

Funding primary education and its connection with local governments

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Abstract::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 our 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.¹ 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.

Keywords: local government, primary education, kindergarten, infant's nursery

¹ Other sources mean various types of funding, donations as well as the incomes of the institutions.

1 Funding education in local governments

Based on the table 1., a sharp borderline can be drawn between the two educational levels. 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.

	Infant's nursery		Kindergarten		Primary school	
	N = 46		N = 250		N = 234	
	\bar{x}	σ	\bar{x}	σ	\bar{x}	σ
State funding	63,72	16,63	62,29	16,60	60,89	15,26
Own revenue – credit	2,30	7,88	2,28	8,51	2,35	8,26
Own revenue – bond	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
Other	12,37	16,58	17,60	18,89	17,88	18,88

Table 1.

Average and standard deviation of the sources in educational funding according to institutions

Source: own research, 2009 (measuring level: ratio scale, N = 256)

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:

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.

2 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 structure² of infant's nurseries³ it can be concluded that the relative standard deviation of state funding has a strong volatility (26%) regarding⁴ 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.

2 Funding structure may mean state, credit or local taxes or other funds.

3 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.

4 State funds provided for kindergartens can vary between 20 and 100%.

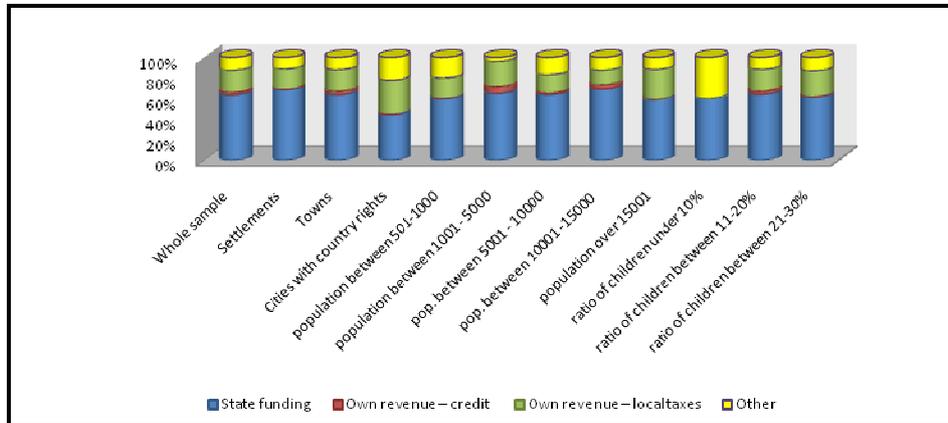


Figure 1.

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)

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 2.

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 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 our 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.

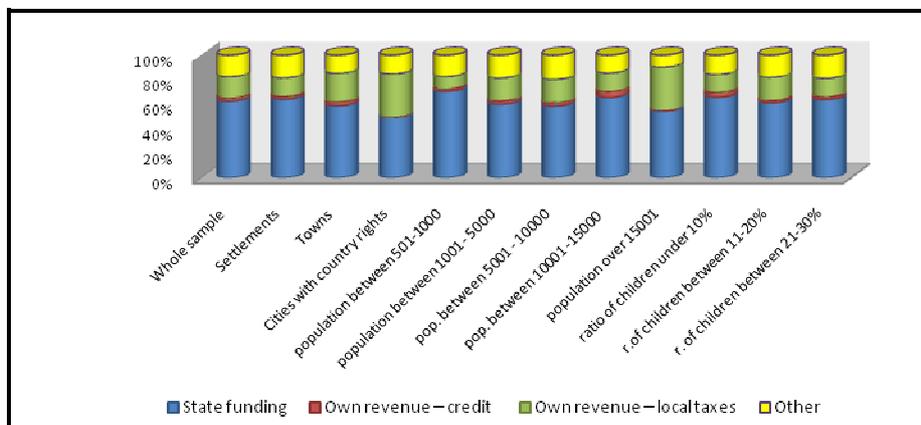


Figure 2.

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 3.

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.

4 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.

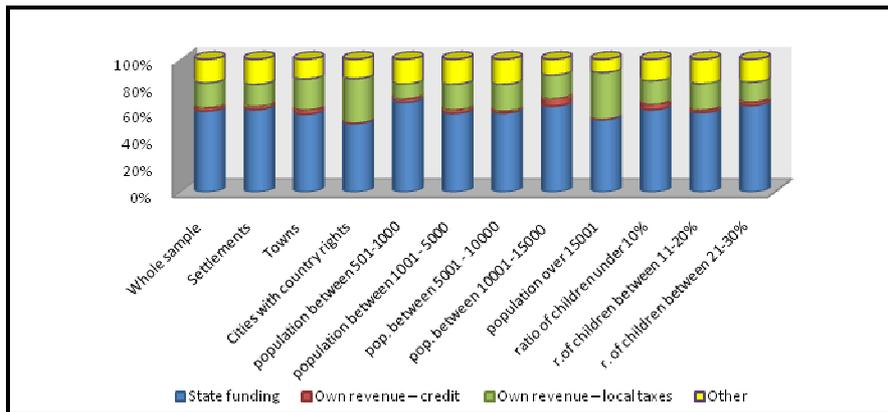


Figure 3.

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>	<i>p = 0,003</i>
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 4.

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 partional 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 variability⁵. 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

5 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%.

means the solution, 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.