues, – there is no chance left for the future development of these settlements.
- F3. It's beyond doubt that this is the group of the settlements' infrastructure. Both employment characteristics and the parents' opinion on local education, the opinion of parents sending their children to other than local schools can be found here, which is quite surprising, since this factor is rather supposed to relate to F1 or F4 as it has ties with the quality and effectiveness in education. In our view there are two main reasons why parents might send their children to schools or kindergartens in other towns or settlements rather than to local ones. One of the reasons is employment, it might happen that parents cannot find a job in their own town or settlement. In such cases the parents prefer schooling their children in the towns or settlements where they are actually employed, – that might be the explanation of the fact why these two features form a common factor. In other cases the parents are dissatisfied with the local educational standards of the given settlements, and therefore they prefer schooling their children elsewhere. In our standpoint this is when “opinion “ takes shape.
- F4. The group of parents' opinion and requirements.
- F5. Issues related to financing, budgeting and the opportunities and conditions of alternative service provision, as a method of reducing costs make up this factor.

### **3.7. Influencing factors in daily operation of primary education and funding it by the municipalities**

In the course of my research several goals had been set in order to get to know the everyday routine operations of the municipalities, the importance of these issues for the respondents, and also how and to what extent the respondents agreed with the contents of the statements. In the survey our curiosity focused on the local appreciation of certain issues related to national public education. The survey results reflect the opinion of the local respondents, and this opinion in many cases might occur a rather subjective one, so the survey results do not necessarily share neither the intentions or the course nor the opinion of the central education governance. As a method, we conducted general base statistics for that. The research was based and has been conducted on the last part of the survey, a list containing eighteen statements of the final part of the survey, in which several statements have been made relating to operation.<sup>15</sup> The opinion of the municipalities in this case has also been evaluated on the basis of two criteria. However, in this case – in our opinion – the number of inhabitants is not relevant, since the statements are linked to public education only in a general sense, the statements do not cover any issues that would be determined by the number of inhabitants of the towns or settlements.

It has been concluded from the research that in most cases the municipalities shared the same opinion on one thing, the norms of funding in public education are less and less enough to cover the costs of educational duties. The perception of the statement was similar at all segments. The measure of relative standard deviation was below 20%, indicating medium variableness. In comparison with the sample average, the towns and the cities with county rights considered this statement more significant than average, since their value is above sample average. These two segments turned to be more homogeneous when related to smaller towns, their relative standard deviation of below 10% is also a proof of that.

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<sup>15</sup> Legend: 1 = not in the least agrees with the statement, 5 = completely agrees with the statement.



Rotated factor matrix ( 1 )				Rotated factor matrix ( 2 )				Rotated factor matrix ( 3 )					
KMO value: 0,788 Cumulative variance value: 54,087%	parents' opinion and the infrastructure of education	local infrastructure	demography and financial background	KMO value: 0,788 Cumulative variance value: 61,866%	parents' opinion financial background and the infrastructure of education	local infrastructure	demography	KMO value: 0,788 Cumulative variance value: 69,823%	the infrastructure of education	demography and the local infrastructure	local infrastructure	local infrastructure	financial background
effectiveness in education	0,832			the parents' contentment of their children's education	0,796			technical facilities and equipment of educational institutions	0,832				
teachers' qualification, the opportunities of motivation	0,794			the population's and the parents' requirements	0,727			teachers' qualification, the opportunities of motivation	0,823				
technical facilities and equipment of educational institutions	0,756			effectiveness in education	0,683			effectiveness in education	0,793				
the parents' contentment of their children's education	0,667			the opportunities and conditions of alternative service provision		0,676		demographic characteristics		0,818			
the population's and the parents' requirements	0,532			municipal budget, estimated revenues and expenditures		0,601		population of compulsory school attendance age group within the next 6 years		0,714			
geographical characteristics of the settlements, infrastructure		0,723		teachers' qualification, the opportunities of motivation		0,561		geographical characteristics of the settlements, infrastructure		0,563			
employment characteristics		0,714		technical facilities and equipment of educational institutions		0,549		employment characteristics			0,828		
the opinion of parents sending their children to other than local schools		0,605		employment characteristics			0,789	the opinion of parents sending their children to other than local schools			0,689		
demographic characteristics			0,76 6	the opinion of parents sending their children to other than local schools			0,670	the population's and the parents' requirements				0,897	
population of compulsory school attendance age group within the next 6 years			0,66 0	geographical characteristics of the settlements, infrastructure			0,608	the parents' contentment of their children's education				0,608	
the opportunities and conditions of alternative service provision			0,52 0	demographic characteristics			0,793	the opportunities and conditions of alternative service provision					0,851
municipal budget, estimated revenues and expenditures			0,46 2	population of compulsory school attendance age group within the next 6 years			0,698	municipal budget, estimated revenues and expenditures					0,444

Table 10.

The factor structures of the key issues in education governance, N = 256  
Source: Author's research, 2009 (Factor analysis, measurement level: interval scale)

In the case of the sample segmented by child rate it was the group of municipalities with less than 10% of child rate that evaluated the statement above average, and also this group turned to be the most homogeneous of all. Most municipalities agree with the following statement in great proportion but due to their financial difficulties and economic hardships they are less and less capable of undertaking and performing voluntary tasks, however the general opinion of the settlements already shows strong variableness. In connection with the statement the smaller towns agree with the statement the most, it is also the smaller towns having the most universal opinion on it. In the case of the sample segmented by the legal status it is the cities with county rights that agree with the statement the least, but it can be taken for their own revenue capacities well above that of the smaller towns. In the sample segmented by child ratio the two extreme groups agree with the statement high above the average and their opinion is more homogeneous than the group with the 11-20% proportion – but even so, it is still moderately variable –, if compared of the two.

During their course of everyday routine operation the majority of municipalities have to face issues related to growing cost-effectiveness problems, however the opinion of the municipalities – as reflected by the relative standard deviation – indicates strong variableness. It is interesting that the cities with county rights have the highest average i.e. in their case it is a burning issue, a problem that has to be solved soon. For the segment of towns the importance of this issue is the least characteristic. From this point of view it is not coincidental that they plan to take further steps in rationalization of their operations. As viewed from the aspect of child ratio it is again the group of 11-20% showing the lowest values and also the values well below average, that means in their case the problem does not occur with such an intensity. The opinion of municipalities over the issue of public education quality and effectiveness indicator launched in 2007 differs greatly. Most respondents agreed with the statement that on account of the introduction of the quality and effectiveness indicator the necessary contributions of the municipalities have risen, however there are municipalities where this problem has not occurred. In case of cities with county rights the problem has many aspects, while in case of towns it is well above the average, even surpassing the values of cost-effectiveness problems. The towns agreed with the statement in greater proportion than the settlements did. At settlements with child ratio below 10% the problem occurs definitely strongly, while according to the opinion of settlements with the highest child ratio no further measures of contribution are needed.

The majority of municipalities do not agree with the counterpart of the above mentioned statement stating that by implementing the public education quality and effectiveness indicator the whole financial system became much simpler, and the average figure of 1,99 also proves that. This ranking is similar to the ranking in all segments. The general neglect of problems in public education can be detected on local levels and the average value of 3,6 is just a prove of that. This also means that the majority of problems and issues experienced as “bitter experiences” by the municipalities are not either analysed or discussed properly, which is in most cases and not necessarily the mistake of the central decision making level but that of the lower decision making level, so the municipalities do not take advantage of the opportunities meant for expressing their opinion.<sup>16</sup> The cities with county rights put the most accent on this statement of all the segments, but the majority of settlements also firmly emphasizes this problem. The same can be concluded from the values of settlements with over 11% child rate, however the group of settlements with below 10% do not have such a prevailing opinion. Based on the average value of the statement (3,53) it can be stated that the majority of the sample also agrees with the statement that quality education can only be provided by involving further debts into the process resulting further indebtedness. The towns have the highest opinion of this statement. The towns already have huge debt stocks but even so they are considering borrowing more external financial sources. The cities with county rights agree with the statement the least since they possess alternative financial sources in order to enhance the quality in education. No significant differences can be detected at groups formed by child ratio.

The municipalities deal with the following statements concerning the problems of public education rather in a general sense and they also do not share neither a common nor a definite opinion on these issues, since all the average figures are without exception below 3,5. With the above mentioned facts our hypothesis has been proved.

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<sup>16</sup> The approach towards this survey has to be considered, from local levels it can also be experienced at researches and surveys.



Our curiosity also focused on how certain statements are related to each other reflecting the respondents' opinion. In order to group the priorities in this case also the method of factor analysis has been conducted. During the course of factor analysis several probes have been conducted, so at first we set up a four-factor structure, then a five-factor one and finally it resulted in a six-factor structure. The factor structure is demonstrated in the following table. It has been detected at the factor analysis that the following statements stock together in their movements in all three probes:

- a. the deterioration in public education, the neglect of the problems in public education, the incapability of output in public education and the ad hoc legal stipulations – irresponsible decisions,
- b. severe cost-efficiency problems in education, also the tendency of decreasing proportions of norms in financing,
- c. the municipalities have only the role of the financier, also performing subregional tasks and duties,
- d. securing the proportional number of teachers to the decreasing number of children, and increasing municipal contribution to financing education.

During the course of the analysis of the factor structures it could be observed that there are statements appearing in different monitored factor groups, somehow dismantling the structure. The following structures appeared:

- weakening the counties,
- growing municipal contributions, due to the quality and effectiveness indicator,
- high standard education – further indebtedness,
- quality and effectiveness indicator – simpler system of financing,
- exaggerated decentralization,
- secondary education, and
- fewer voluntary tasks and duties, due to difficulties in management.

The six-factor model had been considered as final factor structure since in this case the otherwise related to each other factors could be clearly separated from each other. The factors could be outlined as follows:

- F.1. Includes the problems in public education. The statements on output in public education and the process of deterioration of the output can be found here, also the consequences of the many times hard to follow legal stipulations.
- F.2. Apparently the group of statements related to education financing, including the statement of growing municipal educational contributions and the difficulties of providing the appropriate number of teaching staff required to a certain number of children. In our view the “odd man out” in this factor group is one of the statements related to quality and effectiveness indicators since in the follow up part there is another factor functioning as a pair of the statement.
- F.3. The group of functioning problems. In our view the last statement belonging to this factor, which is the one on decreasing norms should rather be placed in the previous group since this is obviously an issue of education financing.
- F.4. It is the factor containing the statements related to decentralization. Further statements such as providing secondary education, exaggerated decentralization and weakening the counties are also grouped here.
- F.5. A factor containing a statement related to the quality and effectiveness indicator and another (thematically) quality and effectiveness related statement from the “education financing” factor.
- F.6. The factor group of statements related to providing quality in education. This group contains the statements on opportunities of subregional tasks and duties, the process of further indebtedness in order to provide and maintain quality in education and the statement on the governing role of municipalities.

Rotated factor matrix ( 1 )					Rotated factor matrix ( 2 )						Rotated factor matrix ( 3 )						
KMO value: 0,714  Cumulative variance value: 45,427%	problems in education	education financing	decentrali- zation	tasks and quality education	KMO value: 0,714  Cumulative variance value: 52,283%	problems in education	education financing	problems in operation	decentrali- zation	efficiency indicators	KMO value: 0,714  Cumulative variance value: 58,036%	problems in education	education financing	problems in operation	decentrali- zation	őzoktatási telj. mutató	quality education
Deterioration in public education	0,711				Deterioration in public education	0,717					Incapability of output in public education	0,693					
Neglect of the problems in public education	0,702				Neglect of the problems in public education	0,697					Deterioration in public education	0,693					
Incapability of output in public education	0,651				Reasons of deterioration of quality of output	0,647					Neglect of the problems in public education	0,683					
Reasons of deterioration of quality of output	0,642				Incapability of output in public education	0,634					Reasons of deterioration of quality of output	0,652					
“ Ad hoc “ legal stipulations – irresponsible decisions	0,567				Weakening the counties	0,568					“ Ad hoc “ legal stipulations – irresponsible decisions	0,584					
Weakening the counties	0,560				“ Ad hoc “ legal stipulations – irresponsible decisions	0,561					Increasing municipal contribution to financing education		0,784				
Severe cost-efficiency problems in education		0,623			Severe cost-efficiency problems in education		0,710				Securing the proportional number of teachers to the decreasing number of children		0,528				
Securing the proportional number of teachers to the decreasing number of children		0,617			Fewer voluntary tasks and duties, due to difficulties in management		0,655				Growing municipal contributions due to efficiency indicator		0,514				
Increasing municipal contribution to financing education		0,539			Tendency of decreasing proportions of norms in financing		0,553				Fewer voluntary tasks and duties, due to difficulties in management			0,730			
Tendency of decreasing proportions of norms in financing		0,535			Increasing municipal contribution to financing education			0,775			Severe cost-efficiency problems in education			0,624			
Growing municipal contributions due to efficiency indicator		0,488			Securing the proportional number of teachers to the decreasing number of children			0,487			Tendency of decreasing proportions of norms in financing			0,567			
High standard education – further indebtedness		0,474			Performing subregional tasks and duties				0,608		Secondary education				0,812		
Efficiency indicator – simpler system of financing			0,784		The municipalities have only the role of the financier				-0,586		Exaggerated decentralization				0,606		
Exaggerated decentralization			0,532		Secondary education				0,552		Weakening the counties				0,604		
The municipalities have only the role of the financier				-0,656	Efficiency indicator – simpler system of financing					0,821	Efficiency indicator – simpler system of financing					0,853	
Performing subregional tasks and duties				0,569	Growing municipal contributions due to efficiency indicator					0,510	Performing subregional tasks and duties						0,719
Secondary education				0,543	Exaggerated decentralization					0,417	The municipalities have only the role of the financier						-0,506
Fewer voluntary tasks and duties, due to difficulties in management				-0,368	High standard education – further indebtedness					0,400	High standard education – further indebtedness						0,487

Table 11.

Factor structures related to problems in operation, N = 256

Source: Author's research, 2009 (Factor Analysis, measurement level: interval scale)

#### **4. NEW AND RECENT SCIENTIFIC RESULTS**

- R.1. It has been proved that in connection with all expenditures the proportion of state funding is also statistically related to the number of inhabitants of the settlements. The inhabitants mean potential tax revenue base for the municipalities. During the course of the study of the public educational infrastructure we came to the conclusion that as for the infrastructure concerned, the municipalities do not possess any own financial sources for the development and redevelopment of their infrastructure, no matter how old and obsolete their infrastructure was, not even if their institution is on the brink of existence. We have come to the conclusion and it has also been proved that the performance of educational tasks and duties of the municipalities can be characterised by short and medium term perspectives. The financial limits of the municipalities are strongly determined by the budget and it has the top priority among almost all segments. The other emphasized group of segments influencing education governance is related to demographic characteristics. The requirements of the employers and the parents' opinion, and also the human factors of education have only a more dominant emphasis in the case of larger municipalities possessing more stable financial foundations.
- R.2. By segmenting the sample by legal status, number of inhabitants and child rate we proved that in the case of smaller towns and settlements the central financial sources have a more significant proportion than in comparison with other segments. This might be accountable for the three markedly distinct groups of settlements. The municipalities of these settlements are incapable of contributing more, or do not intend to (because of having other priorities in other fields) contribute more to the financing of public education, so in the end the results of it demonstrate a larger proportion of central financial sources. Furthermore, as a result of our research it has been proved that the structure of financing of the municipalities is neither determined in a significant measure by the child rate of children of kindergarten and elementary school age nor is related to the population of the settlement. The segments possessing institutions of their own in greater proportions and those institutions that are capable of operating these institutions by themselves are also more likely and willing to sacrifice even more financial sources in order to finance their public education. It is characteristic for these municipalities that they normally add their own contributions to the sums allocated by state financing, however, the majority of municipalities having there institutions in the form of association are unable to do so. When analysing several characteristic features it could be noticed that the towns and settlements with a population of 10001 to 15000 show special particularities. The majority of those institutions operated in the form of association for co-operation share a lot of characteristics with those of the smaller towns. Despite the high population figures this segment provides the least contribution to the costs of performing tasks and duties, thus resulting in a high rate of state financing. This is the proof of the central educational policy stating that such contributions are frittered away in such way.
- R.3. It has been concluded that the municipalities finance not just their compulsory tasks and duties using their own budgets but in greater proportion forced to do so in order to operate the institutions of the settlements in general, and the municipalities also have to supply their compulsory self-contributions to projects, and also have to finance and fund investments and developments. Public education in general comes only second when spending local municipal taxes.
- R.4. According to the opinion of the majority of municipalities the launching of the public education quality and effectiveness indicator in 2007 did not bring more opportunities but on the contrary, further difficulties. This opinion was based on the experience gained by launching the new indicator and the necessary self-contributions and financial sources required for performing public educational tasks and duties have not decreased in any way, on the contrary, it has further increased. Not all the municipalities have extra financial sources for that, so the differences between municipalities may further widen and additional steps in operation rationalization might have to be taken. According to the unanimous opinion of the municipalities it can be concluded that the norms meant for financing public education are not enough to finance these objectives and also insufficient to cover the costs, the norms make up a smaller and smaller proportion of all funding. In the case of certain settlements, lacking the necessary self-contributions, this process may end up in unpredictable consequences not only in the

long run, but also in medium terms, as well. Without re-modelling the system further negative effects would influence public education, future downgrading of national human resources is predictable for the country in today's tough international competition, as it has already been projected in the PISA evaluations of school performance tests.

- R.5. Based on the opinion of the majority of the respondent municipalities it can be stated that the majority of the municipalities is unable to improve the level of public education by themselves, and this statement has been made earlier in the above mentioned paragraphs, in the technical literature and also the results of our research. The municipalities are also unable to improve the quality and effectiveness in education, and that might mean unfavourable conditions and drawback not just for the settlement, but for the country as well.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The literature review suggests that a great number of renowned economists have dealt with the issues of public sector and in more details with local economics and also this topic has been covered thoroughly in our time and this can be thanked to the extraordinary role of this sector in our everyday life. It can be stated based on this review that the structures and methods used in practice by the municipalities can be exceptionally versatile from several aspects, the country's form of government, economic strength and the country's municipal model structure. The fundamental objective of my research was to highlight the dominant factors at local educational and organizational decisions, to introduce the aspects of funding, to monitor the municipalities' future plans and intentions in the spheres of governance, operation and indebtedness. Our goal of primary importance was also to obtain information on settlements' education governance on a daily basis.

During the course of data processing of the survey we have come to the conclusion that the majority of the settlements, – comprising of mainly smaller towns and villages – due to their financing difficulties on a daily basis and the decrease of child rate are increasingly forced to give up the management of their own public educational institutions and the institutions have to be operated in the form of micro-regional associations. This fact in itself has an indicative role. As for the network of institutions maintained by the municipalities concerned this sample shows the phenomenon of those of the nationwide institutions, the number of nurseries and also the number of nursery beds do not meet neither the real needs nor the necessary number. There are hardly any nurseries in the smaller towns and villages in municipality governance, as for the towns concerned it is solely the bigger towns where nurseries are maintained by the municipalities and not even the non-governmental organizations can improve this situation.

The analysis has also proved that state funding is still predominant, and in many cases it is the only source for education-related expenditures. The more inhabitants a village or a town has, in proportion with the growing numbers of inhabitants, the more declining the proportion of state funding is, due to the dominance of the own sources of the municipalities. The above mentioned statements may suggest that there are alterations in capacity of local financial revenues. All these also underline the fact that there are huge differences within the municipal system, and these differences are to be eliminated in urgent priority, no matter it is beyond the framework of central government support provided for preserving everyday operation. This would require a radical transformation of the whole municipal financing system but up till now no such transformation could really happen, a transformation that has long been blocked by the decisive resistance of the settlements and also because of the lack of both central and local determination and willingness.

In the sample segmented by the number of population during the course of the study there has always been one segment excelling in financing, a segment which broke all previous trends and better used and absorbed the central sources. If we take a closer look at these settlements, their tasks and duties and also their provisions, these settlements definitely stand out of the other municipalities. Since they possess a great deal of institutions operated in the form of association, for quality and effectiveness and economic reasons these municipalities are also forced to thrifty management, which is equal to a more efficient use of state funds. The financial strengthening of this group of settlements would also mean a substantial relief for the smaller municipalities. Furthermore, we have concluded that the proportion of financial resources provided from the state budget for executing of educational tasks and duties by the municipalities can be the least connected to the legal status of the settlement or the number of children eligible for public education, on the contrary, it can be linked to the number of inhabitants of the settlement. The towns and settlements with a larger population have obviously more potential resident tax-payers, and as a result of this the municipalities proportionally get more tax revenues so much more can be spent from the municipal budget on covering the costs of local public education. This relationship has been proved statistically. Therefore, the system of normative support should be altered and transformed into a new direction and it would be a very practical approach to do so, into a new system in which the alterations in the number of inhabitants or the actual income of the population or the current economic situation of the municipalities are taken into account and consideration. When calculating the financial sources meant for funding public education certain indicators could also have been taken into consideration, such as per capita personal income tax revenue<sup>17</sup>, or the per capita vehicle income tax, an

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<sup>17</sup> In connection with this issue it would be also worth considering the possible future deductibility of it for the municipalities.

indicator which is a clear expression of the income situation of the population. These indices should be inversely proportional to the measures of state public funding, thereby helping to eliminate differences between the settlements and improving the situation of the economically most vulnerable settlements.

Apart from public funding, the major financial sources of education financing are the local municipal taxes, loans and other incomes. The educational institutions' own revenues and also the parents' contributions (just to highlight the most important factors), make up a large proportion of all revenues, however they are inversely proportional to the amount of state funding. The municipalities surveyed in the sample have reached the maximum level of their possible tax related revenues, so the revenues cannot be further increased by levying new types of taxes. Therefore, only the already applied types of taxes have been demonstrated in the thesis, since the intention of the introduction of would be taxes were minimal (only four respondents actually planned implementing them). It can be concluded that the settlements have neither further opportunities nor intention to spend more local tax revenues on financing and funding local public education.

The lacking proportion of educational expenditures in funding public education can only be obtained by borrowing financial sources in the forms of loans, and this method is more characteristic for the smaller settlements. During the course of the analysis of the municipalities' loan structure it became clear that an increasing proportion of financial sources has to be devoted to covering operating costs in an alarming proportion, as for the villages and smaller settlements concerned. Due to its insufficient capacity of revenues, this type of settlements is forced to borrow further loans, with all the risks and dangers of future repayment.

Another important objective of the research was to study the future loan borrowing intentions of the municipalities. Our assumption that short-term approach and planning is characteristic for the municipalities has been proved since the municipalities intend to borrow their loans in general within a year, typically in the form of bank loans. Reaching the upper limit of local tax revenue capacity and the risks in the process of indebtedness are thought-provoking, just like the fate and future of Hungarian public education. However, one should not forget about the fact that for some municipalities it is much simpler to borrow financial sources than designing and implementing new kinds of local taxes. Implementing restrictions or imposing further taxes on the public or the business community would result in citizen opposition and resistance endangering the political legitimacy of the leaders of the community. Thus, in many cases borrowing external financial sources is a more viable method, no matter it is visible and has to be listed in the budget or needs municipality board approval, but even so, it is less “ visible “ than imposing new types of taxes.

The municipal system is often criticized from the institutions as well. This fact has been proved true during the course of the research since among the institutions maintained by the municipalities there was only a very small proportion of institutions with a level of deterioration not reaching at least thirty percent. The study has also confirmed that the municipalities do not have the means and unable neither to develop, refurbish nor to expand their institutions using just their own sources. This is characteristic for all types of institutions. The respondents made it clear and also emphasized the importance and necessity of support in financial aid and funding provided by the European Union and also that of the national central budget, and the future development in general without the involvement of these sources would be almost impossible. It could be noticed that through the development of their institutions' network the intention of the municipalities was not to borrow financial sources for the development of the infrastructure of educational institutions, – with the exception of some municipalities, – so neither borrowing nor issuing bonds can be directly related to the refurbishment of these institutions. The segmentation of the sample by legal status revealed the fact that the municipalities of villages and smaller towns deny in greatest proportion the opportunity of upgrading education related infrastructure, mainly due to the lack of financial sources.

The general opinion of the settlements was almost unanimously consistent on the issue of the determining role of municipal revenues and expenditures in education governance. In all segments a similar result has been concluded. The demographic situation is also considered to be an important factor by the municipalities. During the process of setting the objectives and the course of their education governance and policy, the municipalities rarely take into consideration the opportunities of alternative means of performing their tasks and duties, or if they do so, only as of a matter of least importance, just like in the issue of why parents send their children to other than local educational institutions. The denial of the opportunities if implementing alternative means of task and duties provision can be traced back far in the past to the “ bad conditioning “ acquired at the change of the political system. The municipalities stick to their own autonomy even if such stubbornness requires sacrifice in quality and effectiveness and quality in public education.

This suggests that the settlements subordinate all their education related decisions to financing, – i.e. both central and local financing sources – therefore lacking such funds, the municipalities are unable to achieve any substantial reforms in education. Due to the lack of financial resources at local level the quality and effectiveness in education can hardly be improved and these conclusions might also be emphasized in future international studies and surveys depicting an unfavourable picture of our national human resources.

It became also clear that the municipalities are planning further reforms and transformation only in a small proportion of their institutions since the majority of municipalities have already reformed their institutions either by closing them down or by letting them operated in the form of association. The most widely spread and preferred methods of further steps are amalgamation of institutions, forming one into a sub-unit, merger of the institutions' management and organization as well as establishment of joint supply organizations. This suggests that supply rationalization has already reached the limit that can be tolerated by the population of the settlements.

During the research, when examining the related attributes and components, it become apparent that certain characteristic features, – such as the proportion of state funding, the estimated forms of rationalization of supply, and also the estimated future borrowing of external sources, – were closely correlated with the population, far more closely than with any other groups. As this may suggest, a change in the number of inhabitants can facilitate significant changes in the operation of a settlement. The result of this may be noticed, migration, more precisely an exodus of the population, a significant decrease of the population may endanger the existence and operation of certain settlements.

Our main objectives were also to study the opinion of municipalities on everyday operational problems. The respondents made it clear and expressed their opinion on the statement that performing educational tasks and duties can hardly any longer be financed by using just the central financial norms and it is reflected from other researches and studies as well<sup>18</sup> however, there might be quality and effectiveness problems beyond this issue and the municipalities do not intend to change this system, mainly in order to protecting their legitimacy and also avoiding conflicts. In addition to that, the studies covered issues of the most important changes in education funding in our time, the practical evaluation quality and effectiveness indicator in public education. An almost unanimous opinion has been expressed in that issue that the new method did not make the use of contributions simpler, neither have the proportion of municipal contributions decreased, which would coincide with the original idea of the introduction of the indicator, and that would make the municipalities implement rationalization.

In conclusion, based on the research it can be stated that the Hungarian public education involves certain elements of risks foreshadowing non-favourable changes in the future. The inadequacy of state funding and the relatively small own revenue in small villages, where there are no additional resources to meet the requirements of performing educational tasks and duties, serious consequences might occur on every level of primary education and in operation as well. Overall, it can be concluded that for the above-mentioned municipalities public education is one of the most important local public services of all compulsory responsibilities, however public education is in a situation of a dire crisis, not just from effectiveness aspects but also from financing as well. Eliminating potential threats cannot be expected from the municipalities by themselves, these problems can only be solved by using external assistance.

The usefulness of the practical results of the research – in our view – is not limited to the municipalities:

- First, the results may help the local decision makers in forming their educational policy and to take all the important segments into account and consideration that are heavily accented by the municipalities.
- Secondly, the results may also advise the local level in their identification of potential risks threatening them as had been projected by segments.
- Thirdly, it may help the decision makers to learn the opinion of municipalities more closely in all issues related to public education.

We certainly wish to continue this research more properly in the future in order to study the opinion of a wider spectrum of the municipalities. Some aspects of possible future research may include the analysis of changes in funding, the further study of factors playing a role in decision making related to public education and also exploring further conditions of the process of indebtedness might be of similar importance.

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<sup>18</sup> The publications of the staff of National Institute for Public Education (Oktatáskutató Intézet)

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