



**USAID assistance to the  
Center for Economic Analyses**

**REPORT ON SOME EX-POST ASPECTS  
OF DECENTRALIZING PRIMARY  
EDUCATION IN MACEDONIA\***

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**Center for Economic Analyses (CEA)**

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## **Foreword**

This report is prepared under the contract provisions signed between CEA and USAID for nonexclusive services to USAID as part of the grant agreement and under the SoW prepared by the USAID MLGA Project. This report is illustrating some ex-post aspects of the process of decentralization in Macedonia in the area of primary education and is based on previous projects conducted by CEA and the author for different clients.

This report is developed under difficult and serious constraints given lack of data especially from the Ministry of education and science. In any way CEA agreed with its USAID CTO to deliver this report given CEA's experience and own source database information only. The views expressed in this report are those of the author and do not necessarily reflect the views of USAID, the Government of the United States of America and the institutions mentioned in it.

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## Executive summary

- (1) The Ministry of Education and Science, decentralized education functions to the municipalities in a phased approach (basically: first phase with earmarked grants and second phase with block grants).
- (2) Earmarked grants are supposed to cover the operation and maintenance costs i.e. the utilities, heating, communication and transport, materials and tools, repair and current maintenance, contractual services.
- (3) Block grants are supposed to cover the operation and maintenance costs of the proper competency i.e. the expenses as from the earmarked grants and in addition, the salaries and related benefits for the employees in the proper activity/competency.
- (4) The revenue sources available to LGUs to fund their expenditures include: a) their own revenues; b) the shared revenue (unconditional grants) from VAT and PIT; c) the revenues from the self financed activities of the municipal budget users (this is actually the revenues from managing own assets); e) donations; f) earmarked and block grants from the central government; g) loans (LGUs in Macedonia are allowed to borrow starting from July 2007).
- (5) At the same time it has also to be taken into account that the central government do not recognize the LGUs transitional costs from the demographic, economic and institutional changes that took place during the transition.
- (6) In 2005 it was transferred less money as earmarked grants than what was spend in 2004 from the central government for the education activity which actually worsened the financial situation of the LGUs.
- (7) In real terms there are real increases in transfers in 2006 compared to 2004. The number of students increased by 5,3% compared to 2004 thus, the real percentage change per student is increasing by 8,8% for maintenance and 3,8% for transportation of students. This shows that controlling for inflation the situation seems to improve in per student real terms.
- (8) Different techniques of calculations show that there still might be a tentative fiscal gap in providing primary education services.
- (9) The disparities across LGUs are relatively high and these should be taken into account in the allocation formula. The methodology for earmarked grants transfer needs improvements in transparency and predictability at least.

## **Background**

The Ministry of Education and Science, decentralized education functions to the municipalities in a phased approach. The phased approach to the fiscal decentralization and to the intergovernmental grants is prescribed in the Law on financing Local Government Units (LGU). During the first phase of the process of decentralization in Macedonia the system of earmarked grants was introduced by the Law on financing LGUs. The earmarked grants are supposed to cover the distinct activities and the line ministries and the government funds are responsible for proposing to the Ministry of finance the formulas for the allocation of the grants to individual LGUs by projects, institutions and/or programs referring to the budget of each next fiscal year (article 10 of the law). In practice the earmarked grants are supposed to cover the operation and maintenance costs of the distinct competencies (culture, social care and child protection and education) i.e. the utilities, heating, communication and transport, materials and tools, repair and current maintenance, contractual services.

Since the inception of the second phase of the fiscal decentralization process, the block grants are paid to those LGUs that entered the second phase. The block grants are covering the competencies prescribed by the Law on LGUs a (culture, social care and child protection, education and health-article 12 of the law on financing LSGU). In more detail this means libraries, music and performance activities, museums, cinemas, kindergartens, homes of elderly, primary and secondary schools, whereas no transfer of competencies was done for the health sector. It is also stated in the article 12 of the Law on financing LSG that the amount of block grants must not be less than the amount of the expenditure made by the central government in the last fiscal year preceding the transfer of the competency. In practice the block grants are supposed to cover the operation and maintenance costs of the proper competency i.e. the expenses as from the earmarked grants and in addition, the salaries and related benefits for the employees in the proper activity/competency.

LGUs are also receiving shares of the VAT and PIT collections, which are in fact to be considered as unconditional grants and also the delegated competency grant is envisaged in the Law on financing LGUs.

## **Intergovernmental transfers in Macedonia – selected issues**

The revenue sources available to LGUs to fund their expenditures include: a) their own revenues; b) the shared revenue (unconditional grants) from VAT and PIT; c) the revenues from the self financed activities of the municipal budget users (this is actually the revenues from managing own assets); e) donations; f) earmarked and block grants from the central government; g) loans (LGUs in Macedonia are allowed to borrow starting from July 2007).

On the other hand the LGUs can also implicitly find internal sources from improved efficiency of providing services to citizens, such as better use of human capital, improved management of resources and investment in skills. They can also create arrears to creditors,

but this will provide only temporary relief. They could also deliberately reduce the quality of their services, but this would entail huge entailing political costs.

One has also to consider at the same time that the demographic, economic and institutional changes that took place during the transition have also impacted on local finance, in general creating additional expenditure needs without corresponding provision of finance, or even shrinking the tax base. At the same time it has also to be taken into account that the central government appears to be unwilling to recognize to LGUs part or all of the following expenditures: (a) transition expenditures (including the those stemming from lower purchasing power and from changes in the relative prices that took place after the fall of socialism); (b) administrative overheads, incurred, hitherto, by departments of the Central Government on the now transferred competencies; (c) geographical (and other) distinctions among various LGU jurisdictions; (d) diseconomies of smaller-scale service delivery by the LGUs, where these may occur; (e) potentials for social disruption, resulting from smaller-scale or more localized choices of service delivery; (f) macroeconomic instability (inflation); (g) demographic changes (h) underinvestment in the past (i) insufficient maintenance in the past.

An interesting example is the allocation of the block grant for education. Its formula includes with an important weight the standard student/teacher-ratio. This favours municipalities with relatively higher population growth for which the actual student to teacher ratio is higher than the standard, while it puts at an immediate disadvantage those LGUs with low population growth and low pupils-to-teacher ratio. As a consequence, some LGUs are under pressure to close schools, to reallocate teachers, or to dismiss them. All this means that the devolution of salaries of teachers is not a minor reform but it amounts to give to local government in Macedonia important responsibilities in the reform of the primary and secondary education, for which they may not be necessarily equipped both in terms of capacity and of fiscal resources. LGUs will be constrained to improve their efficiency in providing services and to deal with the underinvestment and lack of maintenance from the past and to deal with the depreciated assets. All these issues were not considered as additional costs for the LGUs when the central government transfers were determined.

The task of calculating the cost of providing services gets even more complicated within the existing cash based system of local budgeting and accounting. It is anecdotic that up to 30% of the current cash based year's expenditures at LGU refer to appropriations or to activities from the previous years. This system in a way allows LGU's decision makers – mayors and councils - to exercise their devolved powers, but risks to hidden deficits in the system.

The earmarked/block grants so far for the primary education transferred to Macedonian LGU are illustrated in the next table.

Table. Nominal transfers from the central government (earmarked and block) grants 2005 – 2008.

Sector	Earmarked Grants for 2004	Earmarked Grants for 2005	Earmarked Grants for 2006	Earmarked Grants for 2007	Block grants for 2007	Earmarked Grants for 2008	Block grants for 2008
Primary education	422.866.586	363.200.000	440.000.000	535.917.558	941.385.749	256.192.000	5.308.244.600
Transport for primary school pupils	169.193.030	174.000.000	210.000.000	204.892.751			

Source: Ministry of finance.

We can see that in 2005 it was transferred less than what was spend in 2004 which actually worsened the financial situation. After that the transfers are increasing in nominal terms from 2006.

### Primary education services profile at LGU level in Macedonia

The transition process in Macedonia brought demographic, ethnic, institutional and economic changes that were relatively outside the possibility of control of the central government in Macedonia. With the fiscal decentralization, these changes are putting expenditure and revenue pressures down to the LGUs.

On the next table we can see that the student/teacher ratio is decreasing from 16,0 for the year 2004/05 to 15,3 for the year 2006/07. The number of schools is also decreasing for the same period, but the number of teachers is increasing.

Table. Grants for primary education and relevant information on expenditure needs in this sector

	2004/05	2005/06	2006/07	2007/08	2008/09
Number of schools	1010	1008	1003	na	na
Earmarked (block) grants including transportation in million denars	592	537	650	1682	5564
Number of students (possible cost driver)	223876	235691	231497	na	na
Number of teachers (possible cost)	13970	14917	15098	na	na

driver)					
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Source: Ministry of finance and State statistical office. For 2007 and 2008, total earmarked and block grants.

From the table we can see that transfers to primary education are increasing in nominal terms especially as more LGUs are entering the phase two of the process of decentralization.

### **Tentative fiscal gap assessment for the primary education in Macedonia**

The system of calculation of fiscal gap in general consists of two main elements:

1. Estimating the financial needs for a specific service area;
2. Establishing the finances available to carry out a specific service.

Based on these two elements, the resulting fiscal gap can be calculated. If calculation of costs has been carried out for all municipal functions, the total fiscal gap for the municipality can be computed. Likewise, the aggregate level of funding required for each function/programme can be calculated.

Calculating the costs of competences/programmes/institutions can be based on different approaches:

- Historical basis – Comparison of existing or expected funding with the historical level;
- Cost drivers – Estimating the costs of the present situation, i.e. given existing infrastructure, staffing, equipment, management quality etc.;
- Minimum standards – Calculating the cost of functions based on minimum service standards.

In Macedonia the historical costs for the primary education seems the most appropriate approach at the moment to provide attempt for calculation of the fiscal gap. This is obvious if we accept the fact that the cost drivers approach will retain inequalities between entities (institutions, municipalities) due to differences in infrastructure and data requirements and the minimum standards may require very extensive and time consuming data collection and analyses.

Here we will use few techniques in attempt to calculate the tentative fiscal gap. First, we will use the “accounting” technique by taking into account the purchasing power of the transfer (indexing for inflation) and the change of number of students. Second, we will use the special part budgets of the LGUs in Macedonia in order to see how much LGUs are allocating from own source revenues as a source of financing maintenance of primary schools. Third, we will illustrate what other researchers have done.

*Accounting approach*

Here it would be beneficial to analyse the real terms for providing primary education service in Macedonia. For that purpose let us analyse the following accounting exercise.

Table. Real terms accounting for the primary education in Macedonia.

	2004	2006	Change (nominal terms)	Change (real terms)	Change in number of students	Percentage change per student
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Primary Education	422,9	440,0	4,0	14,1	5,3	8,8
Transportation of students	169,2	210,0	24,1	9,1	5,3	3,8

Source: EAR TA to Ministry of finance 2008.

We can see that in real terms (column 4 indexed for by the CPI inflation) there are real increases in transfers in 2006 compared to 2004. The year 2006 is taken rather than 2007 for consistency comparison with 2004 before the second phase of the process of decentralization started. In the same 2006 the number of students increased by 5,3% compared to 2004 thus, the real percentage change per student is increasing by 8,8% for maintenance and 3,8% for transportation of students.

*Special part budgets approach*

By analyzing the special part budgets of the LGUs we can see that LGUs have on disposal the following sources of financing its programs: a) own source revenues, b) self financing activities (LGU's budget users are financing some activities), c) donations (foreign donors are very active in Macedonia –for example the USAID PEP project), d) transfers from central government and e) loans (LGUs in Macedonia are allowed to borrow to finance their activities).

From these special part budgets (see next table) we can see that LGUs are allocating own source finances (8,6% share). The self financing activities (renting school space and payments made by parents) are almost on quarter (24,5%) on top of the transfers from the central government. The transportation transfers seems to be relatively enough to cover the service.

Table. Shares of sources of financing primary education.

2006 structure	Budget	Self-financing activities	Donation	Transfers	Loans	Total

Primary education	8,6%	24,5%	1,3%	65,7%	0,0%	100,0%
Transport for primary school pupils	0,3%	0,0%	0,0%	99,7%	0,0%	100,0%

Source: EAR TA to Ministry of finance 2008.

#### *Other researches*

From the interview with the local expert of the Municipal management of schools project conducted by DAI and the data kindly provided by her (municipalities analyzed: Berovo, Brvenica, Krusevo, Resen, Strumica, Tearce, Vasilevo 6-digits budget items expenditures covered by the earmarked grants) we present the following calculations.

Table. Comparison between the earmarked grants and the average costs with transportation\*.

	2004/05	2005/06
Number of pupils in primary education	223876	235691
Earmarked grants in million denars**	660	820
Total costs in million denars	896	935
Difference between the average cost and the earmarked grant in million denars (tentative fiscal gap)	236	115

Source: Data kindly provided by Ms Marija Dukovska-Pavlovska and author's further calculations.

\*The number of students in these municipalities are representing around 6% of the total number of pupils in primary education.

\* \*The 2005 earmarked grant is calculated as double the grant for the second half of 2005.

The results from the table above are illustrating the results of the following data transformation: first, we calculate the average expenditure from the 7 LGUs per pupil and make an assumption that this average is a good proxy for the national average. We then take the calculated per pupil average and multiply it with the total number of pupils in the primary education in Macedonia (transportation costs included). When we compare this calculation with what is being transferred by the central government we can see that in 2005 the earmarked grant was short of 236 million denars and in 2006 the tentative fiscal gap was 115 million denars.

The actual costs for transportation are very uneven (see next figure) and thus, we repeat the same calculation this time without the transportation costs.

Transportation costs per student for 2006 in denars

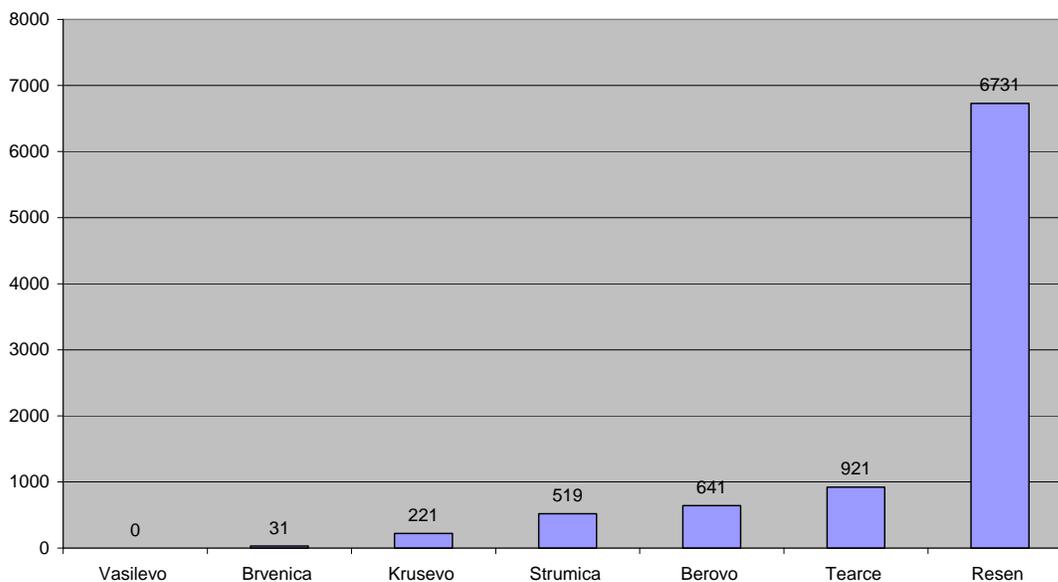


Figure. Transportation costs per pupil for 2006 in denars

The results are illustrated in the following table.

Table. Comparison between the earmarked grants and the average costs without transportation.

	2004/05	2005/06
Number of pupils in primary education	223876	235691
Earmarked grants in million denars	486	610
Total costs in million denars	588	613
Difference between the average cost and the earmarked grant in million denars (tentative fiscal gap)	102	3

Source: Data kindly provided by Ms Marija Dukovska-Pavlovska and author's calculations.

\* The 2005 earmarked grant is calculated as double the grant for the second half of 2005.

It seems that the tentative fiscal gap was 102 million denars in 2005 (transportation costs are not analysed) and that it is only 3 million denars in 2006.

However, these calculations should be taken with precautions and great doze of reserve as the differences across LGUs are large and the 7 LGUs taken here might not represent the national average (see annex).

## **Allocation formula**

In order for municipalities to be able to properly carry out the functions assigned to them, sufficient finances must be available. However, the available funds (budget ceilings) – which are the result of political negotiations between the line ministries and the Ministry of Finance – may not always fully match the calculated financial needs of municipalities. Adequate allocation mechanisms for the different areas are therefore equally important.

To distribute the aggregate amount to municipalities requires an allocation formula, which should be based on objective criteria. Furthermore, it should be fair, transparent and take into account, where relevant, main cost drivers. Although deciding on a specific transfer mechanism ultimately is a political choice, the design should be based on and guided by sound principles such as:

- Providing revenue adequacy – Adequate resources must be provided to the municipalities to achieve the objectives of the transfers;
- Stability – Transfers should be stable over time to promote revenue predictability and overall budget certainty;
- Simplicity and transparency – Only one policy objective should be pursued with each transfer programme; the formula should be understandable to all stakeholders and not be subject to political manipulation or negotiation;
- Incentive compatibility – The transfer system should not create negative incentives for revenue mobilization (if, for instance, transfers are reduced when own revenues are increased), nor should they encourage inefficient expenditures (if, for instance, transfers automatically increase when expenditures increase); such negative incentives can be avoided by establishing formulas on fiscal capacity and financial requirements instead of attempting to equalize actual revenues and expenditures;
- Transitional arrangements – In order to avoid sudden and large changes, the introduction of new transfer mechanisms should be accompanied by transitional arrangements that allow municipalities, during a certain period of time, to adjust to the new system.

Another important issue is that of data. First of all, data sources and estimation procedures must be kept public and transparent. Secondly, calculation and distribution formulas should be based on a limited number of variables because updating large numbers is costly and difficult (besides lowering transparency and increasing the risks of manipulation). In other words, a balance must be found between the need for simplicity and transparency, and the wish to build the most accurate picture of the financial requirements of the municipalities.

As an example, in Macedonia the allocation of the earmarked grants for 2008 is done with the methodology and criteria for allocation (OG 129/07). Here are some principle notes on this methodology:

1. The methodology doesn't publish at all the total amount allocated as earmarked grants for primary education;
2. It lists the criteria upon which the grant is distributed across the LGUs;
3. The formula consists of a fixed share equal to all LGUs and a variable share depending on LGU characteristics;
4. The LGU characteristics take into account the number of students and the population density;
5. One variable "BHД" is not explained (it is used to calculate the "Standard (amount)");
6. The so called Standard (amount) variable is actually not a standard but rather an amount calculated in a "backward calculation methodology" as a residual and thus, it is changing year-by-year and cannot provide stability and predictability.

### **Recommendations**

1. The Ministry of education and science should conduct a wider research agenda to find out:
  - a. Costs of providing primary education service;
  - b. Study the differences across LGUs in Macedonia;
  - c. Include few not many (in order to keep it simple) variables in the allocation formula in order to address these differences and in line with the strategic priorities;
2. The overall presentation of the allocation methodology needs a clearer and more transparent presentation;
3. Sharing data and information from the Ministry of education and science should improve;
4. Presenting only formula without clearly monetizing key variables is not exercising transparency but rather keeping a "reserve power" to potentially change allocation of grant outside the formula;
5. The Ministry of education and science could consider introducing standards and norms in the primary education (something similar to the kindergartens and the effort from the Bureau for improvement of households-see more at EAR TA to the Ministry of finance 2005);
6. If standards and norms are introduced then the allocation formula can improve and might reflect also the real costs.

**Annex 1:**

The next table illustrates descriptive statistics for primary education sources of financing in order to see the difference between the rural and urban LGUs in per capita denars. It shows the sources of financing from the special part budgets for urban and rural municipalities (from 64 municipalities for which budgets were available) and denars minimum, maximum and average per capita.

	rural primary education per capita own budget	urban primary education per capita own budget	rural primary education per capita self financing	urban primary education per capita self financing	rural primary education per capita donations	urban primary education per capita donations	rural primary education per capita transfers	urban primary education per capita transfers	rural primary education per capita total	urban primary education per capita total
Minimum	0	0	0	0	0	0	0	0	0	0
Macedonia (64 LGUs)	4	35	27	97	0	5	209	237	240	374
Maximum	141	1208	167	372	0	142	377	784	535	2289

Source: EAR TA to Ministry of finance 2008.



## References:

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- [6] UNDP, “*Fiscal Decentralization in Transition Economies: Case Studies from the Balkans and Caucasus*”; 2005
- [7] USAID PEP project documents



**NOTES:**