

COMPREHENSIVE COSTING AND FINANCE STRATEGIES

FOR THE EARLY LEARNING SYSTEM IN GEORGIA



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Terminology

Child dependency ratio – Children under the age of 14 as a share of labor force;

GNI – Gross National Income;

IDP - Internally Displaced Person;

Fertility rate - Ratio of live birth per women aged 15-49;

Labor force – Currently active population who fulfill the requirements for inclusion among the employed or the unemployed during a specified reference period;

Preschool age- Children in the 3 to 5 age group;

Gross preschool enrollment rate - Total enrollment in preschool, regardless of age, expressed as a percentage of the eligible official preschool age population in a given academic year. This is calculated as the total number of children enrolled in preschools, divided by the number of 3-5 year-old children, and multiplied by 100;

Net preschool enrollment rate - Total enrollment of preschool age children, expressed as a percentage of the eligible official preschool age population in a given academic year. This is calculated as the total number of 3-5 year-old children enrolled in preschools, divided by the number of 3-5 year-old children, and multiplied by 100;

Net public preschool enrollment rate - total enrollment of preschool age children in public kindergartens, expressed as a percentage of the eligible official preschool age population in a given academic year. This is calculated as the total number of 3-5 year-old children enrolled in public preschools, divided by the number of 3-5 year-old children, and multiplied by 100.

Acronyms

CEE/CIS - Central European Countries/ Commonwealth of Independent States

EL - Early Learning

ELS - Early Learning System

GDP - Gross Domestic Product

GER - Gross Enrollment Rate

ISSET – International School of Economics at Tbilisi State University

KG - Kindergarten

MoLHSA- Ministry of Labor, Health and Social Affairs

MoES - Ministry of Education and Science

MoF- Ministry of Finance

NCAC - National Curriculum and Assessment Center

OECD- Organization for Economic Cooperation and Development

PISA - OECD Programme for International Student Assessment

SSA- Social Service Agency

TSA – Targeted Social Assistance

UN - The United Nations

UNICEF - United Nations Children’s Fund

UNESCO - United Nations Education and Science Organization

WMS – Georgian Welfare Monitoring Survey by UNICEF

WASH –Georgian National Survey of Water, Sanitation and Hygiene in Preschools by UNICEF

TransMonEE database - Transformative Monitoring for Enhanced Equity database

Executive Summary

This study was carried out by the ISET Policy Institute between July and November 2012, during the parliamentary election period, which was a time of great turbulence and uncertainty toward the future policy directions of Georgia. Therefore, it is very well-timed to provide input into the ongoing discussions regarding strategic options the Georgian education sector faces.

The study is based primarily on a survey of Georgian municipalities commissioned by UNICEF and implemented by the National Statistics Office of Georgia (GeoStat) in July-September 2012. The main goal of the study was to analyze the existing early learning models, relevant funding schemes, and potential funding strategies to expand preschool enrollment from the current 46%¹ to universal coverage of 100%. The study is based on a detailed analysis of the Georgian preschool education sector's institutional foundations, as well as its demographics, legal, economic and financial conditions. Since independence, Georgia's preschool education sector has gone through several successive phases. It declined dramatically throughout the 1990s but in 2001 it began to gradually expand. This ended with the decentralization reform of 2005. Currently, the Net Enrollment Rate (NER) in public preschools stands at 42%², while 4%³ of children are in private care. Although the total preschool population shrank relative to 1990, the preschool NER today is higher than it was during the pre-independence period. Moreover, almost half of all 5 year-old children are enrolled in primary schools⁴. Nevertheless, about 40%⁵ of 3 to 5 year-old children are not covered by any EL or primary education institutions. The 2005 reform placed the burden of financing public preschools on the municipal governments, although it also gave them the freedom to tailor early learning delivery to local needs. Accordingly, the role of national policymaking agencies such as MoES and MoHLSA has been significantly reduced. Their main function in today's environment is to issue methodological guidance. The post-2005 decentralization efforts created a huge diversity in the way preschool education is delivered throughout Georgia's 65 municipalities. For instance, municipalities exhibit vast differences in enrollment rates, quality of service, cost per child, and the relative shares of municipal and parental contributions to this cost, as well as attention to the needs of socially vulnerable children.

CHALLENGES There are two main issues that raise concern with the current state of preschool education in Georgia:

- Georgia's current standing in international assessments (such as PISA) of the learning outcomes of school-age children is not satisfactory. Expanding enrollment in ELS and improving its quality would be one of the most effective ways to improve the learning outcomes of children and their eventual success as adults (personally and professionally).
- While potentially good in some ways, the lack of a uniform approach creates problems of inclusion and of quality in many of the municipalities. Unfortunately, these problems are concentrated in regions with higher child poverty rates and in rural areas and regions with large ethnic minority populations.

Thus, the main priority for Georgia should be to gradually expand ELS coverage with a special emphasis on the weaker "links": socially vulnerable children, ethnic minorities, and rural regions. Focusing on the disadvantaged groups will help achieve the fastest possible progress to the extent they are further away from

¹ Source: GeoStat. IHS 2011

² Ibid

³ Ibid

⁴ MoES information about 5-year-olds in primary schools in academic year 2011-2012 (available at <http://www.mes.gov.ge/content.php?id=2792&lang=geo>)

⁵ Authors' calculation based on estimate of NER from IHS 2011, MoES information about 5-year-olds in primary schools in academic year 2011-2012 (available at <http://www.mes.gov.ge/content.php?id=2792&lang=geo>) and our cohort projections based on GeoStat population data (see Annex 1 for more details about cohort projections).

the “mean” in terms of learning outcomes (or achievements), as far as the nation as a whole is concerned. International research reveals that “Preschool experience appears to be a stronger force in the lives of low-income than more advantaged children” (Spence Boocock, 1995) and tends to narrow the achievement gap between the two groups by providing equal opportunity for everybody from the very beginning. As James Heckman, the Economics Nobel prize Laureate puts it, “The best way to improve the American workforce of the 21st century is to invest in early childhood education to ensure that even the most disadvantaged children have the opportunity to succeed alongside their more advantaged peers”(Heckman & Masteroy, 2004).

EXPANSION SCENARIOTo identify the best way forward, we looked into a number of early learning service models that have been used to expand ELS coverage in settings that are similar to Georgia’s. Early learning service models include full-day care, a half-day program that emphasizes school readiness for all, and a variation on this program that relies on parental in-kind contributions as a means of reducing costs. For conventional KGs, we calculate two types of unit costs: empirical and normative (see Chapter 4 for more details). While the empirical cost is the observed average spending per child in the existing system, the normative cost of “ideal” full-day care reflects the cost of providing a child with preschool services in full accordance with all the relevant standards and recommendatory guidelines. Due to the fact that norms differ among the municipalities, we cost Tbilisi and the rest of Georgia separately. The costs of “ideal” full-day care are about twice as high as compared to the observed empirical costs (see Table 9 on page 38). We further develop several scenarios to expand coverage from the current 46% to 100%. These scenarios are based on an identical assumption concerning demographics, the share of socially vulnerable children and private preschool coverage. The financial implication of these scenarios – for the municipalities and the parents – are different due to differences in EL service models used (e.g. full-day vs. half-day) and different treatments applied to rural and urban populations.

- The option of expanding coverage using the current full-day EL service model is not financially feasible. It would require a doubling of recurrent costs as well as a massive investment in additional physical capacity and training of teaching staff.
- Half-day models provide a financially attractive option to expand coverage in the short term in both rural and urban settings (Scenario I). This option achieves the objective of school readiness for all without affecting children that are currently enrolled in the ELS.
- Scenario II has a stronger emphasis on equity by placing socially vulnerable children in full-day care in order to ensure a proper nutrition and a safe environment.
- Scenario III achieves full coverage at a lower cost for the municipalities: instead of co-funding about 70% of full-day care costs for all (as is the case today), municipalities will provide free half-day school readiness programs at less than 60% of the total full-day care cost today. Relatively affluent parents will have the option of keeping their children in full-day care at their own expense. Rural children under this scenario will be placed in alternative half-day programs that utilize parental help to reduce the per child cost to about a third of what full-day care costs today. Socially vulnerable children in both rural and urban settings would still be entitled to full-day care, which would be financed by the above savings.
- Scenario IV and V are about differential treatment of 5 year-old children, who according to today’s legislation, may enroll in primary education (about 43%⁶ practice this option today). We cost out two extreme possibilities: under scenario IV, all 5 year-olds enroll in preschools; under scenario V they enroll in primary education.

We priced these expansion scenarios using empirically observed unit costs as well as normative costs that were derived from ELS standards developed by MoES, MoLHSA and the Tbilisi Kindergarten Management

⁶ Authors’ calculations based on MoES information about 5-year-olds in primary schools in academic year 2011-2012 (available at <http://www.mes.gov.ge/content.php?id=2792&lang=geo>) and own cohort projections

Agency. Provided that the ELS remains decentralized, there is considerable scope for experimentation at the municipal level. There is no need to stick to a one-size-fits-all policy (“scenario”) as there are important local nuances that such an approach would inevitably fail to address. Among these nuances are many urban/rural specifics that have to be taken into account when expanding coverage. In urban areas, non-enrollment is mainly explained by demand factors (parental attitudes). Therefore, any future policy seeking to expand preschool coverage in Georgia’s cities would have to explain the benefits of EL and instill parents’ trust in the system. For rural areas, on the other hand, the main bottleneck is on the supply side: the physical and human capacity to deliver high quality EL. As the example of Mtskheta-Mtianeti region shows, a policy combining financial incentives for parents in the form of preschool fee waivers for children eligible for Targeted Social Assistance (TSA) with improved availability of EL institutions can help increase preschool coverage in regions with high child poverty. Finally, language issues would have to be addressed in regions populated by ethnic minorities.

OTHER RECOMMENDATIONS

Review the policy on parental contributions to the cost of preschool education. Regardless of the expansion scenario chosen by the Georgian Government, any future policy would have to address the question of parental contribution to the cost of preschool education. Universal coverage with full funding by the municipal governments would more than double the cost of provision for the municipalities, which may not be sustainable from the macroeconomic point of view, especially given the mounting pressures on the new government to increase the allocation to salaries, pensions and other social benefits. The fully funded option may also not be desirable from the efficiency point of view, as it would result in waste of scarce public resources. Because there is a considerable willingness to pay for high quality preschool service among relatively affluent Georgian parents, it would be much better to use public funds to expand preschool coverage and target the vulnerable populations. The fact that there are long waiting lists for public KGs in Tbilisi suggests that local fees (currently about 30%⁷ of total costs) could be slightly increased. **Review staff remuneration policies and standards.** The current salary level in the preschool education sector may not be adequate for expansion purposes. Expansion would require a major recruitment and training effort. Higher remuneration standards would help attract the right people – investing resources in the training of people who do not have the capacity or the motivation to stay in the sector would lead to a waste of resources. An option to consider is to link compensation to performance by introducing merit-based bonuses and annual raises. This would create incentives for educators and other staff to invest in their own professional development and reduce staff turnover. **Promote competition as a means of improving quality.** Frequent inspections by the municipalities are not necessarily the most effective way of advancing the quality of preschool care. Public preschool institutions could be given greater autonomy in setting prices and the quality of service and thus compete with each other and private providers. Competition, if properly designed, could provide powerful incentives for improvements, especially in urban areas where consumers have a choice among many providers. A note of caution: flexible pricing is a must condition for competition to be effective in fostering quality improvements as long as public kindergartens operate at full capacity.

Engage the private sector. As long as the public education system is unable to provide universal coverage, the government and/or individual municipalities may consider the use of public funds to expand coverage by utilizing spare private capacity. The private KG might have spare capacity to absorb a part of preschool age children that are not currently covered. Instead of building new public KGs, the state could train educators of private preschools and even subsidize the cost of private provision. Both measures would decrease the cost for parents and provide more children with access to higher quality preschool education, changing their lives for the better. Even though this issue is beyond the scope of our report, as private providers of

⁷ Calculated from the UNICEF-commissioned Survey of 65 Municipalities, July-September 2012, GeoStat.

childcare are not subject to any licensing or supervision for now, engagement should be conditional on meeting some standards and regulations of ELS. A similar way of engaging the private sector is practiced in Singapore (Economist Intelligence Unit, 2012). Yet another option to consider is to introduce means testing and differentiated fees for public education, as is already practiced in Tbilisi. This measure would push some of the higher-income parents from public to private KGs, freeing the capacity of public KGs to take care of children from low-income families.

Gather data on performance indicators for evaluation and benchmarking purposes. A proper policy for the preschool sector cannot be designed in an information vacuum. Ad hoc surveys by international agencies such as UNICEF is not a substitute for an orderly and regular collection of performance indicators based on a random sample of service providers, parents and municipal authorities. This would allow the individual self-governing units to evaluate the success of their approaches by using other municipalities as benchmarks. Additionally, despite the fact that private KGs are not currently supervised by any municipal or central authorities, data about the private provision of childcare would help evaluate the challenges and opportunities facing the sector as a whole.

Introduction

This study was carried out by the ISET Policy Institute between July and November 2012, during the parliamentary election period, which was a time of great turbulence and uncertainty toward the future policy directions of Georgia. It is primarily based on “Data Collection for Early Learning and Child Protection in Georgia” – a survey of Georgian municipalities commissioned by UNICEF (hereinafter, Survey of Municipalities) and implemented by GeoStat, July-September 2012. The main goal of the study was to analyze the existing early learning models, relevant funding schemes, and potential funding strategies to expand preschool enrollment from the current 46%⁸ to universal coverage of 100%. We analyzed the demographic, legal, economic and financial context of Georgia’s preschool education sector and reviewed its institutional foundations from the point of view of effectiveness, equity and quality. As we see it, there are two main issues that raise concern with the current state of preschool education in Georgia:

- Georgia’s current standing in international assessments (such as PISA) of the learning outcomes of school-age children is not satisfactory. Expanding enrollment in ELS and upgrading its quality would be one of the most effective ways to improve learning outcomes of children and their eventual success as adults (personally and professionally).
- While potentially good in some ways, the lack of a uniform approach creates problems of inclusion and quality in many of the municipalities. Unfortunately, these problems are concentrated in regions with higher child poverty rates and in rural settlements and areas with large ethnic minority populations.

To identify the best way forward, we looked into a number of early learning service models that have been used to expand ELS coverage in settings that are similar to Georgia. These EL services include full-day care, a half-day program that emphasizes school readiness for all, and a variation on this program that relies on parental in-kind contributions as a means of reducing costs. We developed several scenarios to expand coverage of 3-5 year-old children from the current 46% to 100%. These scenarios are based on identical assumptions concerning demographics, the share of socially vulnerable children and private preschool coverage. The financial implication of these scenarios – for the municipalities and the parents – are different due to variations in EL service models used (e.g. full-day vs. half-day) and different treatments applied to rural and urban populations.

The report is organized as follows: Chapter 1 is concerned with the context of ELS in Georgia. Chapter 2 reviews the effectiveness, efficiency, equity and quality aspects of the public preschool education sector. Chapter 3 examines alternative models to provide public EL services. Chapter 4 calculates the normative unit costs for each input required by the different EL models. Chapter 5 outlines possible scenarios to provide universal coverage and includes their cost implications. Finally, Chapter 6 offers recommendations for improving ELS in Georgia.

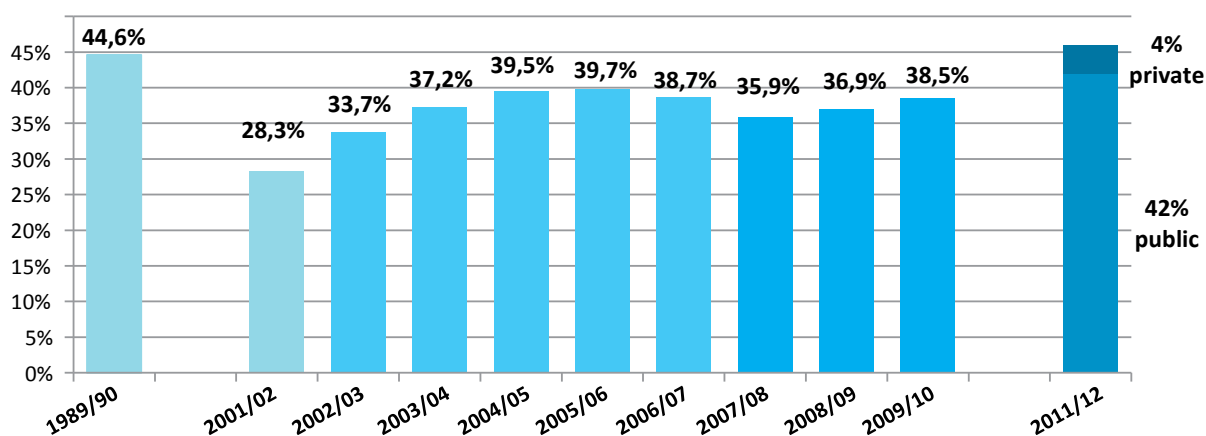
⁸ Source: GeoStat. IHS 2011

Chapter 1. THE CONTEXT OF GEORGIA

Enrollment

The preschool education sector in Georgia has faced many problems since the collapse of the Soviet Union. The service is predominantly provided by so-called “kindergartens” - full day care centers. Figure 1 shows how dramatically public preschool enrollment has decreased since 1990, the year before the country’s independence. Economic crises, political destabilization, the Abkhazia War and civil war in the 1990s impeded the functioning of almost every sector in Georgia, including kindergartens (KGs). As a result, the public preschool NER decreased over that decade from 44.6% (1989-90) to 28.3% (2001-02) . The situation started improving in the early 2000s, with enrollment rates increasing by more than 10 percent, between 2001/02 to 2005/06 academic years. Subsequently, we observe stagnation and a small decline in NER (the lowest point, 35.9%, was reached in 2007-08). This could be attributed to the 2005 reform of preschool education, which placed the financial burden of public preschools on municipal governments. While some municipalities did manage to build new KG facilities, many more fell into disrepair and were shut down for lack of financial resources. In the two years after the decentralization reform, from 2005/06 to 2007/08⁹, the number of public preschool institutions decreased by 64.

Figure 1. Net Enrollment Rate (NER) in public KGs in Georgia



Note: 1989/90-2001/02 — official NER for 3-6 age group, 2002/03-2009/10 — official NER for 3-5 age group, 2011/12 – estimate of NER (public + private) for 3-5 age group from IHS 2011.

Source: For 1989/90-2006/07 academic years — TransMonEE2012 database (available at <http://www.unicef-irc.org/database/transmonee/>); 2007/08-2009/10 academic years — survey of municipalities by NCAC, MoES; 2011/12 – IHS 2011 by GeoStat.

Beginning in 2008 the situation starts improving in terms of both enrollment and the number of operating KG facilities. We observe an increase in the number of public KGs (including nurseries), higher enrollment as well as improved utilization of existing facilities as measured by the child-to-KG ratio. In the academic year 2011/2012 there were 1,239 public KGs in 64 Georgian municipalities out of 65 (excluding Gardabani); 98,007 children were enrolled in the public preschool system, with 79 children per KG, on average. It is worth noting that the preschool system is apparently catering to many school age children as well. According to Municipality Survey Data that was commissioned by UNICEF in July-September 2012, Gross Enrollment Rate

⁹ Source: Ministry of Education and Science of Georgia, 2008 survey of municipalities.

(GER) in the preschool education system at the end of the 2011/12 academic year stood at about 52%¹⁰, which is 10 percentage points higher than the NER for public preschools at 42%, as estimated based on data from the Integrated Household Survey (IHS) carried out by GeoStat.

Table 1. **Public KGs and enrolment dynamics, 2009-2012**

	2009-2010 Academic Year		2010-2011 Academic Year		2011-2012 Academic Year	
Number of reporting municipalities	54*	54*	58**	54*	64***	
Number of public KGs in reporting municipalities	871	876	952	901	1,239	
Number of children enrolled in public KGs	34,661	37,496	45,960	42,369	98,007	
Enrolled children to KG ratio	40	43	48	47	79	

Note: Number of enrolled children includes both preschool and nursery enrolments.

* Out of 65 municipalities, 54 report data in each of the three years, allowing for a review of the trend. 10 municipalities did not report in one or more years: Tetrtskharo, Gardabani, Ozurgeti, Tbilisi, Batumi, Kutaisi, Keda, Kobuleti, Kharagauli, Khelvachauri and Zestaponi;

** Out of 65 municipalities 58 report data. Not included are: Tetrtskharo, Gardabani, Tbilisi, Kutaisi, Kharagauli, Khelvachauri, Zestaponi.

*** Out of 65 municipalities 64 report data, only Gardabani is not included.

Source: UNICEF-commissioned Survey of 65 Georgian Municipalities, July-September 2012, GeoStat

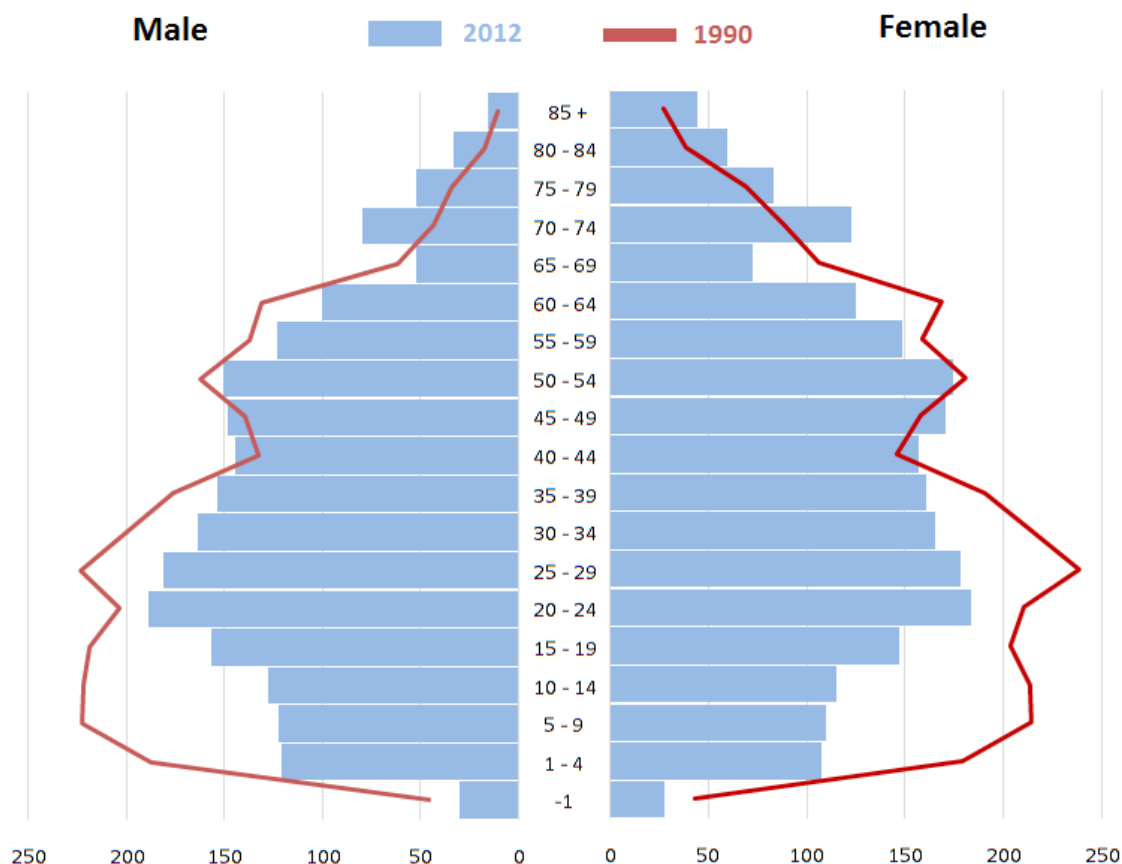
Demographic Context

In order to assess the total cost of the preschool sector accurately, we need to consider both current and future demographic developments. The last population census in Georgia was carried out in 2002. Based on the January 1, 2012 GeoStat estimate, the population of Georgia is 4,497,600. The Georgian population is currently following a pattern of demographic transition (see Figure 2) which is common to developed countries that have lower birth rates and aging populations. On the one hand, a reduction in absolute births will lighten the financial burden on the national economy. However, the aging of the Georgian population over the last two decades has resulted in the number of 65-and-over population increasing from 9.2% in 1990 to 13.7% in 2012. Moreover, according to the UN projections for Georgia, this upward trend is likely to continue: almost one in four residents will be over 65 by 2050, as opposed to one in seven today.

¹⁰ GER in this case is calculated as follows: $\frac{\text{children that are enrolled in preschools and are 3 years old and older}}{3 \text{ to } 5 \text{ year old children}}$

Source: UNICEF-commissioned Survey of 65 Georgian Municipalities, July-September 2012, GeoStat

Figure 2. Population pyramid for the beginning of the 1990 and 2012 years (in thousands)



Source: GeoStat

We calculate the cost of *universal* coverage for 3-5 year-old children based on projections of future age cohorts for the 2012, 2013 and 2014, which in turn rely on demographic projections, as described in Annex 1.

According to our estimates, on January 1, 2012 there were 151,033 preschool-age children in the country. We expect this number to increase slightly during the next two years. As for the more distant future, preschool-age cohort size will depend on fertility and child mortality rates, as well as the number of women in childbearing age.

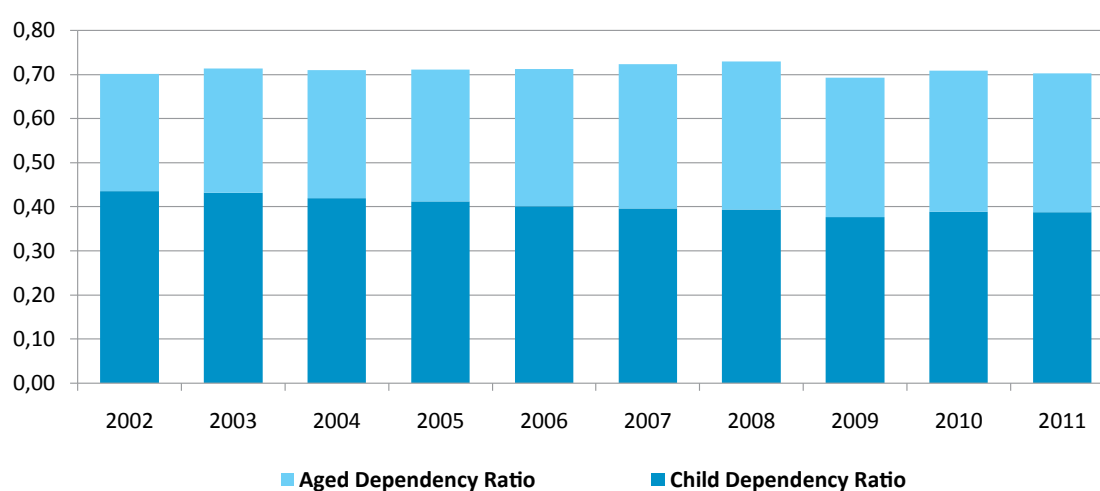
The main source for our longer-term estimates is the UN probabilistic population projections¹¹, according to which Georgia’s population is going to shrink, compared to the year 2000. Under the most probable scenario, the same holds true for the 0-14 age population. The main sources of decline will be low fertility rates and aging (a declining share of childbearing age women in the population).

Even though fertility rate in Georgia has been recovering since 2005 it is still below the 1990 level. Moreover, the minor increase in fertility will not be able to compensate for the fact that the number of women of childbearing age has also decreased by about 15% compared to 1990. Thus, provided the current trends remain intact, we are unlikely to see an increase in the number of 3-5 year-old children through 2050 (for more details see Annex 1).

¹¹ Source: United Nations, Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section http://esa.un.org/unpd/wpp/country-profiles/country-profiles_1.htm.

We now return to the question of financial burden on the Georgian economy due to demographic developments. Figure 3 depicts total dependency ratio decomposed as a sum of children and aged dependency ratios over the last decade¹². As can be observed, the number of children shrank during this period, yet the number of elderly increased in roughly the same proportion, leaving the overall dependency rate intact. The recent demographic trends do not pose an immediate threat to the financial sustainability of the social policies currently in place, as we expect neither a baby boom nor a massive increase in retirement. However, if the longer-term UN projections materialize, by 2050 the Georgian economy may have to deal with significantly higher fiscal burden related to child education and social security for the aged population (who will form more than 25% of the population by then as opposed to 19.7%¹³ today). See Annex 1. To deal with this fiscal challenge, Georgia may have to consider a pension reform delaying the retirement age, like in most developed countries.

Figure 3. Child and aged dependency ratio in Georgia



Source: GeoStat

Legal Context

According to the Georgian Constitution: “The state provides preschool care”¹⁴. As currently interpreted, this statement serves to underline the importance of preschool education without placing the financial burden of providing preschool services on the state. At present, the state is not responsible for providing every child with funding and access to preschool services. This is very different from general education, which is mandatory and fully financed by the state¹⁵. Recently, Tinatin Khidasheli, a Member of Parliament of Georgia, initiated a legislative project that seeks to ensure free preschool services for every child. If the project is approved, preschool services will become free of charge for the parents from March 2013.¹⁶

For the time being, the responsibilities for early childhood development in Georgia are divided between the Ministry of Education and Science (MoES), the Ministry of Labor, Health and Social Affairs (MoLHSA), and

¹² Dependency ratio measures the burden on the economically active population of the country. It is calculated as the ratio of dependent population (under 14 and over 65) to productive population (15-65). The higher it is, the more the burden on the productive population to maintain the upbringing and education of children and provide for the old age of senior citizens.

¹³ Source: GeoStat.

¹⁴ The Constitution of Georgia, Article 35 Section 3

¹⁵ The Constitution of Georgia, article 35, Section 3

¹⁶ Khidasheli, Tina. Interview, 15-01-2013, available at <http://imedinews.ge/index.php?newsid=22612>

local self-governing units. The responsibility of supervising and financing the preschool education system was delegated to local self-governing units in 2005. Based on UNICEF-commissioned survey of Georgian municipalities, 57 out of 65 municipalities have established specialized agencies (or “preschool care unions”) to coordinate and monitor public KGs, provide methodological guidance and quality assurance, and establish fees for parents.

Table 2 presents the division of responsibilities for Early Childhood Development (ECD) among the different institutions.

Table 2. **Division of responsibilities for ECD**

Division of ECD functions	Local Self-Governing Units	MoES	MoLSHA
Setting up preschool education institutions	✓		
Financing preschool education institutions	✓		
Developing and approving educational curricula		✓	
Approving nutrition sanitary rules and norms in child preschool organizations			✓
Approving hygienic requirements for organizing and exploitation of preschool institutions			✓

Source: Georgian Legislation, compiled by the authors.

Since 2005, the role of MoES has been limited to developing and approving educational curricula and other programs for preschool care institutions, and supporting their implementation.¹⁷ MoES issued several methodological documents in 2009-11 that are of a recommendatory nature for the public KGs. These are: “Guide to the management of a preschool education organization”¹⁸, “Preschool child evaluation form”¹⁹, “Preschool education program”²⁰, and “Preschool educator’s manual”²¹. As for MoLHSA, it has multiple responsibilities related to children of preschool age, however, here we refer only to primary responsibilities related to EL institutions, which are: providing nutrition, infrastructure and hygienic standards for KGs.

The 2010 Amendment to the Law on General Education reduced the age for enrolment in primary education from 6 to 5, potentially affecting the preschool sector. As can be seen from Table 3 below, such a provision is rather uncommon: in the vast majority of countries, children go to school when they are 6.

Table 3. **Primary school starting age in countries and territories of the world in 2011**

Age	Number of Countries	Percentage of Countries
5	25	12%
6	134	66%
7	44	22%
Total	203	100%

Source: UNESCO Institute for Statistics Database

¹⁷ Law of Georgia on General Education, 2005. Article 26

¹⁸ <http://elibrary.emis.ge/ge/books/read/142/>

¹⁹ <http://elibrary.emis.ge/ge/books/read/143/>

²⁰ <http://elibrary.emis.ge/ge/books/read/144/>

²¹ <http://elibrary.emis.ge/ge/books/read/140/>

According to MoES, in academic year 2011-12, about 20,000 5-year old children (that is roughly 43%²² of this age cohort) enrolled in primary schools. This policy lightened the financial burden of providing preschool education on the municipalities (schools are financed by the national government). In the absence of universal preschool coverage, it also provided families residing in areas with limited early learning options the possibility to enroll their children into primary education. For this policy not to backfire, however, there should be a possibility for the schools to either provide special programs for or reject 5-year old children who are physically and/or psychologically not ready for primary education.

As a matter of principle, the new Georgian Government supports the decentralization of the preschool system; however, it is also aware of the drawbacks of the current regulatory environment. During its pre-election campaign, the “Georgian Dream” coalition promised free preschool education and an increase of salaries for the preschool educators.

Economic and Financial Context

The growth performance of the Georgian economy has been quite impressive since 2003, with the real growth rate averaging more than 6% a year. Spending on education from the central budget has also increased in both nominal and real terms. Education’s share in the total budget and GDP increased quite significantly during the first stage of reforms in education between 2003 and 2006, when it began to stagnate and even slightly decline afterwards.

Table 4. Spending on education from the central budget

	2003	2004	2005	2006	2007	2008	2009	2010	2011	
Nominal GDP (million GEL)	8564,1	9824,3	11620,9	13789,9	16993,8	19074,9	17986	20743,4	24229,1	
State Budget, total expenditures (million GEL)	1207,1	1930,2	2618,6	3822,5	5237,1	6758,8	6754,1	6972,4	7456	
Education	Million GEL	41	65,3	77,7	384,4	384	419,5	497,6	543,1	566,5
	% of Budget	3,4	3,4	3	10,1	7,3	6,2	7,4	7,8	7,6
	% of GDP	0,5	0,7	0,7	2,8	2,3	2,2	2,8	2,6	2,3

Source: MoF

Table 5 includes information about the overall expenditure on preschool education and its sources in 2011. Note that since 2005, preschool education is not included in the central budget. According to the UNICEF-commissioned survey, municipal (local) budgets were the major funding source (53mln GEL) for public preschools in 2011. The parents’ contribution stood at about 22mln GEL.

²² Source: <http://www.mes.gov.ge/content.php?id=2792&lang=geo>

Table 5. Sources of financing preschool education in 2011

Source	GEL in thousands	Composition of financing (%)	% of GDP
Central budget	0	0%	
Local budget	52,854	70.1%	
Parental contributions	21,945	29.1%	
Donor contributions	81	0.1%	
Other contributions	498	0.7%	
Total Preschool Education Expenditure	75,379	100%	0.31%

Source: MoF and survey of municipalities

Preschool care is usually co-funded by parents in Georgia. The only municipality offering free preschool care is Akhlagori and the only reason for this is that all the children living there are from internally displaced families. Payments vary from 0 to 35 GEL in the municipalities outside Tbilisi. In Tbilisi the maximum fee for a public KG is 80 GEL. 19 out of the 65 municipalities do not offer any type of discounts to children from disadvantaged backgrounds. In the other municipalities, preferential agreements mainly apply to disadvantaged children from a database of socially vulnerable families, children of large families, disabled or single mothers, and disabled children and orphans.

Chapter 2. ANALYSIS

We now turn to the analysis of the preschool education and specifically to the following three questions:

1. Is the sector effective in terms of reaching its stated objectives?
2. Does it provide equitable access to preschool service for children from various backgrounds and types of settlement?
3. Is the quality of service provided by public preschools adequate?

Effectiveness and Efficiency

An effective Early Learning (EL) system should be able to cater for the intellectual, physical, emotional and social development of the child, thus providing the basis for academic achievements during childhood and high economic return as adults. As far as school performance is concerned, one can measure the system's effectiveness by looking at its impact on school enrolment, grades and rates of repeaters. The positive impact of preschool education goes far beyond school performance. Economic research provides ample evidence that investment in EL has one of the highest economic returns to society (Heckman & Masteroy, 2004) affecting social skills, educational attainment, including university attendance, professional advancement and earnings.

School readiness of children is the most commonly used indicator of the effectiveness of EL. This is typically assessed by looking at drop-out and repetition rates. However, these indicators are traditionally very low in Georgia, fluctuating below 1%. Thus, they do not provide sufficient information for assessing the effectiveness of ELS. For instance, in 2010, four out of 1,000 pupils dropped out²³ of general education and one out of 1,000 repeated the same grade.²⁴

Moreover, the low repetition and drop-out rates are in fact quite deceptive as far the quality of schooling in Georgia is concerned. The Georgian schoolchildren score very poorly in international exams that assess reading skills and achievements in mathematics and science. According to the Program for International Student Assessment (PISA) 2009, Georgian children perform worse in these areas than their international peers. Out of 74 countries examined, Georgia ranked in the 60-70 range according to various indicators.²⁵

While these poor results cannot be fully attributed to the breakdown of the preschool education system, the assessment should definitely be included in any reform seeking to improve the effectiveness of the Georgian education system. There is considerable international evidence that the availability and quality of early learning institutions positively affects the children's primary school performance. For instance, the box below presents an example of how weak international performance in PISA prompted nationwide reforms in the German educational sector, including early learning programs and institutions, and the subsequent improvements in Germany's PISA ranking (OECD, 2011).

²³ Source: GeoStat

²⁴ Source: TransMonEE 2012 database <http://www.unicef-irc.org/database/transmonee>

²⁵ Georgia ranked # 65 in Maths; # 69 in Sciences and # 67 in Reading. Unfortunately, the Georgian government reacted to the PISA assessment results by opting out of PISA.

The “PISA Shock” affecting Germany

For many years, the German public and policy makers assumed that their country had one of the world’s most effective, fair and efficient school systems. Therefore, they were shocked when PISA 2000 rankings revealed that Germany stood below the average. The “PISA shock” prompted a series of reforms in the sector so that now, 11 years later, Germany’s mean scores and ranking have improved significantly.

Table 9.1 Germany’s mean scores on reading, mathematics and science scales in PISA

	PISA 2000	PISA 2003	PISA 2006	PISA 2009
	Mean score	Mean score	Mean score	Mean score
Reading	484	491	495	497
Mathematics		503	504	513
Science			516	520

Source: OECD (2010), *PISA 2009 Volume I, What Students Know and Can Do: Student Performance in Reading, Mathematics and Science*, OECD Publishing.

Germany implemented multidimensional and complex education reforms, targeting the general, primary, and the preschool education sectors. At the preschool level, the reforms focused on children from poor families, ethnic minorities and migrants. The country reformed the preschool education sector to minimize the influence of a student’s socio-economic background on their achievement. Actions undertaken at preschool level included:

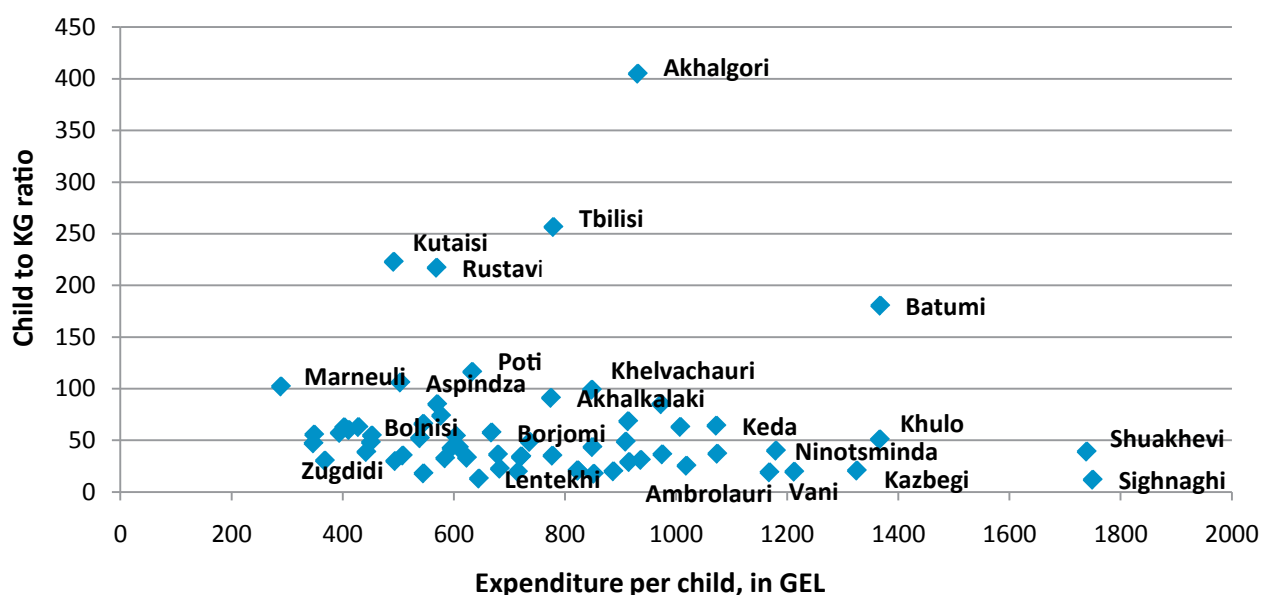
- Supervised by the states and run by municipalities or charities, special programs were developed to increase the level of organized, high quality, affordable language training for preschool age children whose families do not speak German fluently at home;
- A series of legislative changes were introduced to ensure that every child had a place in a kindergarten from the age of 3 until s/he enrolls in an elementary school;
- The availability of preschools for children under the age of three was improved.

The “PISA shock” is good example how a country may adjust its education system as a result of international benchmarking and how complex reforms targeting primary and preschool sectors may lead to improved educational achievements.

As previously noted, the 2010 Amendment to the Georgian Law on General Education reduced the age for enrollment in primary education from 6 to 5. However, in 2011 only 43% of 5 year old children were enrolled in primary education, while the rest were either in preschools or excluded from structured EL institutions. The exact number of primary school age children enrolled in preschool institutions is not known. The fact that they are enrolled in KG could be subject to different interpretations. On one hand, this could be seen as waste of the limited financial resources available to the preschool sector, whereas the fact that such children can potentially benefit from an extra year of preschool preparation could positively impact their subsequent primary school performance.

Efficiency. There is a considerable variation in the average spending per child among the surveyed municipalities, which suggests that some of them may not be operating efficiently. A portion of this divergence comes from the regional variation in the children to KG ratio. The rule of thumb is this: the higher this ratio, the lower the average cost per child because fixed costs (which include such expenses as facilities, maintenance and security) get divided by a higher number of children. However, the variability in spending per child persists even if we check for the child-per-KG ratio as can be seen in Figure 4 below.

Figure 4. Municipal spending per child per year vs. child/KG ratio



Note: Akhlagori is an outlier, because it is an IDP settlement

Source: UNICEF-commissioned Survey of 65 Georgian Municipalities, July-September 2012, GeoStat

Expenditure per child, most of which is financed by the municipal budgets, is clearly unrelated to the average size of KG facilities. This suggests that smaller KGs do not get systematically compensated for the higher per child running cost of operation. Full detail on municipal allocations is provided in Annex 2.

Another potential source of inefficiency is the low child-to-staff ratio reported by all Georgian municipalities. In 2011 there were five children for every staff member in Georgia, whereas the ratio for the Organization for Economic Cooperation and Development (OECD) countries is at least twice as high. Given the limited financial resources that are available to the sector, the relative abundance in personnel leads to lower salaries for preschool staff, which in turn results in higher turnover, especially among highly skilled personnel. Although it has not yet reached catastrophic dimensions, the weak labor market (in 2011, turnover was reported as a problem by only 10% of KGs²⁶), means staffing of preschools should be reconsidered if the labor market situation changes. Low salaries and high staff turnover will negatively affect any efforts to use training as a means of building capacity of preschool educators.

There are few inefficiencies regarding the provision of nutrition. The average spending on nutrition reported by municipalities is not very high. In fact, it is considerably lower than the estimated cost of providing nutrition according to the MoLHSA recommendation. For instance, Tbilisi municipality reports annual nutrition expenditures of 328 GEL per child, whereas the MoLHSA-recommended standard is estimated to cost 727 GEL per child. It would be incorrect to directly compare these two figures given that latter includes three meals per day and is estimated at average retail prices. Still, the very large difference between the two costs suggests that there are no sizeable inefficiencies in the provision of nutrition by public KGs.

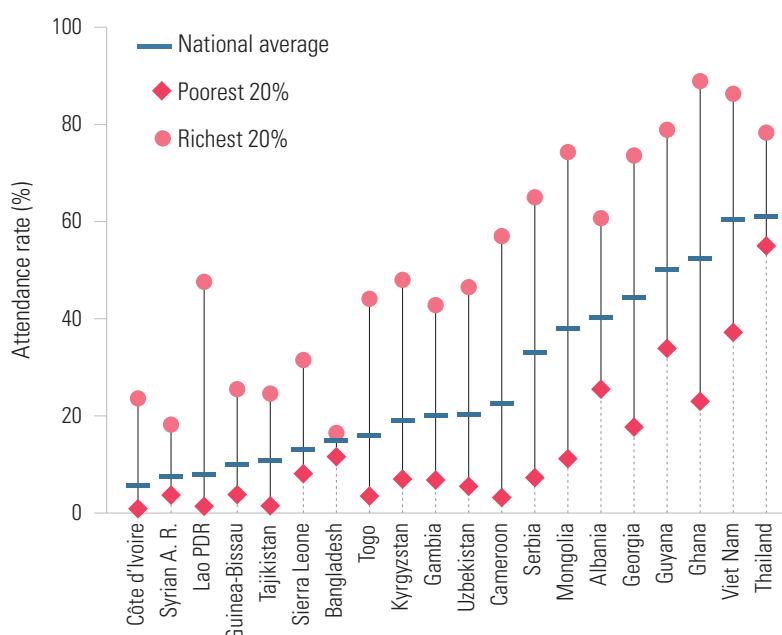
²⁶ Source: WASH Survey, UNICEF 2011

Equity

We examine the equity of the Georgian preschool sector from several perspectives: income, settlement type and ethnicity. Not all groups have equal opportunities to attend the same quality preschool institutions. According to the 2011 *Education for All Global Monitoring Report*²⁷, Georgia had about a 60 percent gap between the enrollment rates of the richest and poorest quintiles in 2005–2007. The gap is quite substantial when comparing Georgia to other countries. These years coincide with the decentralization of the preschool sector, when municipalities had a hard time coping with the high costs related to the added responsibility.

Figure 5. Enrollment of rich and poor

Percentage of 3- and 4-year-olds attending early learning programmes, by wealth, selected countries, 2005–2007



Note: Data are for the most recent year available during the period specified.

Source: 2011 *Education for All Global Monitoring Report* (UNESCO, 2011).

According to UNICEF discussion paper “Reducing Child Poverty”, child poverty has declined since 2009, but is still very high. About 25.2% of Georgian children under 16 live in “relative poverty”²⁸, and 9.4% in “extreme poverty”²⁹. Children from poor families are again underrepresented in the preschool system of Georgia. Based on UNICEF 2011 WMS, the poor children’s preschool enrollment rate is lower than the national enrollment average and enrollment in the richest quintile: 30% as compared with 46% and 48%³⁰. At first glance, it seems that the enrollment gap has decreased substantially. However, the figures of UNESCO and WMS clearly are not comparable due to the different methodologies used for calculating them. One of the most evident differences is age group specification.

²⁷ <http://unesdoc.unesco.org/images/0021/002160/216038e.pdf>

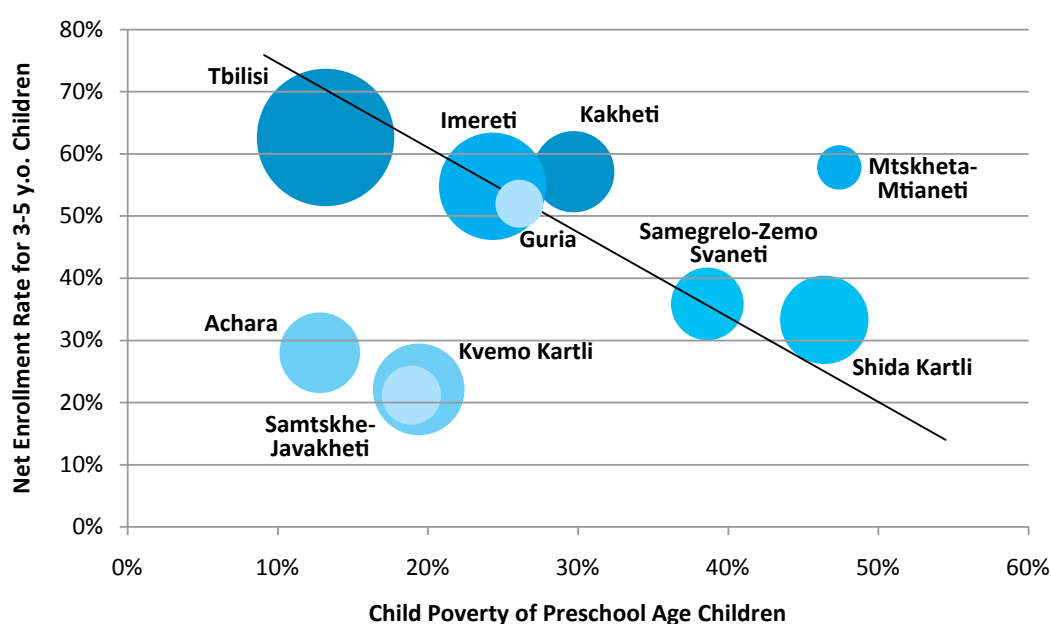
²⁸ Threshold at 60% of median consumption equalling 109.2 GEL per month per adult equivalent (see UNICEF discussion paper: *Reducing Child Poverty*. 2012 for more details)

²⁹ Threshold of 71.7 GEL per month per adult equivalent (see UNICEF discussion paper: *Reducing Child Poverty*. 2012 for more details)

³⁰ Estimate from WMS 2011

The equity problem has a strong regional aspect. As can be seen from the Figure 6 below, as a rule regions with higher child poverty figures are characterized by lower enrollment rates. Somewhat exceptional are Samtskhe-Javakheti and Kvemo Kartli. These two regions have very low enrollment rates – slightly above 20%, which is about 40 percentage points lower than in regions characterized by similar child poverty rates. As both are mainly populated by ethnic minorities, the low enrollment rates could be potentially explained by language issues and the lack of bi-lingual KGs (supply side constraints). On the other hand, Mtskheta-Mtianeti, while having the highest ratio of poor children in Georgia (47%) is second only after Tbilisi in terms of preschool enrollment (58%). Not incidentally, poor children in all five municipalities belonging to the Mtskheta-Mtianeti region (Akhlagori, Dusheti, Kazbegi, Mtskheta, and Tianeti) are being offered preferential treatment, including free full day care. The factor of Akhlagori's IDP settlement, which offers absolutely free preschool service should also be noted.

Figure 6. Net enrollment and child poverty across Georgia's regions



Note: Size of bubbles represents 2011 population size (see table 14 for details in Annex 3)

Sources: WMS 2011 (relative child poverty of preschool age children), IHS 2011 (NER) and GeoStat (population data)

The urgent need for addressing the issue of the exclusion of the poor was extensively discussed in the ISET column in *The Financial* on October 1 and on the ISET Economist Blog³¹ on October 2 (see Annex 4). However, the kind of policy interventions that are needed should be tailored to local (regional) conditions. For instance, in regions such as Samtskhe-Javakheti, one should intervene on the supply side and increase the number of public kindergartens that can cater to the special needs of ethnic minority populations. But the Mtskheta-Mtianeti example reveals that if the supply is there (e.g. the physical capacity to provide EL services), demand interventions can be effective in regions with a high concentration of poor children.

Another important dimension of equity in preschool education concerns the acute disparities by settlement type (urban vs. rural). According to 2011 IHS data, 61% of 3-5 age children in urban areas attend KGs, while enrollment among their rural counterparts is almost twice lower.

A very important aspect from the policy perspective is that the reasons children are not enrolled in KGs dramatically differ depending on the type of settlements. Insufficient supply (low availability of KGs) is the

³¹ <http://www.iset.ge/blog/>

main concern in rural areas, whereas parental attitudes account for almost 70% of non-attendance in cities (2011 IHS data).

While KG availability is a dominant factor in the rural areas, the non-price determinants of the demand for preschools (e.g. parental attitudes) are a key in explaining non-attendance in both rural and urban settings. For example, a very large number of parents of 3-5 year-old children, who do not attend KGs, delay enrollment because they consider their children to be too young (53% and 23% in urban and rural areas, respectively). Many prefer to raise their children at home. This data strongly suggests that policy interventions seeking to expand ELS coverage should target parental attitudes.

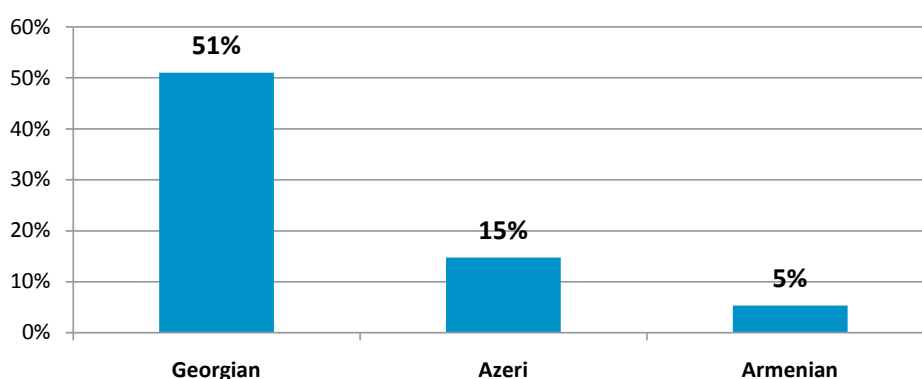
Table 6. Reasons for not attending KG by settlement type, 3-5 age group

What is the reason for not enrolling the child in a kindergarten?	Rural	Urban
S/he is still small	23%	53%
Prefer to bring up the child at home	12%	18%
The child gets ill frequently	2%	4%
Lack of money	12%	13%
There is no KG in the vicinity	48%	2%
The KG is of low quality	1%	3%
Other	3%	7%

Source: GeoStat, IHS 2011

As previously discussed, ethnicity is another major source of inequality in preschool enrollment. In 2011, more than half of ethnically Georgian children in the 3-5 age group attended KGs, while the corresponding shares for the Armenian and Azeri population were 5% and 15%, respectively. Regions densely populated by the Azeri and Armenian minorities (Kvemo Kartli and Samtskhe-Javakheti) have exceptionally low levels of enrollment; lower than in other rural or urban regions populated by ethnic Georgians.

Figure 7. Enrollment in preschool education among 3, 4 and 5 year olds, by ethnicity in 2011



Source: GeoStat, IHS 2011

This situation calls for an urgent policy intervention. In a 2010 report, the Minister of Reintegration identified the involvement of ethnic minorities in preschool education as a priority³². According to Ms. Irma Kurdadze, director of a preschool training center in Akhaltsikhe, there are Armenian-language groups in ordinary KGs in the Samtskhe-Javakheti region. She also pointed out that her training center has developed a training course for preschool educators focusing on bilingual methods of EL. However, trainings have not been delivered due

³² <http://www.smr.gov.ge/docs/doc51.pdf>

to a lack of funding from the municipality. It may be the case that interventions would have to be designed and implemented at the national level to more fully integrate the Armenian and Azeri minorities into the system.

Quality

Judging by the IHS data, quality is not the main concern for parents who choose not to enroll their children into KGs. According to UNICEF education specialists, the quality of public KGs has improved substantially in recent years and indeed, the majority of parents are satisfied with the service delivered. In Tbilisi, where parents are confronted with a substantial number of private preschools, public preschools are able to maintain their share of the market and in fact, encounter a surplus of demand (long queues). The public sector may not be able to compete with the flexibility and the individual approach of private childcare institutions (see ISET Economist Blog in Annex 5), however, it does provide a reasonable price-quality combination. For one thing, public preschools are up to five times cheaper than their private counterparts.

The fact that parents of the non-attending children³³ (see Table 6) are not particularly concerned with the quality of public preschool education should not be a reason for complacency. The preschool education sector is characterized by very strong information asymmetries: most parents are not sufficiently informed about the educational standards KGs should be providing and/or are de facto providing. Atkinson (1987) suggests that parents may indeed value some program aspects. But they mostly value reliability, flexible hours, location, and convenience when asked about reasons for selecting childcare type. Therefore, rather than exclusively rely on parents' opinions, one should evaluate the quality of the EL system using approaches and methodologies adopted by developmental psychologists (see Hofferth, Wissoker, 1992; Kisker, Maynard, 1991; Leibowitz et al., 1988). Among other parameters, the quality of preschool childcare should be evaluated using educator and staff-to-child ratios, and the educational qualifications of providers.

In 2010-11 academic year, the average Georgian municipality had about 18 children per educator, which is quite an acceptable ratio. However, in almost a third of Georgian municipalities the child-to-educator ratio is higher than 20, in 10 municipalities it exceeds 25.³⁴

At least on paper, educators' qualifications also do not seem to be a problem: more than 90% of preschool educators have the appropriate professional education according to a UNICEF-commissioned survey of municipalities. This data should be taken with a grain of salt, however. While no systematic evaluations have been conducted to assess the professional qualifications of preschool educators, interviews we conducted with all 6 UNICEF-supported preschool training education centers suggest that there is a huge gap between qualifications, particularly in modern approaches to pedagogy and preschool management.

An important determinant of quality, and one that is often deemed key for school readiness, is the academic quality standards and their enforcement. The academic standards recommended by MoES adhere to the best international practice in preschool education. However, these standards are not mandatory, as far as the Georgian municipalities are concerned. By law, they have the freedom to establish their own standards, or modify the existing ones. What is interesting, however, is that 10 out of the 65 municipalities were not even aware the MoES provided any methodological guides .

A separate question is whether the municipal authorities bother to establish and monitor any kind of preschool education standards in their jurisdictions. According to the UNICEF-commissioned survey of municipalities, 4

³³ The IHS includes a question on the reasons for not enrolling children in KGs. Quality appears to be a rather minor concern for parents whose children do not attend preschools (1% of parents in rural areas, and 3% in urban areas indicated quality as an issue).

³⁴ source: UNICEF-commissioned survey of municipalities

of the 65 municipalities have no standards established or enforced.

A vast majority of municipalities report they implement certain standards (difficult to know which standards) and conduct regular inspections. The frequency of inspections varies from once per annum to twice a month.

Table 7. Frequency of academic inspections in 2011

Frequency of academic standard supervision	Twice a month	Once a month	Once in two months	Once in three months	Once in six months	Once a year	Frequency not specified	Not at all
Number of Municipalities	1	10	1	5	34	7	3	4

Source: GeoStat, Survey of Municipalities 2012.

One way for the municipalities to improve the quality of educational services would be to increase spending on preschool educators’ training. Such training for preschool educators has so far been delivered mainly with the help of international organizations such as UNICEF. In recent years, we have observed individual municipalities investing in the training of preschool educators, however, the number of such municipalities is still small. In 2011, only 6 municipalities revealed training expenditure in their budget. Although they are unable to devote significant funding for preschool education training, municipalities report more than 70% of current preschool educators have been trained during the last 5 years (with donor funding or, to a lesser extent, at the individual trainees’ expense). This information, however, does not provide any assurances to the quality of training services delivered and their relevance.

Data on preschool educators’ payment levels reveal critical indirect evidence for quality problems in the preschool sector. The average pay is 210 GEL (approx. 97 Euro) per month³⁵ (gross) outside Tbilisi. This amount cannot ensure the attraction and retention of high quality personnel in the public preschool sector. As improving quality has been found to have a positive effect on the children’s future, this is one policy dimension that the new Georgian Government may want to consider in the future. The government may also want to do more to coordinate academic standards among the MoES and the individual municipalities, including measures to establish and verify the quality of preschool education standards. Meanwhile, public preschool institutions in urban areas could be given some flexibility in setting prices (as is currently the practice in Tbilisi) in order to compete with each other. To increase parental trust in preschool institutions, the government could set mandatory standards and institute licensing for both public and private preschool institutions.

³⁵ Calculations are based on the UNICEF-commissioned Survey of Municipalities. The exact number is 210.73285 GEL. We rounded all the salary estimates to the nearest ten, in this case to 210 GEL.

Chapter 3. ALTERNATIVE MODELS OF DELIVERING EL

One of the first things Georgian parents must decide is whether to raise their children at home or to rely on an existing EL facility. According to IHS data, approximately 54% of all parents choose not to enroll their preschool age children in EL institutions. One reason for this (if it is a choice) could be the low opportunity cost of “employing” adult family members in childcare. Such family members, including grandparents, are readily available to help raise children due to the very high number of unemployed and discouraged workers (out of the labor force). For the same reason, even if every member of the household were employed, the family in question could easily afford hiring an informal childcare service provider (nanny).

If Georgian parents decide not to raise their children at home, they face a limited choice of public, private or alternative preschool centers. For many parents, the available choice of preschool centers is much narrower. Urban parents might have to choose between a public or private institution (if the latter is there at all), while rural parents may likely have no choice at all - there is either a preschool education center nearby (typically, a full day public KG), or none at all.

In this chapter we review three different models of providing EL services besides the traditional public KGs: private full-day care centers; an alternative model of half-day care, as implemented by Civitas Georgica (a non-governmental organization that partners with the Polish NGO “Edukator”); and a half-day program that has been used to expand preschool coverage subject to limited resources in countries such as Macedonia, Armenia and Kyrgyzstan (Van Raven, 2009 and 2010).

The main characteristics of these three models are summarized in the Table 8 below.

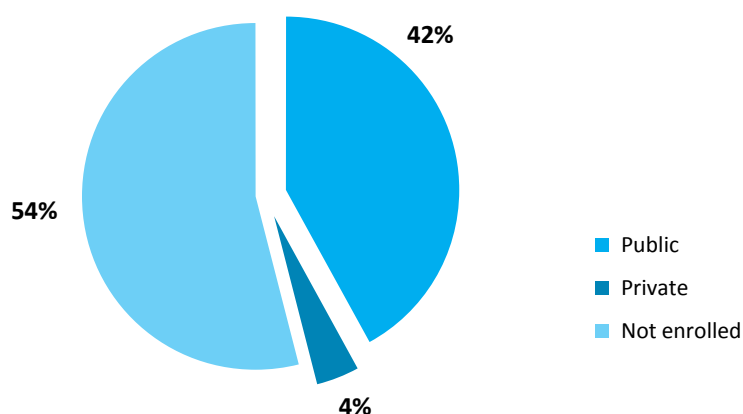
Table 8. Comparison of early learning service provision models

Characteristics of early learning service / model	Full-day	Alternative (Civitas Georgica)	Proposed half-day
Duration of stay	7-8 hours	4-5 hours	3-4 hours
Meals	Yes	No	No
Sleeping	Yes	No	No
Parental help	No	Yes	No
Age structure of the group	same age	mixed	same age
Desired (maximum) group size	30	20	20
Number of educators per group	1	1	1
Number of assistants per group	2	1 (parent)	1

Private Full-Day KGs

The private provision of childcare in the Georgian cities has been on the rise in the past few years³⁶. Establishing a private childcare institution is currently not subject to a licensing requirement and no government institution keeps records concerning their number and coverage. As a result, there is a lack of information regarding the number and size of private providers. Surveys are the only source of information concerning the share of private sector in the Georgian ELS. According to IHS, in 2011 4% of preschool age children were enrolled in private KGs (see Figure 8).

Figure 8. 3-5 year old children in and out of the preschool system in Georgia in 2011

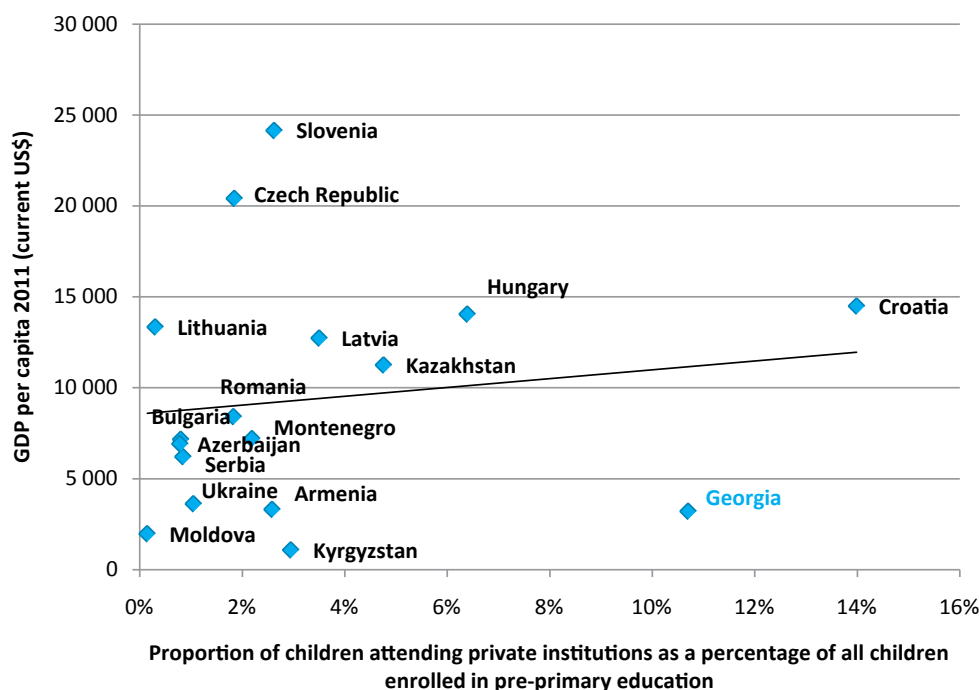


Source: GeoStat, IHS 2011

Private KGs may be quite a bit more expensive relative to the public alternative, yet many Georgian families are willing (or forced) to pay a premium. According to WASH 2011 data, private KGs are smaller establishments, with a small number of groups and consequently, a smaller number of students. educator-to-child ratio, as well as caregiver-to-child ratio is also higher in private KGs. As a result, more attention and care can be given to each child in comparison to a public KG. Private KGs also offer greater flexibility and are less bureaucratic. For instance, parents can drop off and pick up their children at their convenience. Finally, private KGs are directly accountable to the parents (“the clients”), allowing for closer coordination and continuous feedback. Georgia has an exceptionally high share of private preschool providers compared to other CEE/CIS countries. According to the IHS and WMS, of all 3-5 year-old Georgian children enrolled in preschools in 2010/11, between 9% and 10.7% were in private KGs. One may think that private provision is correlated to GDP per capita and size of the middle class, however, this is not necessarily the case. For instance, a higher-income country such as the Czech Republic has close to 1% of private shares of total preschool providers. Figure 9 plots GDP per capita vs. the proportions of children attending private institutions as a percentage of all children enrolled in pre-primary education in 2010/11. One conclusion to be drawn from this analysis is that demand factors (related to income per capita) do not explain the share of private providers in total provision. Rather, these are supply side factors. In Georgia – a huge “outlier” among CEE/CIS countries – public preschools are undersupplied relative to the demand in urban areas. At the same time, Georgia places no restrictions, including no licensing requirements, on private providers of preschool services. Both of these factors apparently account for Georgia’s unique position on the chart.

³⁶ According to WMS, the share of private preschool provision in the total stayed roughly the same from 2009 (11%) to 2011 (10.7%). As the total enrolment has significantly increased during this period, private provision has expanded in absolute terms as well.

Figure 9. 2010 GDP per capita and proportion of children attending private institutions of pre-primary education as a percentage of all children enrolled in pre-primary education, 2010/2011.



Note: Georgian number is an estimate from WMS, 2011.

Source: TransMonEE 2012 database and [The World Bank National Accounts database](#)

The issue of private provision and the challenges and opportunities associated with it are discussed in greater detail on the ISET Economist blog (see Annex 5).

Preschool Education Centers by Civitas Georgica³⁷

Alternative preschool education centers have been introduced in Georgia's rural areas (mostly in small villages and IDP communities) by Civitas Georgia, in partnership with a Polish NGO ("Edukator"). Civitas centers focus on the mental and social development of children and excludes beneficial, but not essential, components of traditional KGs, such as the provision of meals and sleeping facilities.

As a rule, Civitas places its centers in villages that have a small child population and where the local government cannot afford to establish new conventional KG facilities or operate the existing ones. The Civitas Georgica centers provide an effective way of dealing with the challenge of universal coverage in remote rural areas. They do not require significant financing because children attend them for only 4-5 hours per day; sleeping facilities are not needed and meals are not served. The low overhead equates into a substantial savings. Moreover, parents contribute to the costs of running the centers by working as assistants and helping with maintenance work. The centers typically occupy a single room in a school, library or other public building. Thus, the main costs of establishing and running the centers consist of educational supplies and compensation for one qualified educator.

In 2012/13 academic year, Civitas Georgica had about 40 EL centers functioning throughout Georgia.

³⁷ Source: Civitas Georgica webpage http://www.civitas.ge/wm.php?page=but2&subb=bagebi&lng=ge_

Half-Day Preschool Education Centre Model

The main objective of our study is to identify possible ways to improve children's access to EL institutions so as to increase school readiness and include children from socially vulnerable families. In an ideal world with an abundance of resources, we would choose whatever is best for our children. But the reality is that we have to maximize social welfare relative to limited financial resources. Therefore, we must consider a half-day preschool education program that is less costly yet serves the same educational purposes, as compared to the conventional full-day public KGs. This type of half-day program was suggested for countries that are similar to Georgia in terms of preschool arrangements. The arguments for using half-day programs in those countries are also relevant for us (Ravens, 2010).

Half-day preschool programs have been examined by different researchers in recent years, given the desire to enroll more children under constrained budgets. In general, research findings for most countries are in favor of full-day KGs over half-day programs. However, a number of studies do not find any significant differences between full-day and half-day preschools (Holmes and McConnell, 1990). According to these studies, the educational outcomes of full-day KGs and half-day preschool education centers are almost the same. This can be explained by the fact that conventional KGs devote time to activities that are unrelated to learning, such as meals and sleeping, which can be provided at home, outside preschools. In fact, the net learning time in a half-day program might even exceed that in a full-time one (see examples in Evans (2008)). Moreover, half-day programs may be able to provide higher-quality educational experience given their special focus on learning. Finally, whatever the benefits of full-day care in other countries, a half-day program may be a very good fit for Georgia given the multigenerational structure of Georgian families, particularly in rural areas. A typical Georgian family is well "staffed" to take care of the child's emotional needs which are best provided in the home environment.

At least in the short term, there is another reason to consider half-day programs in Georgia. Preschool institutions typically perform two functions: child development and freeing up the parent's time. While the half-day preschool education center serves only the prior function, the latter function may be less relevant in Georgia given it is low labor market participation and high unemployment.

Half-day preschool education centers in Georgia would work with children for 4 hours a day, in contrast to the 7-8 hours of care at traditional KGs. They would not provide meals or sleeping facilities. One group would include up to 20 children of the same age and would be provided for by one educator and one assistant.

While not ideal, there could be an option to operate half-day programs in two shifts a day. This would allow educators to work with two groups per day, making more efficient use of the available physical capacity. Consequently, half-day programs would be able to achieve the main goal of preschool education, i.e. preparing children for schools, at a lower cost.

The proposed half-day programs would be very similar to the "alternative" EL centers operated by Civitas with one essential difference: they would not rely on parental assistance given that urban parents are more likely to have jobs and thus face higher opportunity costs of getting involved in the preschool education process.

As discussed above, half-day Civitas programs are already operational in many rural locations and the fact that local populations are willing to contribute in-kind suggests that these programs address a real need (i.e. are demanded). We attempted to study the demand for the proposed half-day program in urban settings by conducting an online survey of parents to children below the age of 6. Within a period of four days, we received more than 150 responses, mostly from Tbilisi. The sample clearly had selection problems, e.g. it mostly included people possessing computers and having access to internet.

While not fully representative of the general urban population, the main results were as follows. Most parents, in line with international research findings, consider the age of 3 to be appropriate for enrollment in preschool institutions and do not favor enrolling 5 year-old children in primary schools. Quite importantly, more than half of the surveyed parents would enroll their children in free half-day programs; moreover, almost all of them are ready to pay for this type of service.

Chapter 4. UNIT COSTS

In order to estimate the total costs of expanding ELS to all preschool age (3-5 year-old) children in Georgia, we need to estimate the unit cost per child for each model of preschool service providers. The starting point of our analysis is the empirically observed costs of delivering full-day care in the current system (**empirical full-day unit costs**). Next, we calculate the normative costs for a full-day KG service taking into account the recommended or required quality standards related to nutrition, educational materials, and personnel (**“ideal” full day unit costs**). Finally, we turn to two cost-effective models of half-day care that focus on the most essential educational services: a **half-day preschool education center** and a **Civitas-type half-day preschool education center** that relies on parental help. The latter is prospectively well-suited for rural areas. The costing methodology we use is a modification of the original methodology developed by Van Ravens and Aggio (2008). Theirs has been successfully implemented in a number of ELS costing studies across the transition region (for example, in Kyrgyzstan and Armenia).

For each type of preschool model, we identified a list of inputs in the following categories: human resources, educator trainings, material expenses and nutrition. Normative unit costs per child per year are calculated as follows:

$$\text{unit costs} = \sum_{i=1}^n \frac{\text{quantity of input}_i * \text{monthly cost}_i * \text{months per year}_i}{\text{child to input ratio}_i}$$

In other words, this is just the cost of all inputs per child. The Excel spreadsheet included in this study provides full details of the costing methodology.

Under each scenario, we calculate unit costs separately for Tbilisi and the rest of Georgia. Even though the capital, Tbilisi, is not the top spender among the municipalities, it is a special case in many respects. First of all, more than a quarter of Georgia’s population lived in Tbilisi in 2011. Secondly, it pays systematically higher wages to preschool personnel. Thirdly, a large number of private preschools exist in the capital. Fourthly, Tbilisi has special preferences for the socially disadvantaged and practices means-tested fees and electronic registration. Fifthly, Tbilisi is the only Georgian municipality to implement a comprehensive strategy (“Kindergarten management strategy,” approved by the Tbilisi Kindergarten Management Agency in 2011). All other municipalities take a much less systematic approach to preschool system development. Finally, demand for public preschools in Tbilisi is higher than elsewhere in Georgia, resulting in long waiting lists and crowded KGs (note that Tbilisi leads other municipalities in terms of the NER of preschool children). It was for these reasons that we decided to make Tbilisi a separate costing exercise.

The results of our estimation are summarized in Table 9 below.

Table 9. Unit cost (per child per year in GEL³⁸) estimates for Tbilisi and rest-of-Georgia

	Empirically observed full-day model		"Ideal" full-day model		Proposed half-day model		Civitas-type half-day model
	Tbilisi	Rest-of-Georgia	Tbilisi	Rest-of-Georgia	Tbilisi	Rest-of-Georgia	Rest-of-Georgia
Salaries	296	439	659	424	298	214	66
<i>Teaching staff</i>			442	225	231	113	63
<i>Administrative staff</i>			114	63	25	32	3
<i>Support staff</i>			103	136	43	70	0
Training Expenses	0	3	1	1	2	2	2
Material Expenses	132	50	235	189	149	127	127
<i>Toys and study materials</i>	18	3	66	66	66	66	66
<i>Utilities</i>	60	37	60	43	30	22	22
<i>Maintenance</i>	54	9	54	25	24	11	11
<i>Inventories</i>			25	25	8	8	8
<i>Playground</i>			10	10	10	10	10
<i>Sanitary</i>			20	20	10	10	10
Nutrition	328	152	727	678	0	0	0
Miscellaneous	23	42	0	0	0	0	0
Total	780	686	1,622	1,292	449	343	195

Source: Empirical costs calculated based on the Survey of Municipalities excluding Gori (which does not present costs in categories) and Gardabani (that does not report the number of enrolled children). For the details of calculating other unit costs, see the sections below.

Unit Costs of the Empirically Observed Full-Day Model

We calculated the costs per child in the existing KG system using data on 1) revenues³⁹ and 2) expenditures⁴⁰ (the data on revenues and expenditures do not always coincide). Revenues consist of the municipal budget allocation and donor and parental contributions, as reported by the surveyed municipalities. The expenditure approach may be better suited for our analysis, as it reflects the actual costs and enables us to observe the costs of the various inputs. According to our estimates, Tbilisi spent 780 GEL per child in 2011 (exactly matching the amount of revenue), whereas the rest of Georgia spent on average, 686 GEL per child (less than the amount of revenue - 715 GEL per child).

³⁸ The shares (%) of each cost category in the total is presented in Annex 6

³⁹

$$\text{spending per child} = \frac{\text{municipal expenditures} + \text{parental fees} + \text{donor contributions} + \text{contribution from other sources}}{\text{number of enrolled children}}$$

⁴⁰

$$\text{spending per child} = \frac{\text{personnel salaries} + \text{capital costs} + \text{utility costs} + \text{nutrition costs} + \text{toys and study materials costs} + \text{training costs} + \text{miscellaneous costs}}{\text{number of enrolled children}}$$

The first thing we notice is the share and absolute amount of spending on the salaries component in the unit costs, which strikes us as odd. Tbilisi spends 38% (296 GEL out of 780 GEL) of the unit costs on salaries, while the rest of Georgia spends 64% (439 GEL out of 686 GEL). The scale of KGs is a potential determinant of these differences in absolute terms. In Tbilisi there are on average 260 children per KG, while the rest of Georgia has an average of 55 children per institution. That is why the burden of staff compensation is shared by more children in the capital and also why it is lower per child in Tbilisi than in the rest of Georgia. The percentage differences might point to additional sources of inequity. Children outside Tbilisi might not be able to access the same quality of preschool services as their peers do in the capital. The main argument backing this is the lower overall spending per child in the rest of Georgia. Moreover, given the lower share, as well as absolute values of spending on maintenance, utilities, nutrition and materials per child, the impression is that municipalities are mainly struggling to cover costs related to human resources and do not have sufficient funds available for improving the quality of the learning environment or nutrition.

Unit Costs of the Ideal Full-day Model

The costing of this model is based on the standards recommended by MoES, MoLHSA and the Tbilisi Kindergarten Management Agency. These standards are said to “provide the basis for elaborating a monitoring system” (e.g. see p.3, Kindergarten Management Strategy, 2011) by the municipal authorities, but the standards are not legally binding. Therefore, it should come as no surprise that the normative costs of the ideal full-day model are about twice as high as the empirically observed costs. Four cost categories are considered: human resources, training, material expenses and nutrition costs.

Human resources. The required inputs and costs for the ideal model were quantified as follows:

- **Staffing.** For Tbilisi, the list of human resources was constructed based on recommendations contained in the “Kindergarten management strategy” (p.10)⁴¹ with the addition of a municipal supervisor to perform the monitoring and evaluation function. For rest-of-Georgia, given the much smaller size of preschool institutions (55 children on average compared to 260 in Tbilisi) we costed a smaller staff, excluding several administrative and support staff positions that are not essential for small-scale preschool institutions, as confirmed empirically⁴².
- **Work loads.** We assumed workloads for each type of preschool personnel as set in the MoES “Guide to the management of a preschool education organization”. The calculation of annual salaries was based on the actual number of months in a year each position is staffed by public KGs in Tbilisi. **Child-to-staff ratios.** Wherever staffing standards exist we assumed recommended ratios; elsewhere we used empirically observed ratios. Child-to-educator and child-to-educator-assistant ratios are based on the MoES written standards⁴³ and child-to-cleaner ratio on an expert opinion⁴⁴. All other child-to-staff (e.g. child-to-cook) ratios are based on the empirically observed ratios.
- **Supervisors.** Tbilisi employs “curators” to perform the monitoring function for an average of 15 KGs. According to the Georgian Portage Association⁴⁵, curator positions are not staffed in any other municipalities and establishing such positions in Tbilisi required a large upfront training investment. Based on this, we assume that supervisors would monitor on average 17 KGs (equivalent to the average number of KGs in rest-of-Georgia municipalities⁴⁶) and have a gross salary of 500 GEL. Even though this

⁴¹ Approved by Tbilisi Kindergarten Management Agency, 2011.

⁴² MoES survey of municipalities, 2008.

⁴³ “Guide to the management of a preschool education organization”, MoES.

⁴⁴ Irina Rukhadze, Tbilisi Kindergarten Management Agency

⁴⁵ Nana Gochiashvili, Georgian Portage Association.

⁴⁶ Estimate from the survey of municipalities.

salary is high compared to other rest-of-Georgia preschool personnel, it could potentially compensate for additional KGs to supervise, transportation costs and upfront training.

- **Salaries.** We used empirically observed salary levels. One might be concerned with the adequacy of these salaries in terms of recruiting and retaining qualified personnel. However, at least in the short run, as long as labor markets remain weak, there is no better alternative to using the empirically observed salaries. Salary estimates are rounded to nearest ten in order to look more natural.

Training. The ideal full-day model includes a training component designed to keep preschool educators abreast of new teaching methods. Per person per day training costs and the desired duration and frequency of trainings are based on interviews with the UNICEF-supported Preschool Personnel Training Centres. One 2-day training per educator per year (at 40 GEL) was suggested as a reasonable assumption, taking into account the Georgian reality.

Material expenses. This category includes furniture and equipment, such as tables, chairs, beds and linen for children; toys, stationery, books, playgrounds, utilities and maintenance costs (including minor repairs). Standard sets and estimated prices were available only for toys and stationery⁴⁷. As for other costs, we relied on the UNICEF-commissioned survey of municipalities and interviews with the experts.⁴⁸ Our estimate of material expenses does not include any major construction costs. See box below.

Physical infrastructure may be there to serve the needs of preschool education expansion

Our calculations throughout this report focus on recurrent unit costs per child per year, excluding capital investment. We therefore assume that ELS coverage can be expanded using the spare physical capacity of existing KGs or other municipal buildings that could be put back into circulation. Such spare capacity is likely to exist because the Georgian preschool system used to cater to a much larger number of children. For instance, in 1990, there were at least 159,000 children in the system⁴⁹, which is higher than the total number of 3-5 year-old children today (151,033).

There are of course many issues with Soviet era infrastructure: can it be renovated? Is it located where we need it today? During the past 20 years, Georgia went through a process of urbanization and migration of IDPs. Nevertheless, some of the dilapidated infrastructure could be restored to its original use, reducing the need for new construction.

If the physical capacity for expansion is not there, municipalities will need to find ways of accommodating additional children. Even in that case, new construction may be avoided. First, municipalities could implement two shifts in half-day public preschools. Second, there is the possibility of using public funds (e.g. through a voucher system) to cover the cost of half-day care by private KGs.

Nutrition costs. These were calculated based on the MoLHSA-recommended menu (2003)⁵⁰ and the average prices of food products in 2011 available from GeoStat. The estimated costs might be higher than the actual costs, especially for Tbilisi where large KGs are buying food products in bulk at lower wholesale prices. Also, we account for three meals a day, whereas the common practice is two meals. According to a representative

⁴⁷ Ministry of Education and Science, The list of minimal necessary toys and stationery for a KG group of 20-25 3-6 year old children, 2011

⁴⁸ Alexander Kalandadze, Civitas Georgica and Irina Rukhadze, Tbilisi Kindergarten Management Agency

⁴⁹ Based on GeoStat and TransMonEE 2012 database, of 357,000 3-6 age children in 1990, about 44.6 attended kindergartens. The gross enrolment rate may have been even higher

⁵⁰ MoLSHA order N280/n, About Approval of Nutrition Sanitary Rules and Norms in Child Preschool Organizations, Annex 10, 2003, Tbilisi

of the Tbilisi Kindergarten Management Agency, nutrition costs faced by Tbilisi-based KGs do not exceed 2.20 GEL per child per day.

Our estimate of the unit cost for the “ideal” full-day KG model is about twice as high as the empirically observed costs: 1,622 vs. 780 GEL in Tbilisi and 1,292 vs. 686 GEL in the rest of Georgia.

Half-Day Program Costs

Estimating the unit cost per child per year in half-day centers is to some extent an empirical exercise, as Civitas Georgica has the experience of establishing such centers in Georgia. The normative case we are analyzing differs from EL centers operated by Civitas Georgica in only one respect: it does not rely on parental help with maintenance and teaching assistance.

Key costing assumptions related to half-day programs are these: children are taken care of 4 hours a day; exclusive focus on school readiness – meals and sleeping facilities are not provided; average group size is 20 (as opposed to 30 in the full-day model). Half-day EL centers are thus cheaper in achieving the goal school readiness of 3-5 year olds⁵¹.

Where applicable, our costing of half-day programs is based on existing standards and recommendations. Only three cost categories are considered: human resources, training and material expenses.

Human resources. Compared to the full-day model, we eliminated a number of positions that are not required under the half-day scenario, including administrative staff other than directors, washers, cooks, and music teachers. For all staff except guards we calculate for a half day workload and half⁵² of the full day salary. We assume a group size of 20⁵³ per one educator (“aghmzrdeli”) and one educator assistant (“dzidza”).

The Civitas-style half-day EL center uses much fewer human resources. In particular, the center is operated by a single educator who uses the help of parents to perform the teaching assistance functions as well as cleaning, maintenance, etc.

Training: we assume the same frequency, duration and cost of training, however unit costs are higher than in the full-day model given the smaller number of children under the single-shift scenario that we are costing.

Material costs. We assume the cost of utilities and hygienic materials to be half of the empirical full-day costs. Maintenance costs (including minor repairs) are assumed to be 45% of those for the full-day model due to much lower per child space requirements⁵⁴. On the other hand, we assume the same rate of depreciation (and cost of replacement) for toys, furniture, playgrounds and educational supplies. Our estimate of material expenses does not include any major construction costs.

As mentioned above, nutrition costs as well as the cost of beds and linen are set at zero.

Our estimates of unit costs for half-day programs are as follows: 449 GEL for Tbilisi, 343 GEL for rest-of-Georgia in the “conventional” setup, and 195 GEL in the Civitas-style EL center.

⁵¹ Additional savings could be achieved by introducing a second shift allowing educators to work with two groups per day without additional investment in physical infrastructure.

⁵² We assume that a half-day educator working two shifts is in effect working full-time and thus should have at least the same salary as he/she earns in the existing system.

⁵³ According to Alexander Kalandadze (Civitas Georgica) twenty is the absolute maximum number of children that one preschool educator and one assistant can take care of in the education process. This group size is also considered optimal by Van Raven in all his studies.

⁵⁴ According to MoLSHA standards, a small full-day preschool for 50 children has to have space of about 222 square meters. A half-day preschool education centre of similar capacity would require only 100 square meters, That is about 45% of what is required under the full-day model.

Chapter 5. SCENARIOS

In this chapter, we use the estimated unit costs to calculate the total costs of expanding the public preschool education system under five different scenarios. Each scenario assumes universal (100%) coverage of 3-5 year-old children. These scenarios use the same assumption regarding demographic developments, the share of socially vulnerable children, and size of private sector coverage.

Assumptions for all the scenarios:

- Private KG NER : 4%⁵⁵
 - Share of Tbilisi preschool children: 26%⁵⁶
 - 5-year-old child enrollment rate at primary schools: 43%⁵⁷
 - Coverage: 100%
 - Total cost calculations are done for the year 2013
-

The financial implications for the public budget and the parents are different as each scenario gives priorities to different goals: some of them focus on school readiness and low costs for the municipalities; others put more emphasis on creating the proper environment for children from socially vulnerable families.

Table 10 below summarizes the main characteristics of each scenario, including the types of services provided for different social categories and age groups in different types of settlements.

The light pink color in a cell represents status quo i.e. that under the scenario in question the policy intervention does not affect the relevant category of children. For each scenario, the table indicates which service is provided for each type of child targeted by the policy. For instance, under Scenario 1 we do not treat children that are currently enrolled in ELS, and do not try to change the proportion of 5-year-olds in primary school. In this scenario we treat only those children who are out of ELS (private or public) and primary education institutions by enrolling them in half-day preschool education programs.

⁵⁵ The estimate for the private KG enrolment is deduced from the annual IHS Database by GeoStat.

⁵⁶ We do not have an exact number for Tbilisi preschool children. We first thought to use the live birth indicators to approximate this figure, however, as birth registration does not necessarily imply that a newborn will stay to live in the same city or even region, we decided to use the current overall regional distribution of the Georgian population for this, ignoring the potential age distribution peculiarities by regions. Even so, it should be mentioned that these two measures produce quite similar numbers: the first at 28% and the second at 26%. So, according to our rationale, we picked 26%.

⁵⁷ This number comes from 2011. About 20,000 children were enrolled, representing 43% of children of this age cohort. Source: <http://www.mes.gov.ge/content.php?id=2792&lang=geo> . We assume the same enrollment for the next years.

Table 10. Expansion scenarios

			Scenario 1: expansion through ½ day programs	Scenario 2: expansion through ½ day programs and full-day program for the vulnerable	Scenario 3 (minimum cost)	Scenario 4 (minimum cost + all 5 y.o. in ELS)	Scenario 5 (minimum cost + all 5 y.o. in primary)
3-5 children currently enrolled in public KGs	Urban	Vulnerable			Full-day	Full-day	Full-day
		Other			Half-day	Half-day	Half-day
	Rural	Vulnerable			Full-day	Full-day	Full-day
		Other			Half-day	Half-day	Half-day
3-5 children out of the EL and primary education system	Urban	Vulnerable	Half-day	Full-day	Full-day	Full-day	Full-day
		Other	Half-day	Half-day	Half-day	Half-day	Half-day
	Rural	Vulnerable	Half-day	Full-day	Full-day	Full-day	Full-day
		Other	Half-day	Half-day	Alternative	Half-day	Half-day
% of all 5-year-old children who attend primary school			43%	43%	43%	100%	0%

The total cost calculations for all the scenarios rely on demographic and other assumptions (see box above) and our unit cost estimates. One may argue about the validity of these assumptions in the future, but these are the best estimates one can make today.

The first scenario in Table 11 (Scenario “0”) – expanding enrollment using the current full-day KG approach – is not considered as feasible. According to our calculations, the total cost of this scenario is about 99 mln. GEL, including parental contributions, i.e. almost a doubling of the annual spending on the preschool sector assuming the 2011 NER⁵⁸. And this calculation does not include the extra fixed costs of buildings, buying or renting the facilities needed for accommodating additional children in full-day preschools! The lion’s share of this extra financial burden would have to be carried by the municipal budgets (the parents of children that are currently not covered by ELS have almost by definition a lower willingness to pay for preschool education at the current quality of provision). From the macroeconomic point of view, implementing this scenario would require GDP growth of about 100% in order for the total spending on preschool education not to increase as a share of GDP. It is, therefore, obvious that this option is not feasible.

Another observation to make is that “ideal” unit costs are so high that the total price tag for “upgrading” preschool services to the ideal standard is almost the same as the funding needs for expanding coverage to 100% at the current (empirically observed) unit cost.

⁵⁸ Here we refer to spending related to preschool age children only; spending on both under 3 and over 5 age children is ignored.

Table 11. **Total cost implications for different scenarios to provide full-day care in 2013: at the current (white rows) and ideal unit costs (blue rows)**

	Costs in GEL	
	Extra cost	Total cost
Status Quo	0	49,458,820
	47,625,441	97,084,261
Scenario 0 - universal coverage using full-day public KGs (maximum cost)	49,169,580	98,628,401
	141,884,545	191,343,366
Scenario 1: expansion through ½ day programs	25,208,869	74,667,689
	72,834,311	122,293,131
Scenario 2: expansion through ½ day programs and full-day program for the vulnerable	30,443,276	79,902,097
	87,323,716	136,782,536
Scenario 3 (minimum cost)	8,854,022	58,312,842
	33,224,945	82,683,766
Scenario 4 (minimum cost + all 5 y.o. in ELS)	22,674,955	72,133,775
	47,045,879	96,504,699
Scenario 5 (minimum cost + all 5 y.o. in primary)	913,688	50,372,508
	18,175,437	67,634,257

Note: Total costs for full-day are calculated based on the empirical and much higher “ideal” costs. All the extra costs are calculated relative to the cost of providing the status quo share of 3-5 year old children with the current level of service in 2013 (49,458,820 GEL).

Funding Schemes and Allocations

For each scenario below we present the total costs associated with them. We decided not to avoid the issue of funding schemes – meaning the division of these costs among the municipalities, parents, donors or other sources of funding.

One reason why we did not try to divide the total costs between the interested parties is that there is a legislative initiative that seeks to ensure free preschool services for every child. According to its initiator, Tinatin Khidasheli, the legislative initiative has its foundations in the Constitution of Georgia, according to which, the “state provides preschool care”. The Parliament of Georgia is going to discuss the initiative in 2013 and, if it is approved, preschool services are going to become free for everybody starting in March.⁵⁹ International research offers mixed evidence about providing preschool services free of charge for parents. On the one hand, high income Belgium (with GNI per capita 45,990 USD)⁶⁰ which provides free preschool care, ranked number 5 out of 42 countries in the Starting Well Index (Economist Intelligence Unit, 2012)⁶¹ of early childhood education. On the other hand, substantially less wealthy Chile (with GNI per capita 12,280 USD)⁶², another free preschool service provider, is ranked 20th in the same index. Availability (as a result of

⁵⁹ Khidasheli, Tina. Interview, 15-01-2013, available at <http://imedinews.ge/index.php?newsid=22612>

⁶⁰ World Development Indicators, available at: <http://databank.worldbank.org/databank/download/GNIPC.pdf>

⁶¹ The index was compiled by Economist Intelligence Unit in 2012.

⁶² See footnote 60

free preschool care) is the component that places Chile above other poor countries. However, it also fails to achieve a higher position in the ranking due to its Achilles' heel – quality. It failed to provide appropriate standards of quality, regulations and suitable training for its preschool personnel. The Chilean experience is an example of how acutely the problem of the quality-quantity trade-off arises in countries with limited financial resources available for ELS. Free preschools allow for the promotion of universal coverage, however, there exists a well-grounded risk that quality suffers as restricted financial resources get mostly directed towards “quantity.” In the case of Georgia, where a substantial willingness to pay for preschool services exists, making them free for everybody will definitely lead to a waste of scarce public resources. The better approach to follow might be means-testing, that is charging a fee for the service based on parental income. In this case, there would be more funds available both for those most in need and for overall quality improvements. However, we do understand that this would be difficult to implement in reality.

Another reason why we do not propose concrete funding schemes is that there is no “correct” way of sharing. In general, ELSs are subsidized by the government: local, central or both. Still, those countries with top early education systems have quite diverse sharing schemes. For instance, Finland (ranked #1 in the Starting Well Index⁶³) practices means-testing and there is a price ceiling, setting the maximal price that parents can be charged. In 2008 the share of parental contributions was 15% in Finland.⁶⁴ Similarly, since 2005 the Norwegian parliament, another leader in the index (ranked #3) established that the parental fee cannot exceed 20% of total running costs (Eknes, 2000). From this point of view, the share of parental contributions in the Georgian ELS expenditure is not regulated and stands at 30%. On the other hand, the UK (#4) and France (#7) provide just a basic package of 15-20 hours of free childcare per week. A similar approach is also practiced in New Zealand (#9). Because this approach of sharing has proved successful, this is what we are basing most of our scenarios on.

As for allocation formulas, they exclusively rely on the cost-sharing scheme chosen. Depending on what the share and purpose of municipal or central government funding is, costs can be allocated in different ways. Municipalities are responsible for financing preschool institutions. So, the allocation mechanism in this case is defined as a method based on which preschool institutions get funds from local authorities. Lately, some of the municipalities switched to per capita (per child) financing, while others still operate with lump-sum allocations. Even though our analysis is based

on unit costs per child per year, we do not advocate per capita financing for a number of reasons. First of all, lessons should be learned from the Georgian general education financing reform. Voucher financing was adopted in 2005. Despite increasing competition, improvement of the financial accountability of the parents and creation of a stimulus to optimize costs, the reform failed to foster competition and quality in remote areas of Georgia. Additionally, in the regions of Georgia with a low density of population per capita, financing was not enough to keep institutions operating. That was why the lump-sum component of financing, which compensates smaller-scale institutions, was added in 2010. Schools were divided into several size categories by the number of pupils and funding (both lump-sum and voucher) was defined in accordance to these categories. However, even this arrangement is still far from perfect. Discontinuities in the allocation scheme create incentives for schools to artificially decrease their number of pupils and gain more funding. Both lump-sum and per capita financing have their merits and limitations. But our view is that a combination of both, without the discontinuities in the formulae, would do the best job.

Another reason we do not argue for any allocation formula is that we believe that these problems can be best tackled at local levels. For instance, per capita allocations could serve as competition resulting in a quality and efficiency fostering mechanism in urban areas. In contrast, rural areas with lower numbers of a preschool age population might not be able to cover their operation costs. So, in these cases, municipalities could look

⁶³ See footnote 61

⁶⁴ <http://www.newamerica.net/blog/early-ed-watch/2008/how-finland-educates-youngest-children-9029>

at individual KGs and decide lump-sum and per capita allocations accordingly. This is not going to be a huge burden for them as there are just 17 KGs on average per municipality in Georgia, excluding Tbilisi.

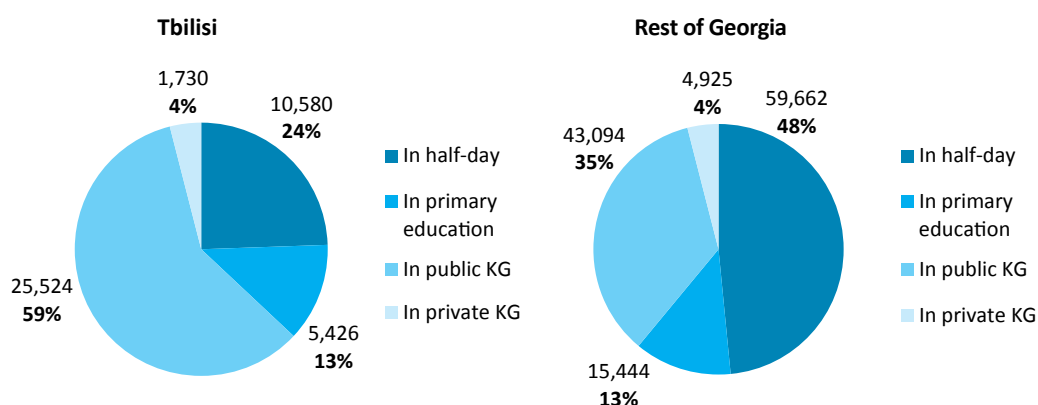
Another point is that our unit cost calculations rely heavily on the assumption of a certain number of children per teacher (30 in a full-day and 20 in a half-day) and per institution (260 in Tbilisi and 55 in the rest of Georgia). When the actual number is different from our assumptions, unit costs will also change. If we dig into the details of costs incurred by early learning institutions, we can see that there are costs that should be paid irrespective of whether you have one or thirty children per group. These are educator salaries. Irrespective of having one or 15 children you need an assistant, too. No matter whether you have two or four groups, you need administrative personnel salaries. You need to have a warm and well-lit room whether you have one child or more there. The only cost that is almost tied to the number of children is the nutrition cost. However, even these costs might be affected if the scale of the institution is changed and products are bought in bulk. Additionally, prices vary across the municipalities and the costs calculated by us cannot serve as a prescription for any individual municipality.

Therefore, our view is that both funding schemes and allocation strategies should be decided at the municipal levels. Municipalities could potentially link the funding to institutions, the number of groups in the institutions and number of children attending them. Additionally, some innovative methods of allocation could also be explored in order to increase the quality of preschool education and achieve the better outcomes for the children. For instance, New Zealand allocates additional funds per qualified teacher to preschool institutions.⁶⁵ The same is also true for Georgian general education.⁶⁶ In this case, institutions themselves become interested in training their academic personnel and thereby raise the quality of education they offer.

Scenario I: Expanding Coverage Through ½ day Programs

Description: Children who are out of preschools or primary schools are placed in state-financed half-day preschool programs aiming to achieve a common level of school readiness for everybody.

Figure 10. Distribution of 3-5 year-old children among different EL and primary education institutions under Scenario I



Under this scenario, children already enrolled in the EL and primary education are not immediately affected. Thus, any further reforms affecting them could be implemented over time, with the involvement of key stakeholders, including parents and municipal governments. All children (regardless of settlement type and

⁶⁵ See footnote 61

⁶⁶ Government of Georgia decree #379, 2011

social background) who are currently not enrolled are placed in state-financed half-day preschool centers aimed at achieving a common level of school readiness for everybody.

This scenario will cost about 75mIn GEL in total, which is 26mIn GEL more than the status quo (this entire extra costs is to be covered by the municipal budgets). The extra infrastructure costs under this scenario are not as high given that half-day programs require less space. If the Georgian economy continues to grow at the rate of 6% per year, it will take less than 8 years to bring spending on the preschool sector to the current level as a share of GDP (assuming there is no dramatic increase in the preschool population – something we do not expect to happen).

Conclusion: This scenario is feasible and relatively easy to implement in the existing environment. It will require investment in the training of additional personnel but no massive investment in the physical infrastructure.

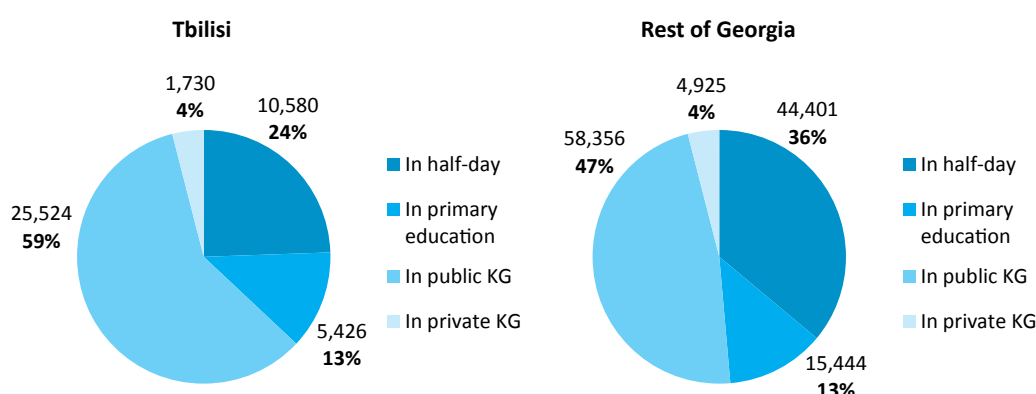
Scenario II: Expansion Through ½ Day Programs And Full-Day Programs For The Socially Vulnerable

Description: Children who are out of preschools and/or primary schools are enrolled in state-financed ½ day programs aiming to achieve a common level of school readiness for everybody. Additionally, all 3-5 year-old children from socially vulnerable families are placed in state-funded full-day care centers in order to provide them with improved nutrition and a safe environment.

Scenario-specific assumptions:

- Share of socially vulnerable among the preschool age children: Tbilisi: 13.2%⁶⁷, rest-of-Georgia: 26.2%⁶⁸.
- Enrollment of poor: Tbilisi: 100%⁶⁹, the rest-of-Georgia: 17%⁷⁰

Figure 11. Distribution of 3-5 year-old children among different EL and primary education institutions under Scenario II



⁶⁷ Estimate from the WMS 2011

⁶⁸ Estimate from the WMS 2011

⁶⁹ As Tbilisi offers preferential treatment such as registration preference and free service, almost all children from “officially poor” families (SSA score below 57000) are enrolled.

⁷⁰ Estimate of the poorest quantile enrolment from the WMS Report was 30%. If Tbilisi enrolls all the poor, then it comes out that in the rest-of-Georgia enrolment of poor stands at 17%.

This scenario is a bit more expensive as it not only aims at school readiness, but also at providing secure and healthy living conditions for poor children during the day. This can be done in the following way: Everybody who is currently enrolled remains in the same conditions. Those children currently excluded from the system are distributed between the traditional full-day and newly added half-day programs. The socially disadvantaged are given places in full-day care, while all others are financed just for school readiness programs.

By “socially disadvantaged” we are referring to those children below 60% of median consumption. We realize that this may be not a very accurate measure of children in need of proper nutrition and a safe environment; e.g. because of the existence of other categories of disadvantaged children, such as orphans and children from large families. However, these are the only figures that we are able to estimate from the available data.

The total cost of this scenario will amount to 80mln GEL based on empirical costs (137mln GEL using “ideal” costs). Compared to Scenario I, the additional cost of providing daycare for the poor based on empirical costs is estimated at 5mln GEL (to be covered by the municipal budgets). Again, assuming a similar growth rate and no dramatic expansion of the preschool population, the Georgian economy will need 9 (instead of 8) years to bring the share of spending on the preschool sector in GDP down to its current level.

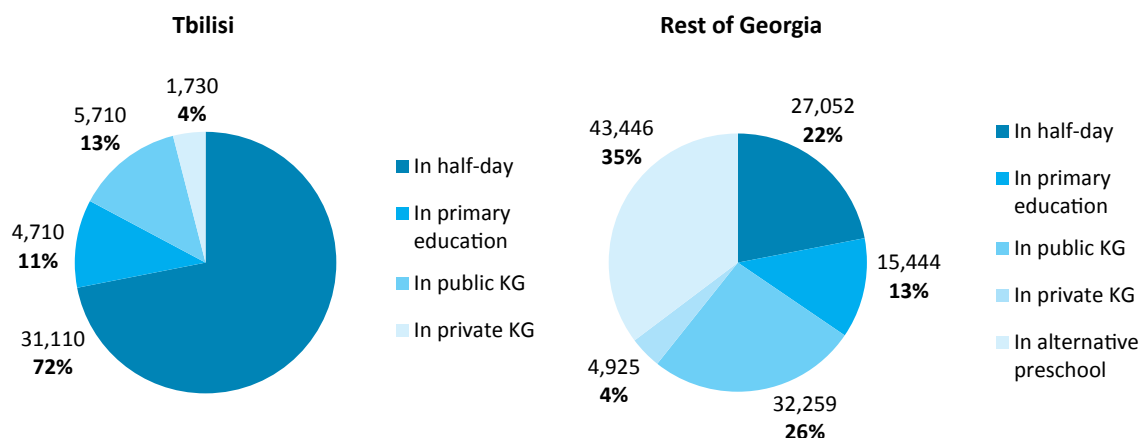
Scenario III: Minimum Cost

Description: Children from socially vulnerable families are placed in state-funded full-day care centers that provide them with proper nutrition and a safe environment. Children from rural areas that are not poor enroll in state-funded Civitas-type programs that use available municipal buildings and rely on the participation of parents to reduce the costs of delivery. All children from urban areas are placed in state-financed ½-day programs aiming to achieve a common level of school readiness for everybody. Meals and sleeping facilities could be provided as an extra service to be paid for by interested parents.

Scenario-specific assumptions:

- Socially vulnerable enrollment outside Tbilisi is the same for urban and rural areas
- 31.9%⁷¹ of the rural preschool age children are poor

Figure 12. Distribution of 3-5 year-old children among different EL and primary education institutions under Scenario III



⁷¹ Estimate from the WMS 2011.

This scenario seeks to minimize the costs of delivery while also serving the needs of the poor by placing them in state-financed full-day care centers. Savings are achieved by implementing Civitas-type preschool centers in the villages and substituting ½ day EL centers focused on school readiness for full-day KGs in urban areas.

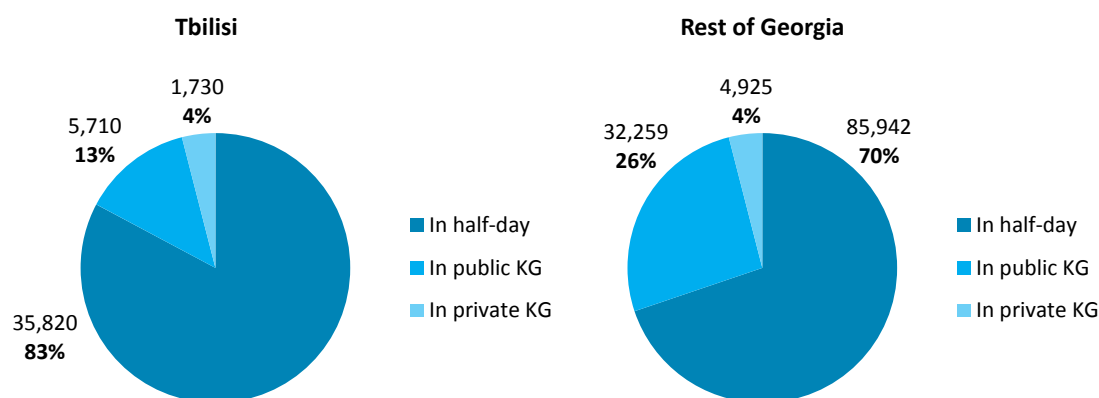
This scenario cannot be implemented immediately but rather, is spread over a period of 3-4 years to ensure a smooth transition. The government would have to commit providing school readiness programs in urban areas. However, any parent interested in enrolling their children in full-day care KGs, will be allowed to do so, if he/she pays for any extra services provided by the KG beyond the half-day service.

This scenario will cost 58 mln GEL based on empirical costs and 83 mln GEL using “ideal” costs for full-day service provision. Parents interested in keeping their children in full-day care would be required to pay on average an extra 33 GEL (117 in the “ideal” case) in Tbilisi and 34 GEL (95 in the “ideal” case) in the rest of Georgia per month. Parental contributions are difficult to estimate, since we do not know what the demand will be for full-day care at these costs and after half-day is provided.

Scenario IV: Minimum Cost, All 5 Year Old Children are Placed in ELS

Description: All five-year old children are placed in ELS. All children are treated as in Scenario III, except that Civitas-type half-day programs are replaced with conventional half-day programs.

Figure 13. Distribution of 3-5 year-old children among different EL and primary education institutions under Scenario IV.

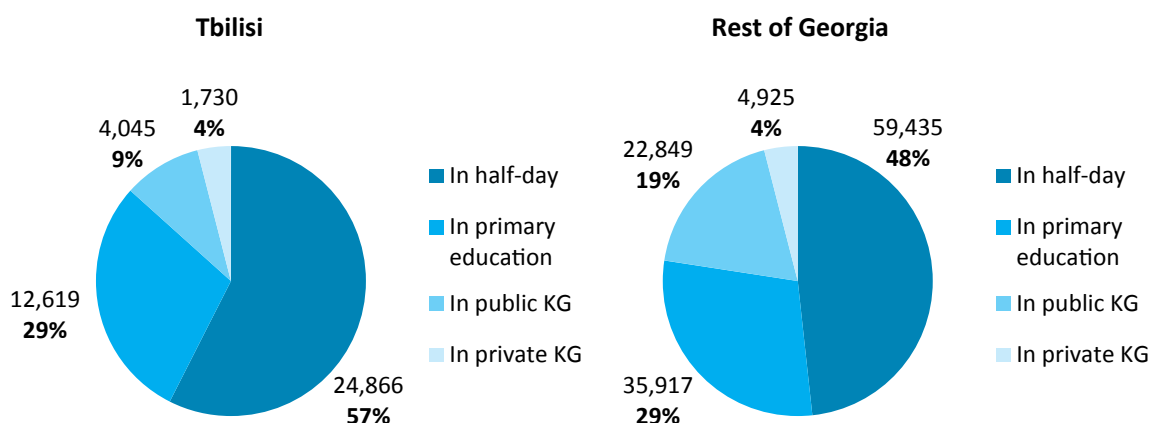


All 5 year-olds attend preschools rather than primary schools. Georgia can converge to this kind of equilibrium in 3-4 years’ time from the start of reforms and it will cost no more than 72mln GEL using empirical costs and 97mln GEL based on “ideal” costs.

Scenario V: Minimum Cost, All 5 Year Old Children are in Primary Education

Description: All five-year old children go to primary schools. The rest are treated as in Scenario III, except that Civitas-type half-day programs are replaced with conventional half-day programs.

Figure 14. Distribution of 3-5 year-old children among different EL and primary education institutions under Scenario V



All 5-year-olds go to primary schools to further reduce the costs of delivering pre-school education. However, this scenario may not be ideal from the point of view of maximizing learning outcomes. The total cost of preschool education will be 50 mln GEL based on empirical costs, which is 3 mln GEL less than municipal government’s spending on preschool education in 2011. The total cost of this scenario using “ideal” prices is 68 mln GEL. However, one should bear in mind that primary school education also needs to be paid for by the economy and we should consider both types of expenditures when deciding on future policy. In some municipalities primary education would be cheaper to deliver than ELS, in others it may be the other way around. Thus, the question of 5-year-old children should be addressed not by economists but by child development experts.

CHAPTER 6. KEY FINDINGS AND POLICY RECOMMENDATIONS

Since independence, Georgia’s preschool education sector went through several successive phases, starting from a dramatic reduction until 2001, when it gradually expanded until the decentralization reform of 2005. At present, the Net enrollment Rate (NER) in the public preschools stands at 42%; another 4% of children are in private care. While the total preschool population shrank relative to 1990, preschool NER today is higher than in the pre-independence period. Moreover, almost half of all 5 year-old children are enrolled in primary schools. Nevertheless, about 40% of 3 to 5 year-old children are not covered by any EL or primary education institutions.

The 2005 reform placed the burden of financing public preschools on the municipal governments, although it also gave them the freedom to tailor early learning delivery to local needs. Accordingly, the role of national policymaking agencies such as MoES and MoLHSA has been significantly reduced. Their main function in today’s environment is to issue methodological guidance. The post-2005 decentralization efforts created a huge diversity in the way preschool education is delivered throughout the 65 Georgian municipalities. For instance, municipalities exhibit vast differences in enrollment rates, quality of service, cost per child, the relative shares of municipal and parental contributions in this cost, as well as attention to the needs of socially vulnerable children.

CHALLENGES

There are two main issues that raise concern with the current state of preschool education in Georgia:

- Georgia’s current standing in international assessments (such as PISA) of the learning outcomes of school-age children is not satisfactory. Expanding enrollment in ELS and upgrading its quality would be one of the most effective ways to improve learning outcomes of children and their eventual success as adults (personally and professionally).
- While potentially good in some ways, the lack of a uniform approach creates problems of inclusion and quality in many of the municipalities. Unfortunately, these problems are concentrated in regions with higher child poverty, rural areas and regions with large ethnic minority populations.

Thus, the main priority for Georgia should be to gradually expand ELS coverage with a special emphasis on the weaker “links”: socially vulnerable children, ethnic minorities, and rural regions. Focusing on the disadvantaged groups will help achieve the fastest possible progress to the extent they are further away from the “mean” in terms of learning outcomes (or achievements) as far as the nation as a whole is concerned. As international research finds, “Preschool experience appears to be a stronger force in the lives of low-income than more advantaged children” (Boocock Spence, 1995) and tends to narrow the achievement gap between the two groups by providing equal opportunity for everybody from the very beginning. As James Heckman, an Economics Nobel prize Laureate, puts it: “The best way to improve the American workforce of the 21st century is to invest in early childhood education to ensure that even the most disadvantaged children have the opportunity to succeed alongside their more advantaged peers” (Heckman & Masteroy, 2004).

EXPANSION SCENARIOS

- To identify the best way forward, we looked into a number of early learning service models that have been used to expand ELS coverage in settings that are similar to Georgia’s. Early learning service models include full-day care, a half-day program that emphasizes school readiness for all, and a variation on this program that relies on parental in-kind contributions as a means of reducing costs. For conventional KGs, we calculate two types of unit costs: empirical and normative (see Chapter 4 for more details). While the

empirical cost is the observed average spending per child in the existing system, the normative cost of “ideal” full-day care reflects the cost of providing a child with preschool services in full accordance with all the relevant standards and recommendatory guidelines. Due to the fact that norms differ among the municipalities, we cost Tbilisi and the rest of Georgia separately. The costs of “ideal” full-day care are about twice as high as compared to the observed empirical costs (see Table 9 on page 38). We further develop several scenarios to expand coverage from the current 46% to 100%. These scenarios are based on an identical assumption concerning demographics, the share of socially vulnerable children and private preschool coverage. The financial implication of these scenarios – for the municipalities and the parents – are different due to differences in EL service models used (e.g. full-day vs. half-day) and different treatments applied to rural and urban populations. The option of expanding coverage using the current full-day EL service model is not financially feasible. It would require a doubling of recurrent costs as well as a massive investment in additional physical capacity and training of teaching staff.

- Half-day models provide a financially attractive option to expand coverage in the short term in both rural and urban settings (Scenario I). This option achieves the objective of school readiness for all without affecting children that are currently enrolled in the ELS.
- Scenario II has a stronger emphasis on equity by placing socially vulnerable children in full-day care in order to ensure proper nutrition and a safe environment.
- Scenario III achieves full coverage at a lower cost for the municipalities: instead of co-funding about 70% of full-day care costs for all (as is the case today), municipalities will provide free half-day school readiness programs at less than 60% of the total full-day care cost today. Relatively affluent parents will have the option of keeping their children in full-day care at their own expense. Rural children under this scenario will be placed in alternative half-day programs that utilize parental help to reduce the per child cost to about a third of what full-day care costs today. Socially vulnerable children in both rural and urban settings would still be entitled to full-day care, which would be financed by the above savings.
- Scenario IV and V are about differential treatment of 5 year-old children, who according to today’s legislation, may enroll in primary education (about 43%⁷² practice this option today). We cost out two extreme possibilities: under scenario IV, all 5 year-olds enroll in preschools; under scenario V they enroll in primary education.

We costed these expansion scenarios using empirically observed unit costs as well as normative costs that have been derived from ELS standards developed by MoES, MoLHSA and Tbilisi Kindergarten Management Agency.

Provided the ELS remains decentralized there is considerable scope for experimentation at the municipal level. There is no need to stick to a one-size-fits-all policy (“scenario”) as there are important local nuances that such an approach would inevitably fail to address. Among these nuances are many urban/rural specifics to be taken account when expanding coverage. In urban areas, non-enrollment is mainly explained by demand factors (parental attitudes).

Therefore, any future policy seeking to expand preschool coverage in Georgia’s cities would have to explain the benefits of EL and instill parent’s trust in the system⁷³. For rural areas, on the other hand, the main bottleneck is on the supply side: the physical and human capacity to deliver high quality EL. As the example of Mtskheta-Mtianeti region shows, a policy combining financial incentives for parents in the form of preschool

⁷² Authors’ calculations based on MoES information about 5-year-olds in primary schools in academic year 2011-2012 (available at <http://www.mes.gov.ge/content.php?id=2792&lang=geo>) and own cohort projections

⁷³ Most parents are generally aware of the benefits of EL, as suggested by a recent UNICEF- commissioned Survey — Domestic Violence against Children. Carried out in June-July 2012. According to this study, 95% of parents consider EL to be —important. At the same time, according to IHS, urban parents often prefer to raise their children at home (18% of parents whose children are not currently enrolled) or delay enrolment considering their children to be too small (53%)

fee waivers for children eligible for Targeted Social Assistance (TSA) with improved availability of EL institutions can help increase preschool coverage in regions with high child poverty. Finally, language issues would have to be addressed in regions populated by ethnic minorities.

OTHER RECOMMENDATIONS

Review the policy on parental contributions to the cost of preschool education. Regardless of the expansion scenario chosen by the Georgian Government, any future policy would have to address the question of parental contribution to the cost of preschool education. Universal coverage with full funding by the municipal governments would more than double the cost of provision for the municipalities, which may not be sustainable from the macroeconomic point of view, especially given the mounting pressures on the new government to increase the allocation to salaries, pensions and other social benefits. The fully funded option may also not be desirable from the efficiency point of view, as it would result in waste of scarce public resources. Because there is a considerable willingness to pay for high quality preschool service among relatively affluent Georgian parents, it would be much better to use public funds to expand preschool coverage and target the vulnerable populations. The fact that there are long waiting lists for public KGs in Tbilisi suggests that local fees (currently about 30% of total costs) could be slightly increased. **Review staff remuneration policies and standards.** The current salary level in the preschool education sector may not be adequate for expansion purposes. Expansion would require a major recruitment and training effort. Higher remuneration standards would help attract the right people – investing resources in the training of people who do not have the capacity or the motivation to stay in the sector would lead to a waste of resources. An option to consider is to link compensation to performance by introducing merit-based bonuses and annual raises. This would create incentives for educators and other staff to invest in their own professional development and reduce staff turnover. **Promote competition as a means of improving quality.** Frequent inspections by the municipalities are not necessarily the most effective way of advancing the quality of preschool care. Public preschool institutions could be given greater autonomy in setting prices and the quality of service and thus compete with each other and private providers. Competition, if properly designed, could provide powerful incentives for improvements, especially in urban areas where consumers have a choice among many providers. A note of caution: flexible pricing is a must condition for competition to be effective in fostering quality improvements as long as public kindergartens operate at full capacity.

Engage the private sector. As long as the public education system is unable to provide universal coverage, the government and/or individual municipalities may consider the use of public funds to expand coverage by utilizing spare private capacity. The private KG might have spare capacity to absorb a part of preschool age children that are not currently covered. Instead of building new public KGs, the state could train educators of private preschools and even subsidize the cost of private provision. Both measures would decrease the cost for parents and provide more children with access to higher quality preschool education, changing their lives for the better. Even though this issue is beyond the scope of our report, as private providers of childcare are not subject to any licensing or supervision for now, engagement should be conditional on meeting some standards and regulations of ELS. A similar way of engaging the private sector is practiced in Singapore (Economist Intelligence Unit, 2012). Yet another option to consider is to introduce means testing and differentiated fees for public education, as is already practiced in Tbilisi. This measure would push some of the higher-income parents from public to private KGs, freeing the capacity of public KGs to take care of children from low-income families.

Gather data on performance indicators for evaluation and benchmarking purposes. A proper policy for the preschool sector cannot be designed in an information vacuum. Ad hoc surveys by international agencies such as UNICEF are not a substitute for an orderly and regular collection of performance indicators based on a random sample of service providers, parents and municipal authorities. This would allow the individual self-governing units to evaluate the success of their approaches by using other municipalities as benchmarks. Additionally, despite the fact that private KGs are not currently supervised by any municipal or central authorities, data about the private provision of childcare would help evaluate the challenges and opportunities facing the sector as a whole.

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- The ISET Economist <http://www.iset.ge/blog/>
- The World Bank database <http://data.worldbank.org/?display=default>
- TransMonEE database: <http://www.transmonee.org/About.html>
- United Nations, Department of Economic and Social Affairs, Population Division: http://esa.un.org/unpd/wpp/country-profiles/country-profiles_1.htm

Annex 1. The Demographic Context

a. Forecasting the size of three, four and five age cohorts

In estimating the size of 3, 4 and 5 age cohorts, we made several assumptions:

- A uniform death rate among the 1-4 and 5-9 year-old population;
- The death rate following 2012 is the time average of death rates of 2006-2011 in the 1-4 and 5-9 age categories;
- The net migration for each age cohort has been set at 0 since January 2008.

The results of our estimation are presented in the table below.

Table 12. The size of three, four and five age cohorts for the coming years

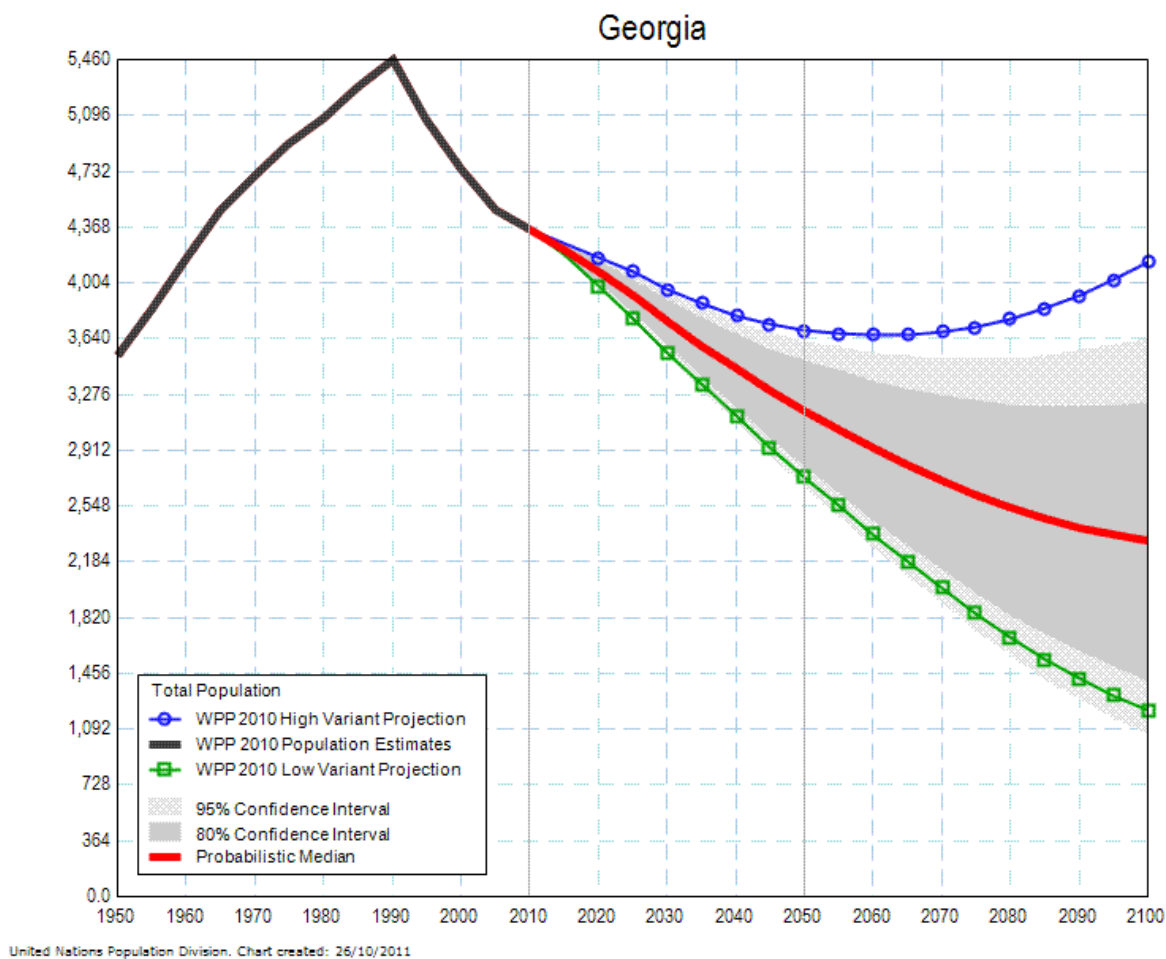
	2012	2013	2014
3-4 age group	55,525	62,348	61,805
4-5 age group	48,549	55,502	62,321
5-6 age group	46,959	48,536	55,488
Total	151,033	166,386	179,614

b. Probabilistic projections for Georgia: population age 0-14 years

The UN has estimates and probabilistic projections of the population age 0-14 for 197 countries and areas with a population of 100,000 or more in 2010. The projections are based on the probabilistic fertility projections from the 2010 Revision of the World Population Prospects. These probabilistic projections of total fertility were carried out with a Bayesian Hierarchical Model.

The figure below shows the most pessimistic (green line) and optimistic (blue line) scenarios together with the most probable development (red line in the range of grey areas) for Georgia's 0-14 age population. The most probable scenario suggests that 0-14 population will shrink over time. Even according to the most optimistic projections, by 2050 the number of this age group will not go beyond the current figure. So, the conclusion is that we expect the number of preschool age children not to increase over the next 40 years.

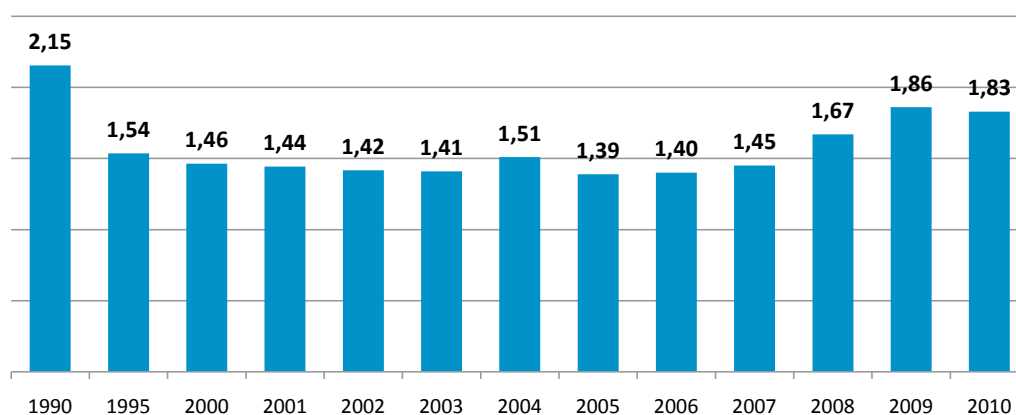
Figure 15. Probabilistic projections for Georgia: population age 0-14 years (in thousands)



Note: Population projection based on probabilistic projections of total fertility form the 2010 revision;

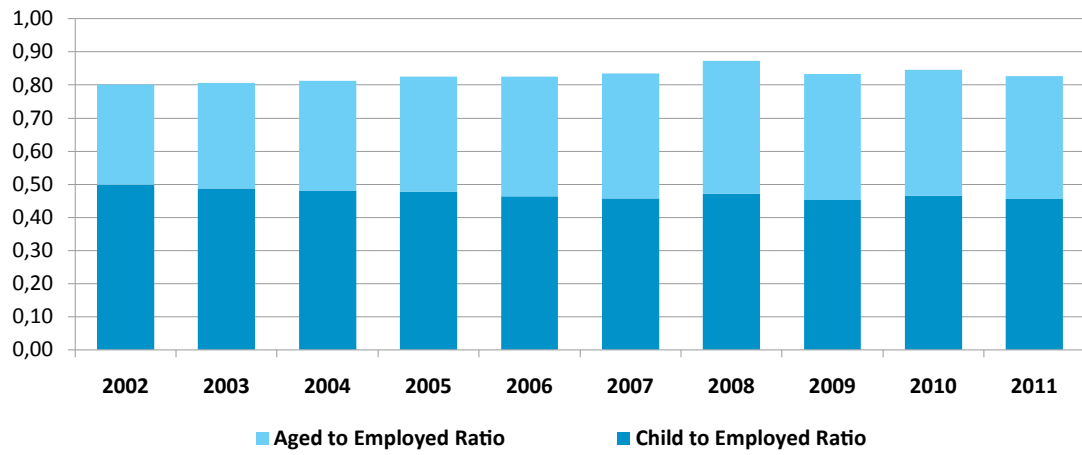
Source: United Nations, Department of Economic and Social Affairs, Population division, Population Estimates and Projections Section. http://esa.un.org/unpd/wpp/P-WPP/htm/PWPP_Total-Population.htm.

Figure 16. Total fertility rates in Georgia



Source: GeoStat

Figure 17. Child-to-employed and aged people-to-employed ratio in Georgia



Source: GeoStat

Annex 2. Spending Per Child By Municipality In Academic Year 2011-12

Table 13. Spending per child by municipality in academic year 2011-12

Municipality	2011-2012 Academic Year Per Child		Population in thousands	Child to KG ratio
	Revenue	Expenditure		
Abasha	791	683	27.8	23
Adigeni	400	368	20.7	30
Ambrolauri	920	887	14.3	20
Aspindza	504	504	13.0	106
Akhaltzikhe	578	577	48.2	74
Akhalgori	931	931	N/A	405
Akhalkalaki	780	775	64.4	91
Akhmeta	633	508	42.2	35
Baghdati	800	937	28.8	31
Bolnisi	488	429	78.3	63
Borjomi	547	668	31.8	58
Tsageri	1213	1213	15.6	20
Chokhatauri	1020	1019	23.0	25
Chkhorotsku	548	546	30.6	18
Dedoplistskaro	387	348	30.6	47
Dmanisi	643	716	28.8	20
Dusheti	1053	975	34.0	36
Gardabani	N/A	N/A	98.7	N/A
Gori	479	N/A	145.3	56
Gurjaani	460	451	69.9	48
Kaspi	738	585	52.9	33
Lagodekhi	416	395	51.9	57
Lanchkhuti	912	910	38.9	49
Lentekhi	648	645	9.0	13
Marneuli	273	289	128.1	102
Martvili	397	349	44.9	56
Mtskheta	460	412	57.3	60
Mestia	697	852	14.6	18
Ninotsminda	1180	1180	34.7	40
Oni	1504	914	8.4	69
Ozurgeti	1074	1074	78.4	37
Batumi	1373	1368	124.3	180
Poti	847	633	47.8	116
Kutaisi	492	492	194.7	223

Municipality	2011-2012 Academic Year Per Child		Population in thousands	Child to KG ratio
	Revenue	Expenditure		
Rustavi	569	569	120.8	217
Tbilisi	780	780	1,162.4	257
Kareli	738	737	52.3	48
Keda	1154	1073	20.4	64
Kobuleti	1146	974	92.1	85
Sachkhere	724	604	47.7	54
Sagarejo	435	403	59.8	63
Samtredia	539	539	60.7	52
Senaki	778	778	52.5	35
Sighnaghi	1827	1750	43.6	12
Shuakhevi	2099	1739	22.8	39
Telavi	512	453	71.0	55
Terjola	680	680	45.1	36
Tetritskharo	725	823	28.0	21
Tianeti	858	824	13.1	21
Tkibuli	658	596	30.1	42
Vani	2337	1168	33.8	19
Tsalendzhikha	578	495	40.7	30
Tsalka	678	545	23.0	66
Chiatura	850	850	55.2	43
Tskhaltubo	989	1008	73.8	63
Kharagauli	916	916	27.5	29
Khashuri	571	570	62.5	85
Khelvachauri	1040	849	95.2	99
Khobi	624	624	41.6	33
Khoni	876	722	31.4	35
Khulo	1367	1367	35.8	51
Kazbegi	1392	1326	4.9	21
Khvareli	609	609	37.2	43
Zestaponi	767	721	75.7	34
Zugdidi	523	443	176.6	39
Min	273	289	5	12
Max	2337	1750	1,162	405
Average	821	765	70	63
Sd	397	320	144	65

Note: see footnotes 39 and 40 for the formulae of calculating per child expenditures and revenues

Source: Survey of municipalities 2012

Annex 3. Net enrollment and child poverty across Georgia's regions

Table 14. Net enrollment and child poverty across Georgia's regions

Region	Share of preschool age children under relative poverty threshold	Enrollment	Population
Tbilisi	13%	63%	1162
Mtskheta-Mtianeti	47%	58%	109
Kakheti	30%	57%	406
Imereti	24%	55%	705
Guria	26%	52%	140
Shida Kartli	39%	36%	313
Samegrelo-Zemo-Svaneti	46%	33%	477
Achara	13%	28%	391
Kvemo Kartli	19%	22%	506
Samtskhe-Javakheti	19%	21%	213

Sources: WMS 2011, IHS 2011 and population data by GeoStat

Annex 4. ISET Blog Post: Breaking the Vicious Circle of Poverty and Inequality

Despite spectacular growth performance during the past several years (averaging more than 6% since 2005), Georgia remains a poor country. In 2011, Georgia's GDP per capita reached USD 3,215, just below the average for small island states in the Pacific and just above Guatemala. Still worse, more than half of Georgia's population live on incomes that are much lower than this average figure. This is because Georgian society is plagued by a very high level of income inequality. For instance, in 2011, Georgia's Gini coefficient – the most common indicator of inequality – stood at 40.8%. By this measure, Georgia is more unequal than all CIS countries except Russia. Think of this: the richest 20% receive close to 50% of Georgia's total income, while more than 9% are mired in extreme poverty. To add insult to injury, many of the poor and extremely poor are either long-term unemployed or out of the labor force, thus unable to contribute to the country's economic performance.

There is no need to explain why extreme poverty is a bad thing. It is bad for poor individuals and their families, it is bad for social cohesion and morale, and it is bad for economic growth. Having the poor productively engaged in economic activity would naturally help increase the size of the pie for society as a whole. Equally important, it would also reduce the need for distortionary taxation and redistribution policies. This in turn would translate into higher economic growth, higher incomes and greater prosperity for all. Therefore, reducing poverty through productive employment should be one of the main policy targets for any developing country, including Georgia. The problem with this policy prescription, of course, is that it's easier said than done.

A key problem is that poverty tends to reproduce itself through the education channel. Poor people cannot afford good (and sometimes any) education for their children. Because education is one of the main determinants of a person's productivity and consequently, wages, children of poor families tend to stay poor. Thus, the lack of investment in human capital has the potential to lock poor "dynasties" in a vicious circle. Moreover, if the number of such dynasties reaches a critical threshold, the whole country may be trapped in poverty.

Consequently, the question for Georgia is this: Is its education system sufficiently inclusive to break this vicious circle? Judging by some of the available quantitative performance indicators, Georgia is doing very well, certainly if compared to countries at the same level of income per capita. For instance, the World Economic Forum ranks Georgia 3rd in the world according to enrollment in primary education and 11th in secondary education in 2011. Moreover, the introduction of national tests and merit-based government scholarships made the system of higher education accessible for some of the poor. However, the poor are still discriminated against, given the availability of expensive private schooling and tutoring for the rich, although this is not a major issue. The main weakness of the Georgian education system is quality. For instance, out of 142 countries included in WEF's Global Competitiveness Index, Georgia is ranked 99th in the quality of primary education and 116th in the quality of the educational system as a whole. As shown in the chart, despite implementing an impressive range of reforms, until 2010, Georgia's ranking on the quality of education indicators has been either stagnating or getting worse. The poor quality of education and its detachment from labor market needs resulted in very high rates of youth unemployment - up to 35% according to some counts.

IT'S EARLY CHILDHOOD DEVELOPMENT, STUPID!

But a really pressing need for Georgia is to offer pre-school learning opportunities for the Georgian poor, especially in rural areas. While some municipalities, e.g. Tbilisi and Batumi, offer generous discounts to socially vulnerable children in the 3-5 age group, 19 of 65 Georgian municipalities are unable to provide any

support for disadvantaged children, resulting in enrollment rates as low as 20%; 17 percentage points lower than the average enrollment!

The emphasis on preschool education is not incidental. There is considerable research evidence supporting the view that increasing the availability of early learning opportunities has the greatest effect on the future of children. Early learning affects children's brain development, builds their cognitive and socio-emotional skills and improves performance at all subsequent stages of education. This, in turn, helps increase people's productivity and earnings as adults, helping to break the vicious cycle of poverty, reduce crime and as a result, strengthen the potential for prosperity.

Much of this evidence is available on Nobel Prize laureate (2000) James Heckman's website. The economist has made early childhood development the objective of an arduous advocacy campaign. In his words, "The best way to improve the workforce in the 21st century is to invest in early childhood education, to ensure that even the most disadvantaged children have the opportunity to succeed alongside their more advantaged peers".

Annex 5. ISET Blog Post: “Invisible Hand” in the Georgian Preschool Education Sector

The private provision of childcare in Georgian cities has been on the rise in the past few years, particularly in the capital. Many of the new private kindergartens (KG) are considered to provide very good quality services, helping to enrich the set of preschool educational choices available to parents (or rather, their children). Private KGs may be quite a bit more expensive compared to the public alternative, yet their share of the market is increasing over time, suggesting that more and more Georgian families are willing to pay a premium for better quality education.

Knowing the share of the private sector in preschool education (and its dynamics over time and space) is very important when planning reform of the national early learning system. We have some sense of the national average of overall preschool enrollment from GeoStat’s Integrated Household Survey. For instance, according to this survey, in 2011 the overall enrollment in the 3-5 age group was around 46%, of which about 9% attended private KGs. However, this estimate is based on a nationally representative survey that is not necessarily accurate when it comes to estimating enrollment rates at the sub-national level. In fact, it may be very imprecise given the large variation in the development of private KG provision across municipalities. We may suspect that private provision is very high in Tbilisi and low in Oni, for example. Yet, a special survey of all Georgian municipalities that was conducted most recently by GeoStat revealed that 41 out of 65 local municipalities simply have no clue as to the true extent of private provision and the overall coverage of preschool children in their region. Of the remaining 24 localities that answered the private provider question, 19 claim not having a single private institution. As for those 5 municipalities that are aware of private KG providers in their localities, the situation is as follows:

Table 15. Reported number of private KGs in 2011

Municipality	Reported number of private kindergartens in 2011
Dusheti	1
Tsalka	1
Poti	2
Batumi	12
Zugdidi	15

Our attempt to deduce the approximate number of children enrolled in private preschools from the number of such institutions was also unsuccessful. Even those municipalities that appear to be aware of their number of private KGs do not know the number children covered by these institutions. Batumi is the only Georgian municipality that is fully informed of the extent of private coverage. No government agency, not even the Ministry of Finance was able to supply us with the number of private KGs operating in Georgia. This was not due to any confidentiality agreement, they just do not know(!). One potential reason for this might be the loose legal framework there is for establishing a business in Georgia. It seems to be the case that when establishing a business, Georgian entrepreneurs are not required to disclose the precise nature of their business activity, unless they operate in the food industry.

Given that Georgian legislation does not distinguish between ordinary LLCs and childcare institutions, the latter are not subject to official sanitary, academic or any other inspections. A representative of a private KG we interviewed in Tbilisi said the quality of services provided by her institution has never been inspected by government agencies. This is not because she was running a clandestine operation (the KG in question even has a website!). The implicit assumption behind such a lack of government oversight is that parents are the best control mechanism.

For most private KGs this is really the case. In one instance, a private Tbilisi-based KG installed online cameras that allow parents to watch their children play during the day. Of course, parents have no time for such Big Brother diversions. They rely on other parent's recommendations and the price as a signal of quality. A private KG would not be able to operate profitably in the long-term by indicating high quality (setting a high price) and under-delivering: just one unhappy parent can destroy their reputation. Consequently, parental control does help establish proper incentives for private KGs; incentives not only to implement a state-recommended standard (even if not enforced), but also to innovate and improve their services. This is because in a competitive environment a KG's stream of profits directly depends on customer satisfaction. Therefore, when asked about the nature of the academic program offered by her KG, our interviewee reported the Step-by-Step program was implemented, which is endorsed by UNICEF. This means that at least some private KGs really do try to keep up-to-date and deliver a service that corresponds to the price-based expectations of the parents.

The fact that parents pay on average 5 times higher fees for private KGs than public KGs may suggest that there is a large quality gap between the private and public options. What is so special about private KGs? First of all, private KGs are smaller establishments, with a small number of groups and consequently, a small number of students. The educator-to-child ratio, as well as caregiver-to-educator ratio is higher in private KGs. As a result, more attention and care can be given to each child in comparison to a public KG. Second, private KGs offer greater flexibility and are less bureaucratic. Parents can drop off and pick up their children at their convenience. There is less paperwork involved as well. Finally, private KGs are directly accountable to the parents ("the clients"), allowing for closer coordination and continuous feedback.

According to the management of the private KG we interviewed, her institution is charging a fee of 300 GEL per month per child, however, they are able to offer discounts for children from relatively poor families. Of course, as a for-profit organization, a private KG cannot accommodate many such children, but if there is spare capacity (and, often, there is) such "humane" treatment could be offered. On the one hand, this can be seen as a simple price-discrimination tactic. However, it can help improve the image and be an advertisement for the KG in question. To sum up, even though private KGs are not subject to state inspections of their sanitary, hygienic and academic standards, they do try to offer a good quality service in order to stay in business.

Are private KGs a threat? If private KGs are able to provide better educational services for those who can afford them, a country may be concerned with the social consequences of providing unequal access to education for children from poorer families.

While perhaps this is true in the abstract, such a concern is totally misplaced in Georgia, given that more than 50% of 3-5 y.o. children are excluded from the early learning system. This is potentially a real time bomb if one considers the impact of preschool education on learning outcomes, labor productivity and wages (see our previous blog post for an explanation).

Thus, the problem for Georgia is to expand the overall coverage of preschool children, not to obstruct the development of the excellent private alternative. While private provision does primarily cater for the needs of the emerging middle class, a true barrier for greater social mobility in Georgia is the outright exclusion of the rural, poor and socially disadvantaged strata of the population.

In fact, as long as the public education system is unable to provide universal coverage, the government of Georgia and/or individual municipalities may consider supporting the development of the private KG sector. For one thing, this could be done in a budget neutral way by saving on the cost of building new public KG. The private KG might have spare capacity to absorb a part of preschool age children that are not currently covered. Instead of building new public KGs, the state could train educators of private preschools and even subsidize the cost of private provision. Both measures would decrease the cost for parents and provide more children with access to higher quality preschool education, changing their lives for the better.

Yet another option to consider is to introduce means testing and differentiated fees for public education, as is already practiced in Tbilisi. This measure would push some of the higher-income parents from public to private KGs, freeing the capacity of public KGs to take care of children from low-income families.

Our conclusion is that private kindergartens are not a problem or threat. Rather they are a huge benefit and opportunity.

Annex 6. Annual Recurrent Unit Cost Components as a Percent of Total Unit Cost for Different Preschool Services, Tbilisi and Rest-of-Georgia

Table 16. Annual recurrent unit cost components as a percent of total unit cost for different preschool services, Tbilisi and rest-of-Georgia

	Existing System		Ideal full-day		Hypothetical half-day		Alternative preschool
	Tbilisi	Rest-of-Georgia	Tbilisi	Rest-of-Georgia	Tbilisi	Rest-of-Georgia	Rest-of-Georgia
Salaries	38.0%	64.0%	40.6%	32.8%	66.5%	62.3%	33.9%
<i>Teaching staff</i>			27.3%	17.4%	51.5%	32.8%	32.3%
<i>Administrative staff</i>			7.0%	4.9%	5.5%	9.2%	1.6%
<i>Support staff</i>			6.3%	10.5%	9.5%	20.3%	0.0%
Training Expenses	0.0%	0.5%	0.1%	0.1%	0.4%	0.6%	1.0%
Material Expenses	17.0%	7.2%	14.5%	14.6%	33.1%	37.1%	65.1%
<i>Toys and study materials</i>	2.3%	0.5%	4.1%	5.1%	14.7%	19.3%	33.8%
<i>Utilities</i>	7.7%	5.4%	3.7%	3.3%	6.7%	6.3%	11.0%
<i>Maintenance</i>	7.0%	1.3%	3.3%	1.9%	5.4%	3.3%	5.8%
<i>Inventories</i>			1.5%	1.9%	1.9%	2.4%	4.3%
<i>Playground</i>			0.6%	0.8%	2.2%	2.9%	5.1%
<i>Sanitary</i>			1.2%	1.5%	2.2%	2.9%	5.1%
Nutrition	42.1%	22.2%	44.8%	52.4%	0.0%	0.0%	0.0%
Miscellaneous	3.0%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Total (GEL)	780	686	1622	1292	449	343	195

Annex 7. Description and Cost Implications of all Scenarios

Table 17. Description and cost implications of all scenarios

			Scenario 1: Expansion through half day programs	Scenario 2: Expansion through 1/2 day programs and full-day program for the vulnerable	Scenario 3:	Scenario 4: Minimum cost + all 5 year olds in ELS	Scenario 5: Minimum cost+ all 5 year olds in Primary education
3-5 children currently enrolled in public KGs	Urban	Vulnerable			Full-day	Full-day	Full-day
		Other			Half-day	Half-day	Half-day
	Rural	Vulnerable			Full-day	Full-day	Full-day
		Other			Half-day	Half-day	Half-day
3-5 children out of the EL and primary education system	Urban	Vulnerable	Half-day	Full-day	Full-day	Full-day	Full-day
		Other	Half-day	Half-day	Half-day	Half-day	Half-day
	Rural	Vulnerable	Half-day	Full-day	Full-day	Full-day	Full-day
		Other	Half-day	Half-day	alternative	Half-day	Half-day
% of all 5-year-old children who attend primary school			43%	43%	43%	100%	0%
Total "Empirical" Cost (GEL)			75 million	80 million	58 million	72 million	50 million
Total "Ideal" Cost (GEL)			122 million	137 Million	83 million	97 million	68 million

