Schools Funding in Georgia

Changes, Problems and Analysis

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Abstract

There is no fixed rule about how financial resources must be directed to the education sector. It is quite clear that the size of investment in the sector well defines the quality of education students are offered. It is highly important to define the amount of money, which is needed for effective functioning of schools and it is also important to define the system of actions, which will support the functional use of those financial resources.

In relation to the above-mentioned, the aim of our study is to analyse general education funding during the post-reform period and based on it to show those problems, which, in spite of the significant rise in funding, arouse as a result of implementing a new system and its further change.

Data sets for the research project were taken from the Ministry of Education and Science of Georgia, National Statistics Department of Georgia and directly from public schools. The object of study is all public schools in Georgia, and the period of data gathering is from 2005 till 2011.

The rational for conducting the study is due to the necessity: the new funding system for the general education schools drastically changed general education finance model. Although, a number of schools fallen under so called deficit school category in the first year of implementation of the new funding system. Period more than 1300 public schools (out of 2180) had shortages in the budget. In 2011 a new, mixed type of funding model was introduced, schools with up to 160 students were funded using so-called need based approach. Under the new funding model schools with student population from 161 to 599 receive base funds. Even though this approach has worked well in terms of eradicating deficits, a number of essential problems were originated.

In the paper, the authors present some conclusions and recommendations on how to solve the existing problems and how to improve the financing model in the future; one of the most important conclusions is that voucher funding scheme couldn't manage to accomplish general education funding goals relating fairness, adequacy and effectiveness. This will only be possible (a recommendation), if expenditure on education as a share of GDP increases by at least 4.5-5% (it was 2.3 in 2011). Shifting to the formula funding is among the recommendations; it will guarantee: balance between the regions, stability, comparability, forecast and it will raise the quality of transparency.

Introduction

Most of the countries allocate big chunk of financial resources for development of the field of education. Since there is a higher probability that educated person will have proper knowledge and skills to be a better citizen by contributing in economic, social and political development of the society, quality of education, starting from the pre-primary education sector, is very important. When we talk about education finance, we mean the share of education expenditure in GDP. Broadening education opportunities is directly related to funding education policy. Over the last decade education finance has gained utmost importance in Georgia. Alongside a number of sweeping social and economic reforms education reformation process has taken place.

We single out the issues that are related to education finance and determine the effectiveness degree of the reformation process. Those issues, listed below, need to be inquired farther by the decision-makers, policymakers, researchers and education administrators:

- The volume of investment in the field of education
- The list of effective mechanisms of distribution of public money
- Financial management process in educational institutions.
- Relationship between the learning outcomes and education financial resources.
- The role of private sector and household in funding education sector.

There is vast variety of best practices in different countries regarding to resolution of the above-mentioned issues. In the science literature, a special attention is given to the development of the general education sector and accordingly to define best possible funding formula. Also, to identify the relationship between the student learning outcomes and expenditure per student. Those findings could be used to monitor the spending practice and policy of educational institutions. Even though, there is no fixed rule how to direct financial resources to education sector, it is quite clear that the size of investment in the sector well defines the quality of education students are offered. It is highly important how to define the amount of money that is needed for effective functioning of schools. In some cases, it is mistakenly perceived that the raise of funding amount is a cure of the problem. The automatic process of allocating more money for the educational programs will not guarantee the raise of students' academic performance. That type of strategy cannot be considered as the way-out. This assumption is well – proved by a number of research findings. Hanushek and others assert that the increase of education funding doesn't necessarily translate into an increase in

students achievements (Hanushek and Kim, 1995). However, it should be mentioned that this finding applies well to developed countries. Money does matter when it comes to developing countries' education systems. Since Georgian belongs to the developing counties group, it is vitally important to allocate more money in the education sector.

The purpose of this study is to analyze the period after general education funding reform in Georgia and revealing the problems followed by the introduction of a new system of funding. For this we: analyzed general education funding mechanisms, which took place after education reform in Georgia in 1005-1010(1), also studied changes and results in funding system since 2011 (2).

"Law on General Education"(2005) determined the general education system setup, operation, management and funding model, which cause significant increases of school funding.

However, during the first years of voucher funding a lot of schools reported that the funding was not sufficient for them and they needed additional money to cover salaries and other costs.

The slight increase in the voucher amount, which took place in the years of 2006-2010, could not solve the budget deficit problem.

Under the Georgian government resolution #395 (23.12.2010) (About calculating financial norm per student and determining respective standard voucher amount for funding general education), the scheme for funding education changed. According to the new scheme, school funding became mixed.

The only major advantage of the new funding system is that budget deficit at schools has shrunk, which has resulted in the fact that school staff now receive their salaries on time.

Nevertheless, this funding system has a lot of drawbacks, which makes us say that funding must be increased in order to improve education process at schools, after which formula financing should be adopted, the model approved by European countries.

1. Education Reform and General Education Funding

1.1 General Education Funding

One of the most important issues, which helps a school function normally, is funding.

"Law on General Education"(2005) determined the general education system setup, operation, management and funding model.

The basic approach to the reform implies that the education system should serve the needs of pupils and students, their capabilities and interests, but not those who are involved in the educational process, educational administrators and teachers. Government and the Ministry of Education and Science prepared the strategic documents stating the long-term goals about the major changes in the sphere of education and science:

• Social Inclusion – is a formation of an education system that will ensure the maximum involvement of all citizens of Georgia in the educational process;

• Civic Integration – is the integration of ethnic minorities in the society with the help of state language teaching and education oriented programs;

• Competitiveness – is the establishment of such education and science system which will equally compete with European science and education system.

• Facilitating the development of knowledge-based environment in which knowledge, as productive force, plays the crucial role in the creation of capital.

To achieve these objectives, the Ministry of Education and Science has prepared the strategy of actions:

• Democratization of the education and science management process and wider public involvement;

• Decentralization of the education system and the provision of educational institutions with autonomy;

• Establishment of quality assurance schemes for the education sector, result oriented management and resource allocation mechanisms;

• Increase funding for the education sector and the development of material - technical framework;

• Develop new mechanisms for funding the education sector;

• Establish the educational environment in accordance to modern standards;

• Worldwide integration of education and science, the development of science and educational – research centres in high schools.

• Creation of favorable conditions for the continuous education and life-long learning;

• Promoting inclusive education.

Altering the general education sector financing model has been one of the key changes since the reform has been implemented. Other than changing the context of the funding formula the amount of money allocated for the general education sector has increased considerably. Without new funding formula is would be rather hard to support successful implementation of the reform directions. Since 2003 Georgia has one of the fastest growing economies in the region. That translated into a raise of the Gross Domestic Product (GDP) and consequently the national budget has increased. The following chart shows a flow of GDP and general education expenses from 2004 to 2001.

GDP and State Expenditures on Education

Table 1.1

Line item	2004	2005	2006	2007	2008	2009	2010	2011
GDP (in million Georgian Lari)	9824	11621	13790	16999	19070	17986	20743.4	24229.1
General education expenses (in million Georgian Lari)	89,7	89.4	332.5	379.3	419,6	497.6	542,1	564,9
Education expenses as a share of GDP	0.65%	0,76%	2,41%	2,70%	2,23%	2,76%	2,61%	2,33

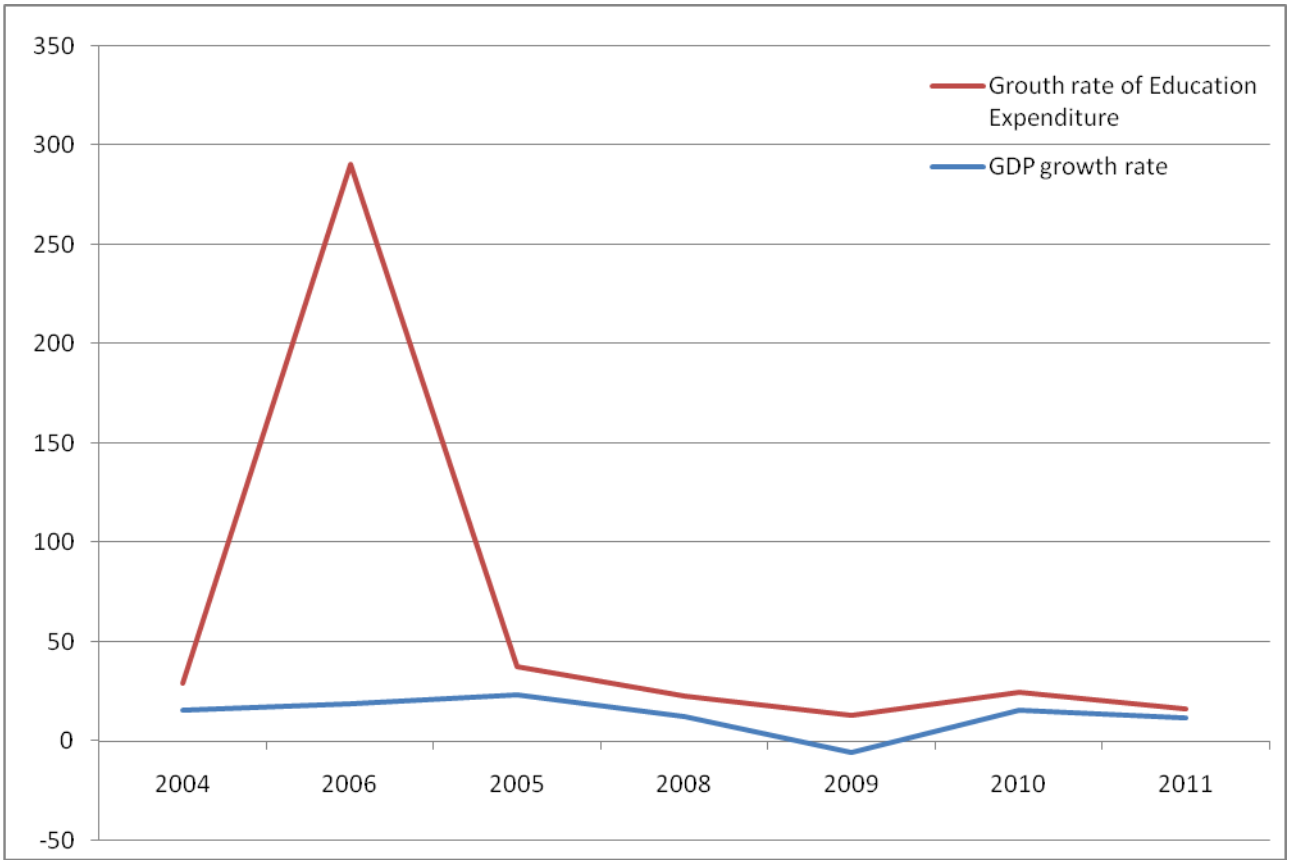
Source: www.GeoStat.ge, www.mof.ge Authors' calculation

Up to 2009 the growth of GDP has been stable 12-13%. From 2009 on the growth of GDP has decreased due to war with Russia in August, 2008 and global economic crises. As it is shown on the

chart money allocated in the general education sector increased noticeably from 2004 to 2011. While the money allocated on the general education sector in 2004 was 89.7 million Georgian Lari (GEL) in 2011 the amount increased 6.3 times, totalling 564.9 million GEL. However it should be mentioned that the small amount of money allocated in the general education sector in 2004-2005 fiscal year is due to the fact that at that time big chunk of money was taken from the local government budget. From 2006 per capita financing model has been introduced for general education schools (both public and private). From 2009 there is a tendency of lessening of a share of education expenditure in GDP. Group of researchers argue that one of the contributors of this process is that from 2008 all Georgian schools introduced 12th grade. Also, there has been increase in teachers pay. However the percent of certified teachers, who are paid extra money, was very low (up to 10 %).

Growth Rates of GDP and State Financing of Education

Figure 1.1



We analyzed all the funds allocated on education sector and then singled out a share of general education sector. We calculated expenses per student and for the general education development program considered by the Ministry of Education and Science of Georgia.

From 2006 the general education sector is mostly financed through the central budget. The funds were accumulated in the Ministry of Education and Science budget. Expenses for general education sector represent 60-65 % of the entire ministry budget. All the costs for public schools operations (partially private schools) are covered that program – teachers' salary, heating and other maintenance and office operation related expenses.

Indicators of State Financing for Education

Table 1.2

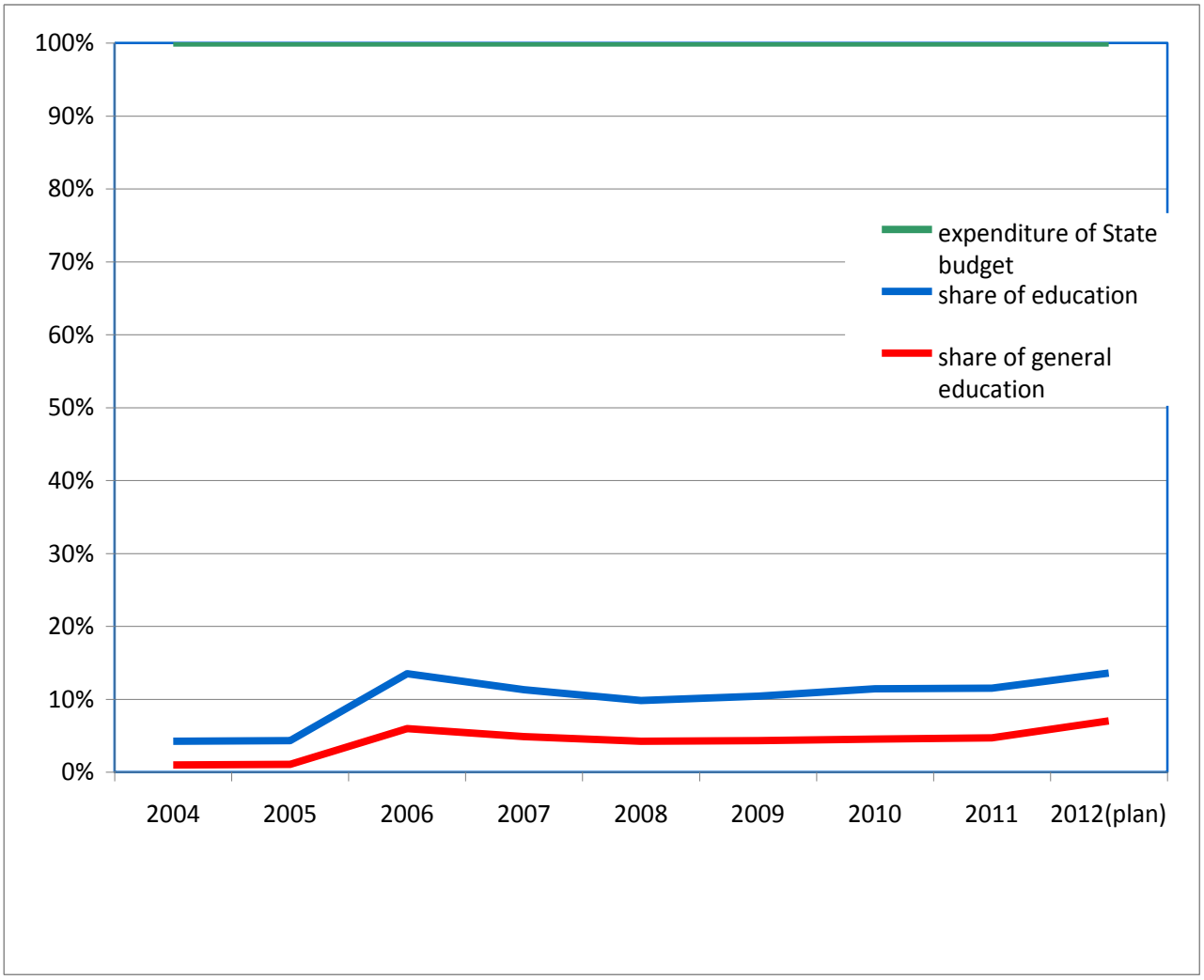
Source	2004	2005	2006	2007	2008	2009	2010	2011
national budget (In million GEL)	1 930.2	2 618.6	3 822.5	5 237.1	6 758.8	6 754.1	6 972.3	7.459.3
State funds for education (in thousands GEL)	89,7	89.4	332.5	379.3	419,6	497.6	542,1	564,9
State funds for general education (in thousands GEL)		37.0	267	289.1	315.3	320.2	350.9	392.1
State funds for education as a percentage of the national budget	3,4	3,4	8,7	7,24	6,2	6,8	7,8	7,6
State funds for general education as a percentage of the national budget	1.0	1.1	6,9	5,5	4,7	4,7	5,1	5.25
Per capita amount (GEL)	29,3	46.0	420	470.3	490.1	512.7	589.3	689.7

Source: www.GeoStat.ge, www.mof.ge, Authors' calculation

As it is shown in the chart GDP as well as national budget is growing steadily (1,1-1,4 %), except 2008-2009 fiscal year. Even though there has been permanent raise in education sector funding it is too low as a share of the national budget.

Share of Education Expenditure in the National Budget

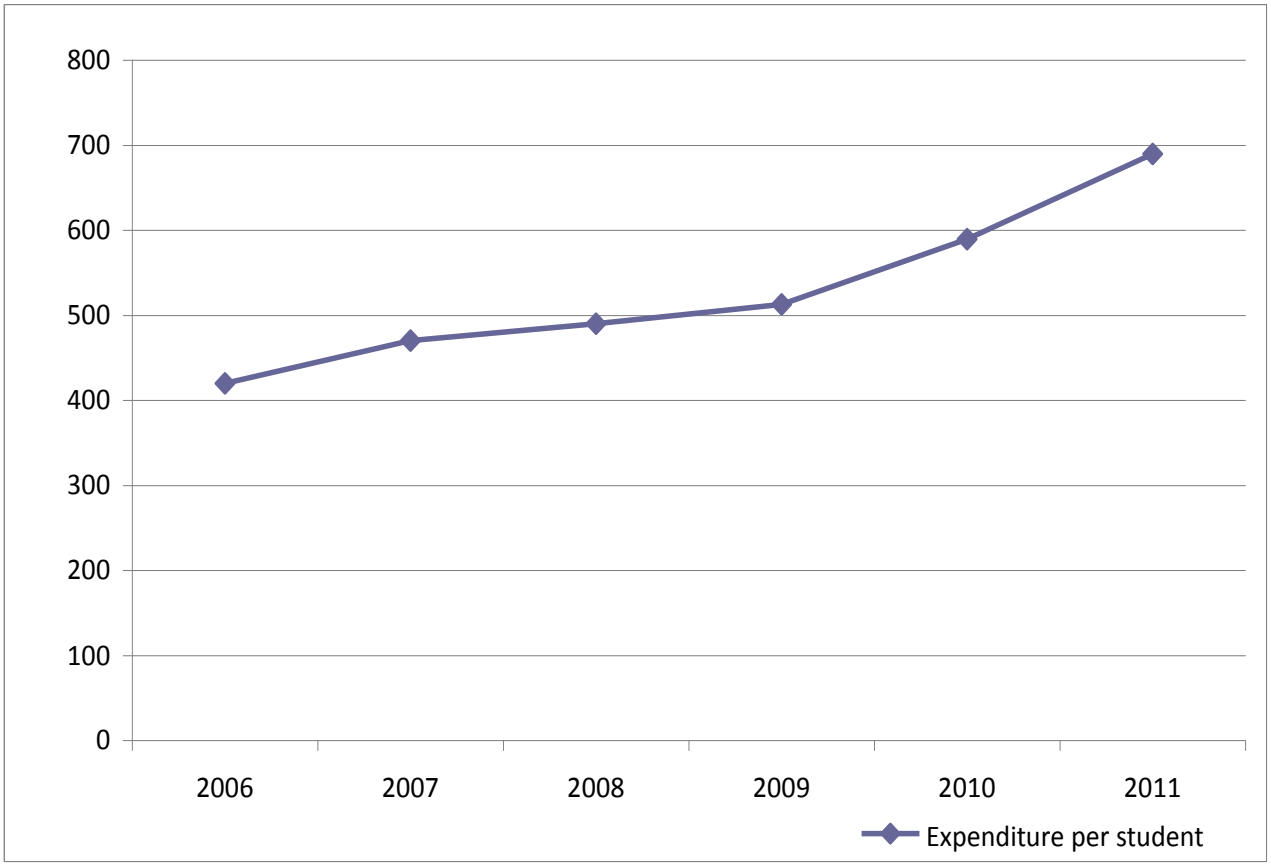
Figure 1.2



As mentioned earlier, the raise of funding education sector, especially general education, at the first stage of the reform was exceptionally high. However, that amount was not enough to cope with all the challenges and problems (post Soviet era legacy) the education sector was facing.

Expenditure per student

Figure 1.3



It is clear that GDP, as well as the expenditure on education as a percent of GDP have risen from 0.65% (2004) to 2.41%, the growth has slowed down and has been close to 2.5%: sometimes it slightly exceeds this percentage or is slightly under it. Education expenditures from the state budget have also increased, resulting in the increased education expenditures per student. As we will see below, it is not enough at all.

If we look through he data of various countries of the world for the same period, we will learn that, according to the European Union 27, education expenditures was 5.4% of GDP in 2009. Expenditure on education, as a percentage of GDP was highest in Denmark (8.7%), Cyprus (8.0%), Sweden (7.3%), Finland (6.8%), Belgium (6.65), Ireland (6.5%), Estonia (6.09%); the percentage is also high in East Europe's countries and Baltic States (6.09-5.64%), from which Romania has the lowest (4.24%), whereas it was 2.76% in Georgia in 2009.

Expenditures per student also vary. The USA spends $ 10.995 per elementary and secondary student, which is 35% more than the average of Organization for Economic Co-operation and Development (OECD) countries, which is $ 8.169. Expenditures per secondary student in the USA were $ 29.910, twice as big as the average of Organization for Economic Co-operation and

Development (OECD) countries, which is $ 13,461 on average. Education expenditures per student is also high in Switzerland, which is 13,775 $ in the elementary stage and 21.648 $ in the next stage. In Norway it was 12,070$ and 18,942$. The percentage is relatively low in East Europe's countries and is 682 $ and 7,063 $ in Poland and 4,626 $ and 7,327 $ in Hungary etc. (eurostat.ec.europa.eu 2010). But those figures are significantly higher than the corresponding figures in Georgia.

While discussing programs focusing on development general education sector we should pay some attention to program(s) that are targeted to improve infrastructure of Georgian public schools.

The Soviet and post Soviet legacy in terms of school system infrastructure has been one of the biggest challenges the government has been facing for years. Before 2004 it had been 20 years nothing tangible done as far as schools infrastructure is concerned. Almost all, if not all schools, especially in the peripheral regions and high mountainous villages were dilapidated, equipped with outdated furniture and teaching resources, heated with wood stows. Consequently, all that played detrimental role on teachers and students performance. Since 2005-2006 school years a national program "Jacob Gogebashvili–Rehabilitation of Georgian Public Schools" has been introduced. The main goal of the program is to create modern and safe environment for all students. The program is focused on to renovate, to equip with proper furniture and teaching resources. Another program "Deer Leap", launched in 2005, is focused to equip schools with computers and other IT equipments and to connect schools and Educational Resource Centres (ERC) to the World Wide Web. The program was designed based on the best practices of Estonia ("Tiger Leap"). Nationwide program "My New Computer" has been launched with patronage of the President of Georgia and is focused to foster IT integration in the learning process.

Infrustructural Programs

Table 1.3

Years / Programs	2005	2006	2007	2008	2009	2010	2011
Jacob Gogebashvili – Rehabilitation of Georgian Public Schools	731 .0	73 472.0	78 831 000	24 139 400	35 500 000	13 775.0	37 736.2
Deer Leap	2 822.6	5,830.00	12,931.80	12,253.90	2,623.40	2 723.5	6 923.2
My New Computer				3 974,3	2 362,1	3 064.0	24 693.3

Source: Ministry of Education and Science of Georgia http://www.mes.gov.ge

1.2 Introducing Voucher System

In 2005 Georgian government enacted a new general education law which defined a funding system for general education schools. Based on the new system, schools would receive funds from the central budget based on the norm calculated per student. The amount did not include funds for the capital expenses.

Under the previous law schools received funds from two different sources: central and local budgets. That approach caused the following problems:

- Ineffective use of funds. In order to receive more money from the government, schools deliberately raised number of classes, which would translate into increasing number of teaching hours. Schools had more teachers and administrators than they were in need.
- Transfers from the central budget were not calculated based on the needs of specific regions. For this reason, wealthy regions would get more money than the poor ones.
- Lack of transparency was another challenge, especially at the local level. Getting funds from the local budget was depending on school administrators and local government representatives' suspicious agreement.

In 2005 Georgian government issued a decree # 182, which defined how to fund general education schools, both public and private. Base voucher amount was defined as 220 GEL. Coefficients were determined as follows: city schools -1; rural area schools - 1, 5; and high mountain region schools – 1.8.

Schools were given freedom to spend money for constriction or/and renovation purposes if they would have spare amount of money after meeting the needs of national curricula.

The new funding system envisioned to reach several goals: to meet the needs of low socio-economic students (mostly resided in rural and high mountain regions); to supporting the school enlargement process throughout the country; and to promote privet school network.

1.3 I Stage of Voucher Funding–Reducing the Number of Schools and Increasing so-called Deficit Schools

Before 2005-2006 school year there were 2733 schools around the country. After the new funding system was introduced about 200 schools were closed, merged with bigger schools.

Distribution of Schools and Students via Voucher Size

Table 1.4

	Voucher amount in GEL	Number of Schools	Number of Classes	Number of Students	Average school size	Average class size
2005-2006	220	564	12858	309992	550	24,1
	330	1197	15319	219028	183	14,3
	396	709	7934	72530	102	9,1
	Total	**2470**	**36111**	**601550**	**244**	**16,7**
2006-2007	220	533	13099	316403	594	24,2
	330	1115	15313	213648	192	14
	396	634	7621	69626	110	9,1
	Total	**2282**	**36033**	**599677**	**263**	**16,6**

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

A parallel process of that cased shortening a number of schools in the rural and high mountain regions were that more and more people left the regions for city.

Students' Portions in Different Type of Schools

Table 1.5

	City	Rural	High mountain
2005-2006	51,5%	36,4%	12,1%
2006-2007	52,8%	35,6%	11,6%

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

Under the new law schools enjoy maximum financial autonomy. Most of the schools decided to hire more teachers. City schools hired 742 and rural schools 458 more teachers in total. There was decrease in number of teachers in high mountain regions. However teaching load was increased. Even though policy makers envisioned that a teacher-student ration would increase, the new model caused a slight decrease of the ratio (from 8.72 to 8.6).

The major problem caused by the new law was so-called deficit schools (schools with deficit budgets). Because, the majority of public schools in Georgia have small number of students, funds received based on the number of students are not enough to pay all the operational expenditure (personnel salary and utility expenses). That fact was taken into consideration for the high mountain region schools. By the law they were eligible to receive additional funds from the central budget. In 2005-2006 school years 874 public schools had less than 100 students. Only 71 public schools operated with more than 1000 students.

The Distribution of Schools by Their Size and Number of Students

Table 1.6

School size	Number of schools	Number of students	Schools average size
0-99	874	47016	54
100-199	675	97180	144
200-299	293	70887	242
300-399	189	64464	341
400-499	118	52625	446
1000-1499	52	62680	1495
1500-1999	17	29052	1942
2000-2499	2	4899	2466
Total	2470	601550	2466

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

New law defined the minimum/base teacher salary – 115 GEL. The following components were defined to calculate teacher salary: education level, qualification, experience, and number of students in the class. After reviewing the data we found that in 2005-2006 school year about some schools did not have enough money to pay for the base salary to the teachers.

If we take account that teachers salary represents the majority of the school expenses (up to 75%) the number of schools that had problems to pay due increased up to 833 schools (1/3 of the all schools).

1.3 II Stage – Problems of Voucher Funding Model

As mentioned earlier, during 2006 -2009 the size of voucher amount changed several times. In 2006 the base voucher was defined 234 GEL. Coefficients were changed the following way: city – 1; rural

– 1.49; high mountain – 1.8. Changes were made in 2007 as well. In 2008, base voucher was defined 325 GEL. Coefficients were changed the following way: city – 1; rural – 1,385; high mountain – 1,738. In addition to that schools with students population up to 400 in city and up to 200 in rural areas the following coefficients were determined: city – 1,062; rural – 1,462.

Voucher Growth in Georgia (2005-2010 in GEL)

Table 1.7

	2005	2006	2007	2007	2008	2009
City	220	235	250	300	345/325	415/380
Rural	330	350	350	420	475/450	545/505
High Mountain	396	425	425	510	565	635

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge,

During 2005- 2009 the size of school voucher changed 5 times for the city schools and 4 times for the rural schools. In 2008 if the city school had less than 400 students voucher amount would be 345 GEL. While the city schools with over 400 students received 325 GEL per student. Concurrently, rural schools with less than 200 students received 475 GEL per student; schools more than 200 students received 450 GEL per student. In 2009 there was a significant increase in funding. In some city schools received from 17- 20.2% raise (depending on school size). The same figure for rural schools were 11.2-14.7% and for high mountains schools 11.2%. The rational behind the decision to fund based on the geographic bases was the big discrepancies of number of students' population in those schools. Later changes did not have positive effects on deficit schools, especially in the rural and high mountain areas. Taking into account the fact that student population was decreasing in those regions that type of approach had a detrimental effect on schools operation. School administrators were left out with no chance to elaborate programs for school development.

Let us strengthen our point with the help of some statistical data:

The number of those schools, which asked for the additional financing, was rising year by year. In 2007 there were 1136 such schools, in 2008 their number reached almost 1300 and in 2009, the additional financing was received by 1623 public schools at different times of the year. They constituted 75% of all schools.

Schools asked for additional funding mainly for two reasons – in winter, to provide heating and pay the heating bills, as well as to repair heating systems. In 2008 such funds constituted 20% of all the additional financing. Schools demanded additional money to pay teachers' and administrative salaries. In 2008, such financing amounted to 26.4 million GEL, and in 2009 such financing rose to 31 million and constituted 11.25% of all the additional financing public schools received. It must be noted that in 2009, compared to the year before, voucher financing increased, approximately by 18%. This rise was supposed to be followed by improved financial conditions at schools, but the opposite happened, schools asked for more additional money and additional financing increased respectively. Thus, the rise of voucher financing did not lower the number of schools with budget deficits, vice versa; their number has been rising since 2006, when the voucher financing system was introduced.

According to 2008 data, 2461 schools were financed, among which 2215 were public. The number of students was 615 082, among which 576 687 at public schools.

Among schools with budget deficits there are schools, which vary by geographical location, as well as by grade levels. The majority of such schools have small number of students. Table 1.8 shows the Distribution of schools with budget deficits by number of students.

Distribution of Schools with Budget Deficits by Number of Students

Table 1.8

Number of students at school	Number of schools with budget deficits	Number of students	Annual budget deficits (GEL)
0 - 10	18	117	311,604
10-20	50	792	1,112,760
21-30	66	1658	1,495,764
31-40	54	1912	1,294,056
41-50	104	4706	2,403,216
51-100	419	31191	7,214,868
101-200	333	44013	2,967,216
201-400	71	19921	554,316
400+	21	11510	130,308
Total	**1,136**	**115,822**	**17,484,108**

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

The analyzes of 2009 data shows us that the situation has not changed, schools with up to 100 students, 697 (out of 699) have budget deficits. It should be noted that those schools, where there are more than 400 students, need additional financing. Such schools are considered bigger than medium-sized (275 students) ones, taking into consideration the sizes of our public schools. 160 schools (35%) out of 451 received additional financing.

At up to 1500 public schools (70% of all public schools), the number of students is less than average and 90% of these schools have budget deficits. Careful examination of schools' real financing (voucher financing plus additional financing) shows us that there is considerable difference in the real financing per student. The table below shows 837 schools with more than 57 000 students, the real necessary financing amount per student is more than 510 GEL, i.e. more than voucher financing amount.

Real Spending per Student

Table 1.9

Range of real financing per student (GEL)	Number of schools	Number of students
>5000	2	6
4000-5000	5	24
3000-4000	5	41
2000-3000	23	332
1000-2000	196	6469
750-1000	194	11005
510-750	412	39193
510	184	36836
420-510	212	31848
420	519	148071
300-400	87	28863
300	376	273999
Total	**2215**	**576687**

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

231 schools need at least 1000 GEL per student. Considerable additional money is needed in order to lower the number of schools with budget deficits, by increasing voucher financing. It must be taken into consideration that voucher rise equally concerns schools with and without budget deficits.

The share of schools with budget deficits is less in town schools, but they consist 54%. 90% of those schools, which receive "mountain region" voucher financing, have budget deficits. As for schools located in villages, 75% of them have budget deficits. If we take into consideration the fact that existing voucher financing amount is determined by geographical location of schools and is aimed to give equal conditions to schools located in complex geographic areas, it cannot do what it is supposed to do – the large part of these schools need additional financing.

In 2008-2009 research was carried out at the Ministry of Education and Science on the opportunities to modify existing voucher financing scheme. In the process, several modified voucher financing schemes were examined – amount of financing per student was determined considering several factors. Among the factors were regional differences, number of students and classes at school, school type.

Calculations showed that any similar scheme for financing, which takes into account several factors, requires either additional financing, or distribution of finances among schools with and without budget deficits. Furthermore, it is not suitable to single out schools and create different financing mechanisms for them (without several exceptions), because it is not clearly defined what "schools with budget deficits" really mean and there is no rule according to which schools can be considered to have budget deficits. Moreover, new schemes for financing schools with budget deficits also require financing amount to be risen, but unless the sustainability of the mechanism is provided, double standards will take place, which will result in uncertainty.

In 2010 the financing practice, which was used in the years before, remained. Thus, the situation was the same.

At that time, there were 2462 schools in Georgia with 622 159 students. 2180 was public with 574 796 students. Here is the distribution of schools and students by regions

Distribution of Schools and Students by Regions

Table 1.10

Indices	Number of public schools	Number of students
Mountainous Regions	604	62 241
Villages	1080	203 295
Towns	496	309 581
Total	2180	575 117

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

It should be noted that, compared to the year before, there was no dramatic change in the number of schools and the number of students there. The number of students at public schools declined by a very small percentage (by 1%), but the number of students at private schools increased. Voucher amount was not increased also. However, the additional funds asked by schools rose. If it was 31 882 700 GEL in 2009, it was 37 230 540 GEL in 2010, i.e. it rose by 15.4%.

Financing of Schools with Vouchers and Additional Funds

Table 1.11

Years / Indices	2010		
	Voucher financing	Additional financing	Total
Mountainous Regions	39 371 860	15 397 975	54 769 835
Villages	106 451 009.5	17 697 488	124 148 497.5
Towns	121 419 351	4 135 077	125 554 428
Total	267 242 220.5	37 230 540	304472760.5

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

The number of schools with budget deficits, according to the Ministry of Education and Science, ranged between 1296-1276, monthly. But because of replacing schools monthly, this figure reached 1570, out of which more than 1200 schools have budget deficits in every or most months and get additional financing.

Despite the merger of schools with small number of students, which had the biggest impact on schools in the mountainous regions, in 2010, still, 91% of schools located in such regions have budget deficits, 73% of the regions' students go to those schools; 74% of village schools have budget deficits, with 51% of students and 46% of schools located in towns have budget deficits, with 28% of students. The reasons such schools are rising are various. As we have already mentioned – increase in heating bills, among which are schools situated in towns too (as such schools have budget deficits mainly in winter), irresponsible principals and rising of the voucher amount more slowly than it rises for a student going to school in town.

We can also assume that additional funding increased after the rise of certified teachers, who required more additional salary.

Financing of Schools with Vouchers and Additional Funds

Table 1.12

Years / Indices	2010		
	Voucher financing	Additional financing	Total
Mountainous Regions	39 371 860	15 397 975	54 769 835
Villages	106 451 009.5	17 697 488	124 148 497.5
Towns	121 419 351	4 135 077	125 554 428
Total	**267 242 220.5**	**37 230 540**	**304472760.5**

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

2. Analyzes of the Financial Resources Used by Schools

2.1 Income structure

The analyzes of income structure of public schools shows us that the main financing to schools was given by the government – 96% of the total financing in 2010 schools received was from the government (central budget), out of which 87% is voucher financing and schools got 9% additionally or as additional grants. Such additional financing was received mainly by schools with budget deficits, i.e. those schools, for which voucher financing is not enough to cover communal bills and salaries. Central budget share in financing schools, except schools in Tbilisi, is 98-99%. Georgian regions do not differ in that way.

As for the share of local government, it is very low and amounts to 0.84% across the country. It must be taken into account that schools have the right to fully control that money. This money does not include financing schools renewal programs, which is done directly by the local government.

Income from economic activities is relatively high (1.62%). It must be noted, however, that this figure is different by regions. It is quite high in Tbilisi, where schools located in the central parts manage to receive relatively high income mainly by offering students additional educational service.

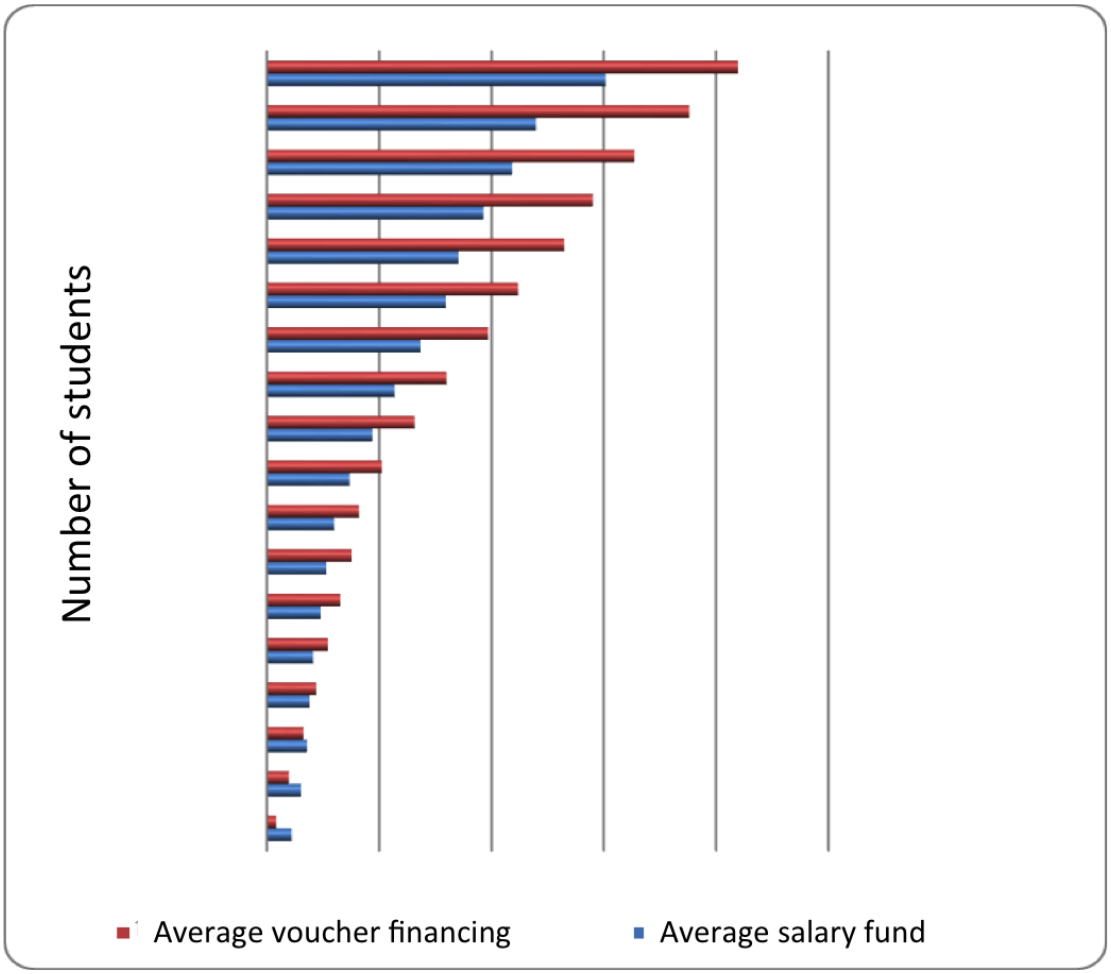
2.2 Analyzes of school expenditures

Analyzes of school expenditures has shown us that primary expenditures at schools are: salaries (teachers', administrative and assistants), office costs, communal bills (heating, electricity, water), salaries for people who are not on the staff, bus fuel costs.

The most important component of costs is teachers' salaries, which was 84% of the voucher financing in 2010 and 75% of the total financing of public schools. This is an average figure and is quite different by schools of different types. In schools located in towns, teachers' salaries make up 70% of the voucher financing, in schools in villages– 87.7%, and schools in mountainous regions – 109.2%, thus in such schools the voucher financing is not enough to cover teachers' salaries.

Voucher Funding and Teachers' Salaries

Figure 2.1



The majority of schools with budget deficits ask the Ministry of Education and Science for help, in order to cover teachers' salaries. In the first place, this problem is connected with small number of students at schools.

In that respect, in the worst conditions are schools, which receive "financing for mountainous regions" . 70% of such schools pay the salaries with the voucher financing. But if look closely at the table, we can conclude that this problem is not because of a school location, but it's because of the number of students at school. If a medium-sized school located in a town has 640 students, the figure in mountainous regions is 16 times smaller – only 106 students.

The chart shows the link between teachers' salary fund and the average voucher financing amount by school sizes.

One of the important expenditures of schools is administrative costs. Even in schools with small number of students there are a lot of administrative and technical employees. The ration between administrative-technical staff and the number of teachers is high in smaller schools. Schools, where there are not more than 50 students, administrative-technical employees, on average, are 45% of teachers in total. This figure is high in some schools, but the voucher financing amount enables them to increase the number of such employees so that they can avoid asking the Ministry of Education and Science for additional funding.

Communal bills include electricity, water supply, cleaning and other costs, which is important for a school to function properly. Analyze of such costs shows us that those costs are directly connected to the area of classrooms and laboratories, i.e. to the size of a school – to the number students at this school.

Costs per student are high at schools with small number of students, which once again proves that determining budgets for such schools requires a completely different approach – different type of heating system, for example, is not considered, as central heating has much less natural gas costs.

The share of money spent on developing education process and students' needs is quite small. These two figures in total, on average, is slightly more than 0.5%. The first category includes professional development of teachers, curriculum development and improving libraries. The second category includes inclusive programs, helping socially unprotected students, programs for the gifted and talented, funds for sport competitions. Such costs are low because at most schools, funds are not issued for them, but it must be noted that there are schools, which have such costs, but those costs are quite low, if we don't take into account several exceptions.

3. Changes in General Educational Financing

3.1 Change of the scheme for financing in 2011

Under the government resolution #395 (23.12.2010) (About calculating financial norm per student and determining respective standard voucher amount for financing general education), the scheme for financing education changed. According to the new scheme, school financing became mixed. "Mixed" meant that some schools received need-base financing. It affected all the schools with no more than 160 students. Factually, by implementing this system, they tried to adopt different financing for schools with deficit, i.e. for those schools, which couldn't get enough financing before the new system. However, this scheme can only be partially called the "need-based". In calculating financing for schools, this scheme meant assessing three components: teachers' salaries, administrative salaries and communal costs. According to the first paragraph of the resolution: For public schools with 1 to 160 students, financial norm per student and the respective standard voucher amount is calculated considering student quantity, hourly workload, administrative and other costs defined by the National education Plan. Public schools, catering for students who have special educational needs, financial norm per student and the respective standard voucher amount is calculated individually, taking into consideration the needs of each school. Thus, this scheme did not affect all of the schools, but some of them. As for other schools, financial norm per student is 300 GEL. But this amount of voucher is changed when student quantity is altered. More specifically, for public schools with 161-230 students in grades 1-8, the coefficient equal to 1,433 was determined which means that such students' vouchers are multiplied by this coefficient; for public schools with 231-299 students the coefficient equals to 1.3; for public schools with 300-499 students the coefficient equals to 1,283; for public schools with 450-599 students the coefficient equals to 1,166; for public schools with more than 1000 students, the coefficient equals to 1. Students in 9-12 grades get different amount of vouchers. More specifically, schools with 161-230 students, the coefficient is equal to 1.72; schools with 231-299 students, the coefficient is equal to 1.56; schools with 300-449 students, the coefficient is equal to 1,54; schools with 450-599 students, the coefficient is equal to 1,48; schools with 600-999 students, the coefficient is equal to 1,4; schools with 1000 students, the coefficient is equal to 1,32.

The amount of voucher is determined respectively:

For public schools, from grades 1 to 8:

Schools with 161-230 students – 430 GEL

Schools with 231 – 299 students – 390 GEL

Schools with 300 – 449 students – 385 GEL

Schools with 450 – 599 students – 370 GEL

Schools with 600-999 students - 350 GEL

Schools with 1000 students – 330 GEL;

For public schools, from grades 9 to 12:

Schools with 161-230 students – 516 GEL

Schools with 231 – 299 students – 468 GEL

Schools with 300 – 449 students – 462 GEL

Schools with 450 – 599 students – 444 GEL

Schools with 600-999 students - 420 GEL

Schools with 1000 students – 396 GEL;

The amount of voucher for private schools is 300 GEL.

For non-Georgian schools/sectors, increased voucher was established. The corresponding addition was determined to be 0.08. Since practice has shown that school financing, which is proportional to student quantity, even in case of different vouchers, could not provide schools with appropriate and enough resources, the resolution launched additional, base financing. Such financing is for schools, where there are no more than 600 students. This financing is equal to:

Schools with 161 – 230 students – 30 000 GEL;

Schools with 231 – 299 students – 17 000 GEL;

Schools with 300 – 449 students – 14 000 GEL;

Schools with 450 - 599 students -10 000 GEL.

Besides the financing determined by this resolution, public schools, every month, receive 75 GEL per each teacher who has passed the certification exams and under the 21 October, 2005 command #576 of the Minister of Education and Science on "Adopting the instruction about public teacher salaries and conditions", under the paragraph 5^1 on "The instruction for public school teachers' salaries and conditions", receives additional compensation; 125 GEL per each teacher who has certificates proving basic computer skills and knowledge of English. Each teacher, who is certified, has certificates proving basic computer skills and knowledge of English and under the command of the director of the LPPL National Centre for Teacher Professional Development (public entity managed by the Ministry of Education and Science of Georgia) has one of the best exam results in basic computer skills and knowledge of English. According to the formula, X = 1000 GEL – (A+B+C), where: X – additional financing for public schools, apart from this resolution; A is the amount of money defined by the subpart "a" of the part 7^1 of the first paragraph of this resolution. B is the amount of money regulated by the subpart "b" of the part 7^1 of the first paragraph of this

resolution; C - teacher salaries defined by the 21 October, 2005 command #576 of the Minister of Education and Science on "Adopting the instruction about public teacher salaries and conditions" (except paragraph 5^1).

The Minister of Education and Science determines the list of those public schools, which, besides the financing defined by the 4th and 5th parts of first paragraph need additional financing. The Minister also determines the amount of additional financing.

Furthermore, later, the resolution established additional financing for schools with different infrastructure. More specifically, schools merged as a result of optimization and reorganization.

3.2 New scheme for financing: advantages and disadvantages

The Ministry of Education and Science put into action a new scheme for financing on 1 January 2011. The first change is connected with dividing schools into two categories by different financing system. In the first category are schools with no more than 160 students. In such schools financing amount is determined according to the National Education Plan, so, factually, according to their needs. Partially this is need-based financing. In January 2011 the number of such schools was 1155, which is 54% of all public schools. In schools with small number of students (less than 161) three components of financing is determined: teachers' salaries, administrative and technical costs, whose main aim is to cover communal costs. In determining teachers' salaries, student distribution among classes, number of classes and hourly workload under the National Education Plan is taken into account. Non-Georgian school factor is also considered. In case a school is non-Georgian, or there is a non-Georgian sector at school, hourly system aimed at non-Georgian schools is fully used. Unlike Georgian schools, this system has approximately 8% more in-class hours, which results in increased salary fund of teachers. Teaching hours at school is calculated using the teaching plan and he number of teachers – using 18 full-staff hours. Salary fund is calculated using the average salary of a full-time teacher, which is 355 GEL (Including the income tax). It is less likely that this average reflects different qualifications and experience of teacher, which exists among teachers in villages and towns, as well as regional differences. Such approach does not take into account the changes, which result from the teacher certification, giving additional compensation to those, who will successfully pass the certification exams (We will discuss teachers' salaries thoroughly in the next chapter).

According to the new scheme for financing, salaries of administrative and technical stuff are determined to be 17% of teacher salary fund. Such averaging approach indirectly takes into account

the number of students, but considers neither school location, nor the building size, which often determines administrative and especially technical stuff structure.

Current and communal costs constitute approximately 15% of all the expenses.

If we compare the new scheme for financing with the previous, voucher scheme, we will certainly find a difference between the two schemes and the amounts of money for financing. According to the new scheme, financing has risen, especially at schools which have a small number of students.

The new scheme does not take into consideration the whereabouts of a school – in a mountainous region, in a village or in a town – it takes into account the number of students studying at school. But, as a school location has an effect on the number of students, we grouped them according to it; the table below shows the distribution of schools according to the new scheme for financing.

Schools with Different Funding, According to Student Number and Geographical Location

Table 3.1

Indices	Number of schools			
	Mountainous regions	Villages	Towns	All
Up to 160 students	513	606	44	1163
161-230	45	190	37	272
231-299	16	100	18	134
300-449	15	99	83	197
450-599	4	24	67	96
More than 600	_	17	207	224
Total number of schools	593	1036	456	2085
Total number of students	53 864	176 246	282 815	512 925

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

As the table shows, the majority (97%) of schools with a small number of students (with up to 160 students) are situated in villages and mountains. They are financed in accordance with the financial

norm per student and respective standard voucher amount. Schools with up to 450 students operate in villages and mountainous regions. They receive additional funding, along with the voucher funding. Schools, which have more than 450 students, are located in towns.

We will now discuss how much money was spent on financing school in 2011 and how they were distributed among schools situated in various geographic locations. Of course, the new scheme for financing did not take into consideration such distribution, but in order to compare with the 2010 data, we analyzed the 2011 financing according to the geographic locations of schools, using the previous table.

Financing of Schools by Their Geographic Location and Their Number of Students

Table 3.2

Indices	Mountainous regions	Villages	Towns	All
Direct financing in 2011	58720056.3	121278791.5	115 825 389.9	295 824 237.7
Schools with budget deficit	107	134	61	302
Additional financing in 2011	1 261 358	2 153 147	659 967	4 074 472
Total financing (2011)	59 981 414.3	123 431 938,5	116 485 356.9	299 898 709.7
Direct (voucher) financing in 2010	39 371 860	106 451 009.5	121 419 351	267 242 220.5
Schools with budget deficit	545	802	226	1573
Additional financing in 2010	15 397 975	17 697 488	4 135 077	37 230 540
Total financing (2010)	54 769 835	124 148 497.5	125 554 428	304472760.5
Difference in voucher financing	+19 348 196.3	+14 827 782	-5 593 961.1	+28 582 017.2
Difference in total financing	+5 211 579.3	-716 559	-9 069 071.1	-4 574 050.8

Source: Ministry of Education and Science of Georgia, http/mes.gov.ge, Authors' calculation

As the table shows, voucher financing for public schools in 2011 was 295 824 237.7 GEL and it rose by 28 582 017.2 GEL, i.e. by 10%, compared to the year before (2010). The impact of the rise of financing was strongly felt by schools located in mountainous regions and villages; Public schools located in towns suffered reduction in financing.

Despite the fact that necessary funds were precisely determined in accordance with the National Education Plan, as well as additional funding, it turned out, that the amount of funding they had received was not enough for schools with small number of students. 15% of all schools still have budget deficits. More than half of them ask for additional funding, every, or almost every month. Which schools turned out to have budget deficits? These are schools with up to 160 students (137 schools); schools with 161-230 students, which, in addition to the voucher financing receive 30 000 GEL (39 schools); schools with 231-299 students, which, in addition receive 17 000 GEL (46 schools); schools with 300-449 students, which, in addition receive 14 000 GEL (41 schools); schools with 300-449 students, which, in addition receive 10 000 GEL (21 schools); and schools with a large number of students with 600-2150 students (18 schools), for which, like schools with small number of students, the voucher financing is not enough and some of them were provided with additional funding (10 000 – 40 000 GEL) from the Ministry of Education and Science at the same time (in just a month) or over months.

To sum up, let us discuss whether the new scheme for financing is the improved voucher financing whereas for 55.8% of all schools (1163 schools) financial norm per student and the respective standard voucher amount is calculated considering the National education Plan, student quantity, hourly workload, administrative and other costs defined by the Ministry of Education and Science; for 33.5% of all schools (698 schools), the voucher amount is calculated using coefficients and they are in addition given additional funding from 10 000 to 30 000 GEL, taking into consideration the school size. 10.7% of all schools (224) remains without getting any additional funding and relies solely on the voucher financing, out of which, 8% of them (18 schools) have had budget deficits and have asked for some additional funds, as it has already been mentioned earlier.

Furthermore, one of the disadvantages of the new scheme for financing is the additional funds which are connected with the existence of one more or less student. The government resolution mentioned above says that schools with 161-230 students, will receive base financing, which amounts to 30 000 GEL etc. In this case, if there are 230 students at school and if one more student is added, the school loses 13 000 GEL. But if it already has 231 students and one student leaves school, the school receives 13 000 GEL in addition etc. Thus, enrolling or not enrolling one student

determines whether a school will receive 13 000, 3 000, 4 000 or 10 000 more money, which, in our opinion, is not right. When the 600th student enrols in a school with 599 students (after which the school will have no base funding of 10 000 GEL), this student's voucher amount won't make up for that lost money, which wouldn't have been lost if this student hadn't enrolled in this school. Does the new school financing system breaks the three fundamental financing principles of fairness, adequateness and effectiveness? This and a great number of other problems still remain after the change of the scheme for financing, among which are schools with budget deficits, no increase in teachers' base salaries, lack of necessary funds in order to operate decently at the most of schools (whereas only salaries, communal bills and current expenses are covered by the financing amount).

The greatest advantage of the new system is that school staff receives salaries on time, which is very important facing the fact that those salaries are quite low. As we have already mentioned, staff at schools with budget deficits were paid late, because of the late delivery of additional funding.

Conclusions and Implications

The Law on General Education of Georgia, adopted by the Georgian Parliament in 2005 was the basis for creating such legislative conditions, where accessibility to education, quality, transparency and objectivity were guaranteed. Introduction of the voucher financing of schools took place during that period. The reason for adopting such type of financing was to create competitive conditions, which would result in the improvement of teaching quality.

According to the Law on General Education, schools are financed from the Central Budget, with the voucher amount corresponding to the financial norm per student. As the research showed, the existing voucher financing scheme failed to accomplish general education funding goals relating fairness, adequacy and effectiveness. It failed to satisfy the needs of stakeholders. It especially became apparent when the number of pupils and classes declined and migration to towns increased, because schools with small number of children located in the mountainous regions started to decline. In 2011, changes made to the scheme of financing partially solved the problems, which existed in the scheme before. First of all, schools with budget deficits declined. However, as the research showed, it was not enough.

Despite the changes, which started form 1 January 2011, equality in school financing was not reached. This is very well reflected in the #395 resolution of the Georgian Government, 23 December 2010, on calculating financial norm per student and determining respective standard voucher amount for financing general education –schools with 161-230 students get 30 000 GEL in

addition to the voucher funding, schools with 231-299 students get 17 000 GEL etc. Is it fair to treat schools with 230 and schools with 231 equally? Schools with 230 students loses 13 000 GEL by adding one more student. And schools with 231 students get 30 000 GEL additionally if one student leaves. One student determines if a school gets 3 000, 4 000 and 10 000 GEL in addition (231-299, 300-449 and 450-599).

Thus, taking into consideration school funding systems and principles of different countries, we came to the conclusion that a change is needed in the Georgian school funding system. What kind of change are we talking about? Firstly, schools must have equal conditions. This will only be possible, if expenditure on education as a share of GDP increases by at least 4.5-5% (According to European Union 27, this figure is 5.4%).

By at least doubling educational expenses, school education process will improve. Besides, voucher funding can be replaced with formula funding. The formula will be developed so that it will guarantee: balance between the regions, stability, comparability and forecast – for small and large schools, for schools located in towns and villages. It must allow us to calculate the value of decisions and their effects: for instance, changes in minimal salaries of teachers, in standard hours of teachers, in class sizes, compulsory number of lessons, schools network etc. Formula funding will take into account the optimal size of classes – by stages, the optimal quantity of students in classes. The formula will also make it possible to distribute money taking into consideration policy priorities like new requirements for the curriculum. The new formula will raise the quality of transparency.

Formula funding advantages are the following:

- It will be based on real expenses of education. The expenses, which will include not only salaries (teachers', administrative staff's and assistants') and necessary expenses (communal, heating and current), but expenses, which will satisfy real needs of students and school staff, which will promote the success of every student.
- General education funding will correspond to education policy. The value of political decisions can be evaluated.
- Financial stability will be guaranteed. Change in finance distribution will bring change to the number of students and thus to the number of classes (change in factual costs).
- Schools will be fully financed at the beginning of the year, because the number of students by classes and thus the number of classes will be known.
- Teachers will get higher salaries – their base salaries and additional compensation will be higher.

- Schools where education process is not in Georgian, additional lessons in Georgian language will take place, as well as additional lessons in classes with language diversities.
- Smaller combined classes and relatively less class mergers. The need for additional lessons in combined classes will be taken into account.
- Changes in factual needs and fair financing will be taken into consideration.
- Will consider the fact that each stage needs different funding.
- Will guarantee keeping, necessary small and remotely located schools, by additional funding; the fact that elementary schools should be located near home will be taken into account.
- Teaching quality will improve, especially on the third stage.
- Taking into consideration the existence of schools with merged management, functioning separately.
- Trainings will be held locally, all teachers will have equal chances for participation.
- Characteristics of students with special needs will be taken into account.

Besides the above mentioned, to solve current problems at schools, it is advisable to do the following:

1. **Engaging the local government.** Schools are mainly financed from the central budget in Georgia. The share of local-governments is tiny (0.5-1% on average). There are issues, which are far from the sphere of education, but solving them is crucial for developing this sphere – infrastructure development in villages (especially in mountainous regions). Local-governments should engage in the activities concerning repairing local roads, repairing school buildings and provide them with heating.

2. **Developing and expanding the network of boarding schools.** When we analyze schools functioning, its effective or efficient activities, we take into consideration its size. It is very hard to determine, which school will be more effective currently – small schools or large ones.

Opinions on this matter vary among researchers. Some think that the best size for a school is to have 400-1200 students, others prefer smaller sized schools (with about 300 students) (Johnson, Jerry D., Craig B. Howley & Aimee A. Howley. (2002) Size, Excellence, and Equity: A Report on Arkansas Schools and Districts. Athens, OH: Ohio University, Educational Studies Department. ERIC Document Reproduction Service (forthcoming), .Pittman, R.B. & P. Haughwout.(1987).Influence of high school size on dropout rate. Educational Evaluation and Policy Analysis, 9(4), pp. 337-343). To their points of view, small schools have better academic results. Students behave better, they are more engaged

in the process; such schools are considered more effective because every student is given decent attention and is decently evaluated. Those ideas could be productive in Georgia, but difficult to at the same time.

If we analyze Georgian public schools in the same framework, we'll get a different picture, because at the end of 2011 there were up to 160 pupils at 1163 schools out of 2085 public schools, the majority of which have classes with 1, 2 or 3 students. Only 67 schools had over 1000 students. Thus, in our country, the number of schools doesn't have to be lowered, but it is necessary to increase the number of students at schools at least up to the minimal point, as the problem of school size is accompanied by the problem of class sizes too. Some of such schools are located in the villages of mountainous regions. The majority of them have small number of students. They are far from one another. As a result of national policy, the number of elementary schools has declined in the past years and elementary school students have had difficulties in reaching their schools easily. This was one of the reasons why people have moved to towns. Regions, where there are boarding schools found themselves in a better situation. We analyzed the functioning of 3 schools located in three regions of Adjaria. These regions are: Khelvachauri, Kobuleti and Keda. Despite the fact that a boarding school in Chaisubani (Kobuleti) was in very bad condition, parents still wanted their children to live and learn at that school. Demand on boarding schools also existed in Dusheti. The advantages of boarding schools are that students can be academically more successful and they can have high level of socialization. The disadvantage is that students spend most of their time away from families etc, but if there is no problem with those issues among parents and children, we can think about the further development of boarding schools.

3. **Equal educational opportunities for every student.** Material and technical resources, which are needed for the normal functioning of the education process, should equally be provided for schools located in towns as well in regions. Some schools are equipped with laboratories, "classes of the future", which are equipped with advanced technologies also function there. Some students and their parents only hear about the abovementioned on the radio or on TV. Parents want their children to learn at such schools. As a result, there are a lot of overpopulated schools in the centre and small schools

in the other places, the situation is especially hard at schools located in the mountainous regions.

4. **Student transporting service for schools.** Local governments can take responsibility for properly developing such a system.

We believe that increasing public school funding and developing a formula-based funding system will cause further development and improvement of school education in Georgia, which will guarantee teachers satisfaction and high prerequisite for students' success.

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