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Needs Index Revision - Project Report

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The aim of the project was to revise the Needs Index Coefficients determined by an expert-normative method back in 2004, we will use “previous evaluation”, “previous estimation”, “old method” and other such phrases when referring to this earlier method. Calculation of coefficients was based on the prices of some specific goods, budgets and regulations. Over the course of 10 years these figures have changed, some of them drastically. In the report we will describe how the new coefficients are derived and will compare each step with the old method.

1. General description of the method

The methodology aims to calculate the subsistence minimum for different categories in terms of the subsistence minimum of a healthy 30-39-year-old man. The categories differ by gender, age (in the following ranges: 0-3 (less than 48 months), 4-6 (from 48 to 84 months), 7-12, 13-17, 18-29, 30-39, 40-59, and 60+), and social or health status (in the following categories: healthy, child with disability, person with disability group I, person with disability group II, refugee, bedridden, lonely pensioner, pregnant, breast-feeding woman, single parent , and orphan). Table 1 below summarizes all categories.

Table 1: All Categories, 0 means that method does not consider the category

	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39)m	(40-59)m	(60+)m	(18-29)f	(30-39)f	(40-59)f	(60+)f
Healthy	1	1	1	1	1	1	1	1	1	1	1	1
Child with disability	1	1	1	1	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	1	1	1	1	1	1	1	1
Person with disability group II	0	0	0	0	1	1	1	1	1	1	1	1
Refugee	1	1	1	1	1	1	1	1	1	1	1	1
Bedridden	1	1	1	1	1	1	1	1	1	1	1	1
Lonely pensioner	0	0	0	0	1	1	1	1	1	1	1	1
Pregnant	0	0	0	1	0	0	0	0	1	1	1	0
Breast-feeding woman	0	0	0	1	0	0	0	0	1	1	1	0
Single parent	0	0	0	1	0	0	0	0	1	1	1	0
Orphan	1	1	1	1	0	0	0	0	0	0	0	0

The needs of a person are divided into two main groups: caloric needs and non-caloric needs. Caloric needs consist of food needs and caregiver needs. Non-caloric needs consist of transportation needs, medical service needs, special means needs and other needs. Medical service needs and special means also have subgroups that will be discussed later. All needs in the caloric needs group are expressed in calories (kcal) and all needs in the non-caloric needs group are measured in GEL – this is the reason why they are grouped in this way. All needs for each category are translated into coefficients and then summed up to get final coefficients. How GEL and calories are translated in coefficients will be described below.

The calculations are based on the Law of Georgia regarding “the rule for calculation of the subsistence minimum”. According to this law, GeoStat calculates, on a monthly basis, the subsistence minimum for an average person, and for the healthy, working age male. The later includes healthy man aged between 30 and 39 years, our measure unit. At the time of calculating this index, the subsistence minimum for the healthy, working age male stood at 149.6 GEL a month. When the previous evaluation was undertaken in 2004, the subsistence minimum was 130 GEL.

The way the subsistence minimum is calculated is important for understanding the method. For details, see “Subsistence Minimum Calculation Methodology for a Working Age Male“ on the Geostat website:

(http://geostat.ge/cms/site_images/_files/english/methodology/Subsistence%20Minimum%20Calculation%20Methodology%20for%20Working%20Age%20Male%20ENG.pdf)

A total of 70% of the subsistence minimum is comprised of the price of food, which is needed to satisfy caloric needs. The remaining 30%, (totaling 44.88 GEL), is for non-caloric needs. It should be noted that in the previous method 65% was used for caloric needs instead of 70%. It is assumed that a 30-39-year-old healthy male does not have any caregiver or special means needs. A total of 30% of the subsistence minimum is thus distributed for transportation, medical service and other needs. In the previous model these groups were grouped in a different way. The distribution of non-caloric needs was as follows: 11.11% for transportation services, 4.44 % for phone services, 11.12% for other services, 22.22% for clothing, 22.22% for medical services, 6.67% for taxes, and 22.22% for other expenses. Since other services, aside from medical services and transportation services, do not affect equivalence coefficients, we unified them in the other needs category. After an evaluation of the monthly medical needs of a healthy 30-39 year-old male (see subsection 3.2) and analyzing per head expenditures in 2013, we decided to take the share of medical services as equal to 25% (11.22 GEL)(48% of this amount is for medicines and 52% for monitoring) and the share of transportation services equal to 20%. Thus from the remainder of the 30% of the subsistence minimum (44.88 GEL), 25% of non-caloric needs is for medical services, 20% is for transportation services and the remaining 55% is for other expenditures.

Here has to be noted that some of the needs are covered by different governmental programs, such as kindergarten expenses, textbook expenses and etc. However after considerations and with the recommendation of representatives of Ministry of Labour Health and Social Affairs we decided not to exclude expenses covered by the government from the needs.

Before proceeding, let us define the Special Functioning Contingent (SFC). A category belongs to the SFC if its members have a limited/violated capacity for full functioning due to age, health, social or political conditions and require additional rehabilitation and reintegration measures.

Those in the SFC category have additional social risks and should be included in the subsistence minimum as a basis for social security. SFC groups also have higher medical, caregiver and special means needs.

For evaluating the subsistence minimum of different categories, one has to sum up caloric and non-caloric needs. More precisely, we need to sum up food needs (K_F), caregiver needs (K_C), medical service needs (K_{MS}), transportation needs (K_T), special means needs (K_{SM}) and other needs (K_O). So, ultimately, the needs for each category N is: $N = K_F + K_C + K_{MS} + K_T + K_{SM} + K_O$. For technical purposes, we needed to change our approach slightly, namely we define service needs (K_S) as a sum of transportation needs, other needs and medical service needs for a healthy (30-39-year-old) male, $K_S = K_T + K_O + K_{MS}^{(30-39)M}$. Finally, adding and subtracting K_S to N does not change anything, but allows us to compare needs components with the previous evaluation. So, we have

$$N = K_F + K_C + K_{MS} + K_T + K_{SM} + K_O + K_S - K_S = K_F + K_C + K_{MS} + K_T + K_{SM} + K_O + K_S - \left(K_T + K_O + K_{MS}^{(30-39)M}\right) = K_F + K_C + (K_{MS} - K_{MS}^{(30-39)M}) + K_{SM} + K_S.$$

For simplicity we will denote $K_{MS} - K_{MS}^{(30-39)M}$ by K_M and again call it medical service needs. Finally, $N = K_F + K_C + K_M + K_{SM} + K_S$.

2. Caloric needs

The caloric needs category has two subgroups: food needs and caregiver needs. The reason why food needs are in the caloric needs category is obvious, but caregiver needs are also expressed in calories and have thus been grouped in the caloric needs group.

For translating calories to coefficients we will use the following: a total of 70% of the subsistence minimum is for caloric needs, which for a 30-39 year-old male is equal to 2,230*(days per month) kcal (2,230 kcal is the daily need). We want to use the subsistence minimum of a 30-39-year-old male as a measure for this and thus translate it into 1, and respectively 70% of it into 0.7. Obviously 2,230*(days per month) kcal is translated into 0.7. Generally, the coefficient for X kcal per day is $0.7 * \frac{X*(\text{days per month})}{2230*(\text{days per month})} = 0.7 * \frac{X}{2230}$.

2.1 Food needs

If a person needs X calories per day, his/her coefficient will be $0.7 * \frac{X}{2230}$. In Table 2 below, the caloric needs of different categories are given. We calculate coefficients according to these. For example, the coefficient for a 10 year-old child would be $0.7 * \frac{1800}{2230} = 0.565$.

Table 2: Caloric needs

category	Kcal per day
(0-3)	1400
(4-6)	1650
(7-12)	1800
(13-17)	2400
(18-29)m	2360
(30-39)m	2230
(40-59)m	2090
(60+)m	1890
(18-29)f	1860
(30-39)f	1800
(40-59)f	1750
(60+)f	1650
Child with disability	1890
Person with disability group I	1890
Person with disability group II	1890
Refugee	1890
Bedridden	1750

Lonely pensioner	1700
Pregnant	2210
Breast-feeding woman	2335
Single parent	1890
Orphan	1800

If a person belongs two or more different categories at the same time that have different food needs, we assume that the needs of that person are the highest of the possible food needs. This is the so-called "overlapping" principle. For example, if we consider a 15-year-old disabled child, his/her food needs per day as a disabled child are 1,890 kcal, and are 2,400 kcal as a 13-17 year old. In this instance, we would take the maximal number (2,400 kcal) from among the two options. This "overlapping" principle was also used in the previous methodology and has remained unchanged for most of the needs groups, however there are some exceptions that will be mentioned later. Since 2004, the numbers in Table 2 have not changed. There have been no changes in this component of the method, except for some minor changes caused by the change in the share of food needs in the subsistence minimum from 65% in 2004 to 70% now, and the correction of some calculation mistakes that were made in the old evaluation. In Table 3, we summarize the coefficients for all categories we consider.

Table 3: Food needs coefficients (K_F)

Status\Age	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39)m	(40-59)m	(60+) m	(18-29)f	(30-39)f	(40-59)f	(60+) f
Healthy	0.44	0.52	0.57	0.75	0.74	0.70	0.66	0.59	0.58	0.57	0.55	0.52
Child with disability	0.44	0.52	0.57	0.75	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	0.74	0.70	0.66	0.59	0.59	0.59	0.59	0.59
Person with disability group II	0	0	0	0	0.74	0.70	0.66	0.59	0.59	0.59	0.59	0.59
Refugee	0.59	0.59	0.59	0.75	0.74	0.70	0.66	0.59	0.59	0.59	0.59	0.59
Bedridden	0.55	0.55	0.57	0.75	0.74	0.70	0.66	0.59	0.58	0.57	0.55	0.55
Lonely pensioner	0	0	0	0	0.74	0.70	0.66	0.59	0.58	0.57	0.55	0.53
Pregnant	0	0	0	0.75	0	0	0	0	0.69	0.69	0.69	0
Breast-feeding woman	0	0	0	0.75	0	0	0	0	0.73	0.73	0.73	0
Single parent	0	0	0	0.75	0	0	0	0	0.59	0.59	0.59	0
Orphan	0.57	0.57	0.57	0.75	0	0	0	0	0	0	0	0

2.2 Caregiver needs

Some categories from the SFC group need caregivers. As a standard baseline for a caregiver, the volume of energy consumption of a person (who are mainly woman) employed on an hourly basis is equal to 2,000 kcal per day, resulting in $\frac{x}{24} * 2000$ if x is working hours. This approach was used in the previous methodology and remains the same in this one. In other words, the expenses of a caregiver, not necessarily a hired one, are evaluated as the food needs of a caregiver during their working hours. If, for example, a person needs six hours of care, then the food needs of the caregiver is $\frac{6}{24} * 2000 =$

500 kcal. So, the person requiring care needs an additional 500 kcal per day, which in coefficients is $0.7 * \frac{500}{2230} = 0.157$. Table 4 gives the caregiver needs for all categories that require care.

Table 4: Caregiver working hours and calories

Category	Working Hours	Additional kcal	Coefficients
(0-3)	8	667	0.21
(4-6)	6	500	0.16
(7-12)	4	333	0.10
(13-17)	2	167	0.05
(18-29)m	0	0	0.00
(30-39)m	0	0	0.00
(40-59)m	0	0	0.00
(60+)m	0	0	0.00
(18-29)f	0	0	0.00
(30-39)f	0	0	0.00
(40-59)f	0	0	0.00
(60+)f	0	0	0.00
Child with disability	3	250	0.08
Person with disability group I	5	417	0.13
Person with disability group II	3	250	0.08
Refugee	0	0	0.00
Bedridden	6	500	0.16
Lonely pensioner	1	83	0.03
Pregnant	0	0	0.00
Breast-feeding woman	0	0	0.00
Single parent	0	0	0.00
Orphan	1	83	0.03

In the case of one person belonging to two different groups, we use the “overlapping” principle. The coefficients for caregiving needs are given in Table 5.

Table 5: Coefficients of caregiver needs (K_C)

Status\Age	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39)m	(40-59)m	(60+)m	(18-29)f	(30-39)f	(40-59)f	(60+)f
Healthy	0.21	0.16	0.10	0.05	0	0	0	0	0	0	0	0
Child with disability	0.21	0.16	0.10	0.08	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Person with disability group II	0	0	0	0	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Refugee	0.21	0.16	0.10	0.05	0	0	0	0	0	0	0	0

Bedridden	0.21	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Lonely pensioner	0	0	0	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Pregnant	0	0	0	0.05	0	0	0	0	0	0	0	0
Breast-feeding woman	0	0	0	0.05	0	0	0	0	0	0	0	0
Single parent	0	0	0	0.05	0	0	0	0	0	0	0	0
Orphan	0.21	0.16	0.10	0.05	0	0	0	0	0	0	0	0

The changes from the previous evaluation are caused by changes in the share of food needs in the subsistence minimum (from 65% in 2004 to 70% now).

3. Non-caloric needs

Non-caloric needs are measured in GEL and we need to translate them into coefficients. As we want to use the subsistence minimum of a 30-39-year-old male as a measure, we are translating that into 1, i.e. this means that the 149.6 GEL subsistence minimum per month is 1, and respectively x GEL per month translates into $\frac{x}{149.6}$.

Non-caloric needs consist of transportation needs, medical service needs, special mean needs and other needs. For a 30-39-year-old male, it is assumed that non-caloric needs are fully covered by 30% of the subsistence minimum. As we have already mentioned, 20% of the non-food part of the subsistence minimum is for transportation (8.98 GEL) and 25% (11.22 GEL) is for medical services and, given the assumption that a healthy young man has no special means needs, the remaining 55% (24.68 GEL) is for other needs.

For people in the SFC categories all non-caloric needs cannot be fully covered by 30% of the subsistence minimum, namely their special means needs and medical service needs. In terms of transportation needs, it is assumed that the needs of a 30-39-year-old healthy male, 8.98 GEL, are the same as those of any other category except children in the 0-3 and 4-6 age categories and the bedridden – for these groups transportation needs are assumed to be 0. Other needs are assumed to be equal for all categories and equal 24.68 GEL per month.

What remains is to evaluate the additional special means and medical service needs for different categories. This will be done in the following two subsections. By additional needs, we mean those above those of a healthy 30-39-year-old male. For medical service needs, we mean those needs above the 11.22 GEL per month that a healthy male requires; for special means needs, we mean above 0, since a healthy male has no such special means needs. So, before we continue, let us denote total service needs as a sum of the transportation needs, other needs and medical service needs of a healthy 30-39-year-old male (11.22 GEL) and summarize that in Table 6.

Table 6: Service needs

category	Transportation needs (GEL)	Other needs (GEL)	Medical services in subsistence minimum (GEL)	Service needs (GEL)
(0-3)	0	24.68	11.22	35.9
(4-6)	0	24.68	11.22	35.9
(7-12)	8.98	24.68	11.22	44.88
(13-17)	8.98	24.68	11.22	44.88
(18-29)m	8.98	24.68	11.22	44.88
(30-39)m	8.98	24.68	11.22	44.88
(40-59)m	8.98	24.68	11.22	44.88
(60+)m	8.98	24.68	11.22	44.88
(18-29)f	8.98	24.68	11.22	44.88
(30-39)f	8.98	24.68	11.22	44.88
(40-59)f	8.98	24.68	11.22	44.88
(60+)f	8.98	24.68	11.22	44.88
Child with disability	8.98	24.68	11.22	44.88
Person with disability group I	8.98	24.68	11.22	44.88
Person with disability group II	8.98	24.68	11.22	44.88
Refugee	8.98	24.68	11.22	44.88
Bedridden	0	24.68	11.22	35.9
Lonely pensioner	8.98	24.68	11.22	44.88
Pregnant	8.98	24.68	11.22	44.88
Breast-feeding woman	8.98	24.68	11.22	44.88
Single parent	8.98	24.68	11.22	44.88
Orphan	8.98	24.68	11.22	44.88

Next, we need to translate these GEL needs into coefficients. Here we again face the problem of one person potentially being in two different categories, but in this case using the "overlapping" principle would be incorrect. As can be seen from Table 6, the only thing that makes a difference for the service needs of different categories is the transportation cost. In this case, taking the maximal number from among the applicable categories would mean taking the maximal transportation needs for the applicable categories, but doing so would obviously not make sense. In this case, therefore, using the minimal figure is appropriate. The final coefficients are given in Table 7.

Table 7: Service needs coefficients K_S

Status\Age	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39)m	(40-59)m	(60+)m	(18-29)f	(30-39)f	(40-59)f	(60+)f
Healthy	0.24	0.24	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Child with disability	0.24	0.24	0.3	0.30	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Person with disability group II	0	0	0	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Refugee	0.24	0.24	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
bedridden	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Lonely pensioner	0	0	0	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Pregnant	0	0	0	0.3	0	0	0	0	0.3	0.3	0.3	0
Breast-feeding woman	0	0	0	0.3	0	0	0	0	0.3	0.3	0.3	0
Single parent	0	0	0	0.3	0	0	0	0	0.3	0.3	0.3	0
Orphan	0.24	0.24	0.3	0.3	0	0	0	0	0	0	0	0

3.1 Special means needs

Special means needs include the need for the purchase of special inventories, personal hygiene items, textbooks and other school items, and adaption facilities or equipment for certain categories of SFC. This category includes those items without which it would be either impossible for an individual to function or their functioning would be strictly limited.

We consider the following additional special means for different categories of SFC: diapers, walking and play pens, kindergarten for 0-6-year-old children; textbooks, notebooks, pens, schoolbags, etc. for school age children. This category also includes special means for persons with disabilities, like hearing aids, aids for those with impaired sight, walking canes, crutches, walking frames, wheelchairs, orthopedic equipment, etc.

3.1.1 Diapers

In the previous evaluation, it was estimated that a total of 540 diapers would be required for a period of three years, with each diaper costing 0.5 GEL. We decided to upgrade these numbers according to the following table.

Age (in months)	0-4	4-8	8-12	12-24
Diapers per day	4	3	2	1
Size of the diapers	3-6	4-9	7-14	11-25
Price of each diaper (GEL)	0.1941	0.2276	0.264	0.3143

Prices are 80% of the price of the “Pampers Sleep and Play” diapers available for purchase in GPC pharmacy shops. (We choose GPC because they had “Pampers Sleep and Play” in all possible sizes). There are cheaper diapers of questionable quality available on the market and the prices of these vary significantly from place to place, we thus decided to take a cheaper version of the well-known “Pampers” brand which is proven to be of good quality (“Pampers Sleep and Play” is almost half the price of “Pampers”),and is still more expensive than some brands. Due this fact, and because pharmacies are not the cheapest places to buy diapers, we multiplied the prices by 0.8. According to our evaluation needs, a 0-3-year-old child’s diaper needs are equal to 356.5 GEL. This amount should be distributed over 48 months (0-3 years is equivalent to “less than 48 months”). So the monthly need for diapers for a 0-3-year-old child costs 7.43 GEL.

3.1.2 Walking and play pens and similar equipment

Walking and play pens and similar equipment are only needed for 0-3-year-old children. In the previous evaluation, it was estimated that 90 GEL per year would be sufficient for walking and play pens and similar equipment, i.e. 6 GEL per month. Nowadays, the price of the cheapest walking pen is about 55 GEL, and the price of the cheapest play pen is about 100 GEL. The price of similar equipment is estimated at being 77.5 GEL (the average of the prices of walking and play pens). In total, expenditure for walking and play pens and similar equipment is 232.5 GEL per 48 months, so the monthly needs for walking and play pens and similar equipment is $\frac{232.5}{48} = 4.84$ GEL.

3.1.3 Kindergarten

Kindergarten is assumed to be a need for 2-, 3-, 4- and 5-year-old children. This need thus intersects two of our categories. From the 0-3 age category, 2- and 3-year old children, roughly $\frac{2}{4}$ of the whole category, need kindergartens. In the 4-6 age category 4- and 5-year old children, roughly $\frac{2}{3}$ of the whole category, need kindergartens. In the previous evaluation a figure of 90 GEL per year was foreseen, but by mistake this figure was not used while making the final calculations. According to UNICEF research about *comprehensive costing and finance strategies for the early learning system in Georgia*, which was undertaken in 2012, in the existing system average annual expenditure per child was about 745 GEL. In Tbilisi, it was 780 GEL and in the regions it was 686 GEL (for more details, see the attached Excel document). From this, we can conclude that the corresponding weights for Tbilisi and the regions are $\frac{59}{94} = 0.63$ and $\frac{35}{94} = 0.37$. In this expenditure nutrition is also included. As nutrition needs are already accounted for in caloric needs, in order not to have double counting we will exclude nutrition expenditures from total expenditure. Again, according to UNICEF, nutrition expenditure stood at 42.1% of total kindergarten expenditure in Tbilisi and 22.2% in the rest of Georgia. So, average annual expenditure per child without nutrition expenses was about 431 GEL in Tbilisi and 533 GEL in the regions. Weighting them using the same weights, we can see that the average annual expenditure per child in Georgia was about 482 GEL. For the 0-3 age category, the total expenditure for kindergartens, of $2 * 470 = 964$ GEL, will be distributed over 48 months, so the per month expenditure for kindergartens

will be $\frac{964}{48} = 20.08$ GEL. For the 4-6 age category, total expenditure for kindergartens, $2 * 482 = 964$ GEL, will be distributed over 36 months, so the per month expenditure for kindergartens will be $\frac{964}{36} = 26.77$ GEL.

3.1.4 School

School is assumed to be a need for children in the age interval of 6-17, it completely covers two of our age categories, 7-12 and 13-17, and partially includes the 4-6 age category. Roughly one-third of the 4-6 age group also has school needs.

In the previous evaluation, school needs consisted of textbooks, notebooks, pens, crayons, pencil cases, etc. It was envisioned that for each school year 12 textbooks, which cost 6 GEL each were needed, including one notebook per month for 12 subjects for a 9-month period, each costing 0.3 GEL; 40.5 pens were needed per year, each for 0.7 GEL, etc. We decided that it was necessary to make more precise calculations of these needs. Based on the information available on the website of the Ministry of Education, the total number of subjects which children cover from I-VI and VII-XII grades was counted. We were able to estimate approximately how many textbooks children need in the I-VI and VII-XII grades, and in some subjects textbooks are not required. We then calculated the average price of textbooks for these grades, taking the prices from www.e-bookland.ge, where the listed prices are the same as those printed on the books. The average price of textbooks for grades I-VI was 7.75 GEL and for grades VII-XII it was 9.46 GEL. (For details see attached Excel document "textbooks")All of this is summarized in the following table.

Grade	No. of subjects	No. of subjects in which a textbook is required	Expenditure on textbooks over 6 years (GEL)
I - VI	49	41	317.75
VII - XII	69	64	605.44

We also considered the need for special notebooks that are attached to some textbooks but sold separately. The average price of such notebooks for grades I-VI was 3.9 GEL and for grades VII-XII was 3.58 GEL. All of this is summarized in the following table (For details see attached Excel document "textbooks").

Grade	No. of subjects	No. of subjects in which a special notebook is required	Expenditure on special notebooks over 6 years (GEL)
I - VI	49	30	98.7
VII - XII	69	22	78.76

Besides special notebooks, school needs also include normal notebooks. We thus take one notebook per month for each of those subjects in which pupils do not have a special notebook, each such book costing 0.35 GEL.

Grade	No. of subjects	No. of subjects in which a special notebook is required	No. of subjects in which a special notebook is not required	Expenditure on notebooks over 6 years (GEL)
I – VI	49	30	19	79.8
VII - XII	69	22	47	197.4

For pens, we did not change the previous approach: two pens per month for a total of 9 months, each costing 0.2 GEL, comes to 3.6 GEL per year. The prices of crayons and pencil cases vary widely and we decided to evaluate annual expenditure on them as twice as much as the expenditure on pens, 7.2 GEL per year. Similarly to the previous approach, school bags, which would be replaced once every three years are also included, the price of which is about 30 GEL, i.e. 10 GEL per year. Final school expenditures are summarized in the following table.

School Exp.	Textbooks	Special notebooks	Notebooks	Pens	Crayons etc.	Total
Periods in months	72	72	72	12	12	1
I - VI grades	317.75	98.7	79.8	3.6	17.2	8.63
VII - XII grades	605.44	78.76	197.4	3.6	17.2	13.98

Since the 7-12 age category is almost fully covered by the I-VI grades, we take 8.63 GEL as monthly school expenditures for this category. One-third of the 4-6 age category is also in I-VI grades, so $\frac{8.63}{3} = 2.88$GEL per month is the schooling expenditure for the 4-6 age category. The 13-17 age category is fully covered by the VII-XII grades and its monthly schooling expenditure is 13.98 GEL.

3.1.5 Special means for persons with disabilities

In this part we completely replicate what was done by the expert-normative method in 2004. People with different disabilities have different needs, some need wheelchairs, some need hearing aids, others need artificial limbs, etc. It is thus impossible to precisely characterize one category of needs. However, if the demand on each special means need is known by having precise information about the number of people demanding such means then how to evaluate needs for some special means of average person from some category members of which and only they might demand this special means? For example, if there are 1,000 people in the category, members of which and only they might need a wheelchair (Only members of disability group I and disable children might need a wheelchair but not all members of this category), and there is demand for 200 wheelchairs (only 200 members out of 1000 need a wheelchair), then each member on average demands $\frac{200}{1000} = 0.2$ wheelchairs. The demand for each special means

need was estimated by governmental programs, namely by the money in the budget devoted to particular special means.

The special means we consider are the following: special means for those with impaired hearing; special means for those with impaired sight; walking canes, crutches and walking frames; wheelchairs; and prostheses and other orthopedic means. The table below gives the amount of money in the government budget devoted to each of the special means groups.

Impaired hearing	Impaired sight	Walking canes, frames and crutches	Wheelchair	Prostheses and other orthopedic means
1,446,500 GEL	4,500 GEL	14,500 GEL	279,000 GEL	279,000 GEL

The above listed special inventory is distributed for persons with disabilities. The special means for those with impaired sight is distributed evenly among disability groups I and II. The special means for those with impaired hearing or requiring walking canes, frames or crutches are completely in group II, and wheelchairs are completely in group I. Disability group I includes 22,757 people and group II includes 78,035 people. The table below summarizes this.

Group of disability	Special means	Impaired hearing	Impaired sight	Walking cane, frame and crutches	Wheelchair	Prostheses and other orthopedic means	Monthly expenditure (GEL)
	No. of persons in budget	1,446,500	4,500	14,500	279,000	279,000	
Group I	22,757	0	0.5	0	1	0.67	1.711012
Group II	78,035	1	0.5	1	0	0.33	1.661915

As occurred in the previous method, when estimating the needs of disabled children is not possible, we equalize them to the needs of disability group II. Special means needs equal 1.66 GEL per month for group II and disabled children, and 1.71 GEL for group I.

3.1.6 Summary of special means needs

Table 8, below, summarizes the special means needs for all categories.

Table 8: Special means needs

Table 8	Diapers	Walking pens	Play pens	Other equipment for ages 0-3	Kindergarten	Textbooks	Special notebooks	Notebooks	Pens	Crayons etc,	Special means for those with disabilities	Monthly expenditure (GEL)
Period in months	48	48	48	48	12	72	72	72	12	12	1	
(0-3)	356	55	100	78	235	0	0	0	0	0	0	32

(4-6)	0	0	0	0	313	106	33	27	1	6	0	29
(7-12)	0	0	0	0	0	318	99	80	4	17	0	9
(13-17)	0	0	0	0	0	605	79	197	4	17	0	14
(18-29)m	0	0	0	0	0	0	0	0	0	0	0	0
(30-39)m	0	0	0	0	0	0	0	0	0	0	0	0
(40-59)m	0	0	0	0	0	0	0	0	0	0	0	0
(60+)m	0	0	0	0	0	0	0	0	0	0	0	0
(18-29)f	0	0	0	0	0	0	0	0	0	0	0	0
(30-39)f	0	0	0	0	0	0	0	0	0	0	0	0
(40-59)f	0	0	0	0	0	0	0	0	0	0	0	0
(60+)f	0	0	0	0	0	0	0	0	0	0	0	0
Healthy	0	0	0	0	0	0	0	0	0	0	0	0
Child with disability	0	0	0	0	0	0	0	0	0	0	2	2
Person with disability group I	0	0	0	0	0	0	0	0	0	0	2	2
Person with disability group II	0	0	0	0	0	0	0	0	0	0	2	2
Refugee	0	0	0	0	0	0	0	0	0	0	0	0
Bedridden	0	0	0	0	0	0	0	0	0	0	0	0
Lonely pensioner	0	0	0	0	0	0	0	0	0	0	0	0
Pregnant	0	0	0	0	0	0	0	0	0	0	0	0
Breast-feeding woman	0	0	0	0	0	0	0	0	0	0	0	0
Single parent	0	0	0	0	0	0	0	0	0	0	0	0
Orphan	0	0	0	0	0	0	0	0	0	0	0	0

Next, we need to translate these GEL needs into coefficients. Here we again face the problem of one person being in two different categories and use of the “overlapping” principle would also be incorrect in this case. Using the sum of the two values is more suitable in such cases. The coefficients are provided In Table 9.

Table 9: Special means needs coefficients

Status\Age	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39) m	(40-59) m	(60+)m	(18-29)f	(30-39)f	(40-59)f	(60+)f
Healthy	0.21	0.19	0.06	0.09	0	0	0	0	0	0	0	0
Child with disability	0.22	0.20	0.07	0.10	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Person with disability group II	0	0	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Refugee	0.21	0.19	0.06	0.09	0	0	0	0	0	0	0	0
Bedridden	0.21	0.19	0.06	0.09	0	0	0	0	0	0	0	0
Lonely pensioner	0	0	0	0	0	0	0	0	0	0	0	0
Pregnant	0	0	0	0.09	0	0	0	0	0	0	0	0
Breast-feeding woman	0	0	0	0.09	0	0	0	0	0	0	0	0
Single parent	0	0	0	0.09	0	0	0	0	0	0	0	0
Orphan	0.21	0.19	0.06	0.09	0	0	0	0	0	0	0	0

3.2 Medical service needs

In contrast to the evaluation made in 2004, medical service needs are estimated in a different way. In the old method medical service needs consisted of four subgroups: monitoring, psychotherapy, rehabilitation stomatology and medicines. All of these categories, except medicines, were evaluated by actual prices. The cost of medicines was determined by adjusting the amounts required for the treatment of systemic organ diseases, with the amounts designated by standards and the average amounts calculated according to the principle of frequency of use. Due to the significant variance of prices across different places and a lack of information, we decided to use all relevant information from the previous evaluation which does not change across time and develop an alternative approach. After consultations with the Ministry of Labor Health and Social Affairs of Georgia we decided to take out the psychotherapy and stomatology subgroups.

Rehabilitation needs are evaluated based on budgeted rehabilitation expenses for a disabled child and for other groups expenditures are estimated to have the same proportion as in the previous method.

Remains to evaluate monitoring needs and medicine expenditures, we assume that 48% of total medical service expenditure comes on medicines and the rest 52% comes on monitoring expenditures. Will it be 48 and 52 or 60 and 40 does not make any significant change, because for calculation final medical service needs we need to sum them up. The reason why we separate is that from the previous evaluation in contrast to monitoring needs we have information about medicine needs for all relevant categories from which using same proportion (in proportion we mean ratios between medical needs of

different categories) as in old method we can expand our estimates (which we can make only for healthy categories) to all categories. Another possible approach would be to evaluate total medical service expenditures for healthy category and then using proportions from total medical service needs expand estimation to all categories, however assuming that proportions in medicine expenditures are more time consistent and they were more reliable in previous method than proportions of total medical service expenditures we decided to use the first approach.

3.2.1 Medicine Needs

Our point of departure is the evaluation of the average need for medicines per person in different categories. At first, we will estimate the need for different healthy categories and will then estimate needs for other categories using the proportion from the old estimation of medicine needs.

One of the figure we will use is the share of medicine expenditure in total medical service expenditures. According to "Health Care Georgia: Short Statistical Highlights" by the National Center for Disease Control and Public Health (NCDC) (see: http://www.ncdc.ge/index.php?do=fullmod&mid=681), the share of medicine expenditure in total medical service expenditures was almost half. According to this, medicine expenditure per person was about 511 GEL in 2011, of which 403 GEL was private and 94 GEL was state health expenditures (given that 511-403=108, the latter figure might well have been a calculation mistake). From private expenditures, 57% (229.7 GEL) were on medicines. According to other sources, the share of expenditures on medicines is 45-50%. According to research of "Free Opinion House" concerning the "Problems of the Georgian Pharmacy Market and its Influence on the Availability of Healthcare Services" the share of medicine expenditures is equal to 48%. Since it would not mean significant changes if the share proved to be 45% or 50% we will use 48% which seems to be reliable estimate.

The next thing we need to evaluate is not the share, but the absolute value of expenditures on medicines. As was already mentioned, in 2011 (which is the latest data series available from NCDC) total expenditure on medical services was 511 GEL. By our estimation, 48% of that figure (245.3 GEL) would be average expenditure on Medicines. According to Geostat inflation on medicines was from 2011 to the end of 2013 was -9.11%, thus our estimation for medicine expenses per year per person would be $(1 - 0.0911) * 245.3 = 222.95$. It should be noted that this does not only include the healthy category, this is the average for the whole population. We also need the average of yearly medicine expenditures for the healthy (more precisely excluding people with disabilities) population. From the Ministry of Labor Health and Social Affairs of Georgia we get detailed data about the losses of the insurance company which collaborates with the government. According to this data, average expenditure declines by 4% if we exclude people with disabilities. We thus assume that the average yearly expenditure of each healthy person is approximately 96% of the average yearly expenditure of the healthy population, upgrades once more to $0.96 * 222.95 = 214.02\ GEL$.

Table 10a below, gives the health risk coefficients for different age and gender categories. For example, it is twice more probable for a 0-1-year-old boy to fall ill than it is a 0-1-year-old girl and it is five times more probable than for a 25-29-year-old male. Respectively, we assume that the medicine needs for a 0-1-year-old boy are twice those for a girl of the same age, and five times more than they are for a 25-29-year-old male. Based on data from Geostat about population distribution in Georgia by gender and age (we only use the share, not the absolute values which do not look very reliable), we translated Table 10a to Table 10 where we have all subcategories of healthy category. If average expenditure on medicines for a category is proportional to the risk of the category, taking a weighted average by the respective weights given in Table 10 should be equal to average annual expenditure on medicines per healthy person, which according to our evaluation is equal to 214.02 GEL. The results of this calculation are given in Table 10.

Table 10a

Age range	M	F
0-1	10	5
2-4	7	3.5
5-9	3.7	3
10-14	3	2.5
15-19	2.2	3
20-24	2.6	3.6
25-29	2	4
30-34	2	4
35-39	2.5	4.5
40-44	3.5	5
45-49	4.5	5.6
50-54	5	6.5
55-59	6.5	7
60-64	7.5	8.5
65-69	8	9.5
70-74	10	10.5
75-79	10.5	11
80-84	12	12
More than 85	13	13

Table 11

category	Risk	Weights	Exp. per year (GEL)	Exp. per month (GEL)
(0-3)	5.867546	0.052561	256.47	21.37
(4-6)	4.106881	0.035051	179.51	14.96
(7-12)	3.079342	0.06332	134.60	11.22
(13-17)	2.648157	0.056898	115.75	9.65
(18-29)m	2.283522	0.09268	99.81	8.32
(30-39)m	2.240379	0.071751	97.93	8.16
(40-59)m	4.833099	0.126756	211.26	17.60
(60+)m	9.298749	0.076517	406.45	33.87
(18-29)f	3.699078	0.08987	161.69	13.47
(30-39)f	4.244746	0.07311	185.54	15.46
(40-59)f	6.038017	0.144861	263.92	21.99
(60+)f	10.32547	0.116624	451.33	37.61

So, we have estimated the monthly medicine needs for the healthy categories. Next, we need to evaluate the medicine needs of the following categories: disability group I, disability group II, refugees, the bedridden, lonely pensioners, the pregnant, breast-feeding women and single parent s. In so doing, we have to use the previous methodology, where needs were distributed according to Table 11. As we can see, in 2004 children's needs totaled 13.9+11.3+10+10=45.2 GEL, but now they need 21.37+14.96+11.22+9.65=57.2 GEL, a sum 1.265 higher than in 2004. For the remaining categories we will use the multiplier 1.265 and get Table 11b from Table 11a. Note that in Table 11b we additionally have the disabled child category, which has needs equal to the needs of disability group II.

Table 11a

category	Coefficients	GEL
(0-3)	0.07	13.9
(4-6)	0.05	11.3
(7-12)	0.04	10
(13-17)	0.04	10
Disability group I	0.15	24.3
Disability group II	0.2	30.8
Refugee	0.07	13.9
Bedridden	0.15	24.3
Lonely pensioner	0.15	24.3
Pregnant	0.03	8.7
Breast-feeding woman	0.03	8.7
Single parent	0.14	23

Table 12b

category	Coefficient	GEL-OLD	GEL-NEW
(0-3)	0.07	13.9	21.37
(4-6)	0.05	11.3	14.96
(7-12)	0.04	10	11.22
(13-17)	0.04	10	9.65
Disability group I	0.15	24.3	30.75
Disability group II	0.2	30.8	38.97
Refugee	0.07	13.9	17.59
Bedridden	0.15	24.3	30.75
Lonely pensioner	0.15	24.3	30.75
Pregnant	0.03	8.7	11.01
Breast-feeding woman	0.03	8.7	11.01
Single parent	0.14	23	29.10
Disabled child	0.2	30.8	38.97

This is not all. Due to various assumptions, some of which might not sound very reliable, we will evaluate all of this with an alternative approach based on the above mentioned data from insurance company (See attached document: “INSURANCE LOSSES”) which covers approximately 80% of medical service expenses. By again assuming a 48% expenditure on medicine, we can have average expenditures on medicines for each group from Table 11b, except refugees, the bedridden, lonely pensioners, the pregnant, breast-feeding woman and single parent s. Their needs will be evaluated in the same way as we did in the first approach. The results are summarized in Table 11.

Table 11

category	GEL
(0-3)	10.48
(4-6)	3.04

(7-12)	2.43
(13-17)	2.58
Person with disability group I	17.67
Person with disability group II	17.52
Refugee	10.98
Bedridden	19.20
Lonely pensioner	19.20
Pregnant	6.88
Breast-feeding woman	6.88
Single parent	18.18
Disabled child	23.00

We thus get two alternative evaluations of medicine needs: one estimation of annual average medicine expenditure and another with losses of insurance companies. In both cases, we use a proportion of the old methodology to expand the estimation for groups that we were not able to estimate. For the final estimation of medicine needs, we will take the average of these two estimations. It should be noted that after taking the average we will subtract the medicine needs of 30-39-year-old healthy males (5.39 GEL, which is 48% of 11.22 GEL) from all categories, because we have already included this figure in service needs. Everything is summarized below in Table 12.

Table 12

category	Initial Estimate	Insurance Losses Estimate	Average	5.39 Subtracted	Coefficient
(0-3)	21.42	10.48	15.95	10.31	0.07
(4-6)	14.99	3.04	9.02	3.38	0.02
(7-12)	11.24	2.43	6.83	1.19	0.01
(13-17)	9.67	2.58	6.12	0.48	0.00
(18-29)m	8.34	2.27	5.30	-0.34	0.00
(30-39)m	8.18	3.10	5.64	0.00	0.00
(40-59)m	17.64	5.74	11.69	6.05	0.04
(60+)m	33.94	13.17	23.55	17.91	0.12
(18-29)f	13.50	4.47	8.99	3.35	0.02
(30-39)f	15.49	4.65	10.07	4.43	0.03
(40-59)f	22.04	4.38	13.21	7.57	0.05
(60+)f	37.69	7.77	22.73	17.09	0.11
Healthy					
Child with disability	42.91	23.00	32.96	27.32	0.18
Person with disability group I	32.19	17.67	24.93	19.29	0.13
Person with disability group II	42.91	17.52	30.22	24.58	0.16
Refugee	15.02	10.98	13.00	7.36	0.05

Bedridden	32.19	19.20	25.70	20.05	0.13
Lonely pensioner	32.19	19.20	25.70	20.05	0.13
Pregnant	6.44	6.88	6.66	1.02	0.01
Breast-feeding woman	6.44	6.88	6.66	1.02	0.01
Single parent	30.04	18.18	24.11	18.47	0.12
Orphan	0		0	0	0

3.2.2 Monitoring needs

Monitoring needs are assumed to be 52% of all medical service needs, excluding rehabilitation needs, with medicine needs comprising the remaining 48% of all medical services, excluding rehabilitation needs. Multiplying all medicine needs by $\frac{52}{48}$ we will get the monitoring needs. Here one additional assumption is made about the about pregnant category. Pregnant women need very few medicines and a lot of monitoring. We thus decided to evaluate pregnant monitoring needs at being 275 GEL per year (based on five visits during a pregnancy, each costing 55 GEL – the cheapest form of visit to a doctor, involving examinations and ultrasound). All results are summarized in Table 13.

Table 13

category	Initial Estimate	Insurance Losses Estimate	Average	5.83 GEL(52% of 11.22 GEL) Subtracted	Coefficient
(0-3)	21.73	11.35	16.54	10.71	0.07
(4-6)	15.21	3.30	9.26	3.43	0.02
(7-12)	11.41	2.63	7.02	1.19	0.01
(13-17)	9.81	2.79	6.30	0.47	0.00
(18-29)m	8.46	2.46	5.46	-0.37	0.00
(30-39)m	8.30	3.36	5.83	0.00	0.00
(40-59)m	17.90	6.22	12.06	6.23	0.04
(60+)m	34.44	14.26	24.35	18.52	0.12
(18-29)f	13.70	4.85	9.27	3.44	0.02
(30-39)f	15.72	5.04	10.38	4.55	0.03
(40-59)f	22.37	4.74	13.55	7.72	0.05
(60+)f	38.25	8.42	23.33	17.50	0.12
Healthy	0.00	0.00	0.00	0.00	0.00
Child with disability	42.56	24.92	33.74	27.91	0.19
Person with disability group I	31.92	19.14	25.53	19.70	0.13
Person with disability group II	42.56	18.98	30.77	24.94	0.17
Refugee	14.90	11.90	13.40	7.57	0.05
bedridden	31.92	20.80	26.36	20.53	0.14
lonely pensioner	31.92	20.80	26.36	20.53	0.14

pregnant	6.38	7.45	6.92	1.09	0.01
Breast-feeding woman	6.38	7.45	6.92	1.09	0.01
Single parent	29.79	19.69	24.74	18.91	0.13
orphan	0.00	0.00	0.00	0.00	0.00

3.2.3 Rehabilitation needs

Rehabilitation needs are estimated by the budgeted money for the rehabilitation of disabled children. This amount stands at 1,681,000 GEL per year. The number of disabled children is 9,000, so the annual amount per child amount will be $\frac{1681000}{9000}$=186.78 GEL, and the monthly expenditure per child will be $\frac{186.78}{12} = 15.56$ GEL. In the previous estimation, the rehabilitation needs of the category disable child were equal to the rehabilitation needs of the second group, were half of the rehabilitation needs of disability group I and 60% of the rehabilitation needs of the bedridden. The rehabilitation needs are summarized in Table 14.

Table 13

category	GEL	Coefficient
Disability group I	31.12	0.21
Disability group II	15.56	0.1
Disabled child	15.56	0.1
Bedridden	25.93	0.17

3.3 Final medical services needs

Final medical service needs are the sum of medicine, monitoring and rehabilitation needs. In the case of one person being in two different categories, the “overlapping” principle will be used. Medical service needs are summarized in Tables 15 and 16.

Table 15

category	Monitoring	Medicines	Rehabilitation	Total	Coefficient
(0-3)	11.17	10.31	0.00	21.47	0.14
(4-6)	3.66	3.38	0.00	7.04	0.05
(7-12)	1.29	1.19	0.00	2.49	0.02
(13-17)	0.52	0.48	0.00	1.00	0.01
(18-29)m	-0.36	-0.34	0.00	-0.70	0.00
(30-39)m	0.00	0.00	0.00	0.00	0.00
(40-59)m	6.56	6.05	0.00	12.61	0.08
(60+)m	19.41	17.91	0.00	37.32	0.25
(18-29)f	3.63	3.35	0.00	6.97	0.05
(30-39)f	4.80	4.43	0.00	9.23	0.06

(40-59)f	8.20	7.57	0.00	15.77	0.11
(60+)f	18.51	17.09	0.00	35.60	0.24
Healthy	0.00	0.00	0.00	0.00	0.00
Child with disability	29.59	27.32	15.56	72.48	0.48
Person with disability group I	20.90	19.29	31.13	71.31	0.48
Person with disability group II	26.63	24.58	15.56	66.77	0.45
Refugee	7.98	7.36	0.00	15.34	0.10
Bedridden	21.73	20.05	25.94	67.72	0.45
Lonely pensioner	21.73	20.05	0.00	41.78	0.28
Pregnant	16.81	1.02	0.00	17.82	0.12
Breast-feeding woman	1.10	1.02	0.00	2.12	0.01
Single parent	20.01	18.47	0.00	38.48	0.26
Orphan	0.00	0.00	0.00	0.00	0.00

Table 146: Medical Service needs coefficients K_M

Status\Age	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39)m	(40-59)m	(60+)m	(18-29)f	(30-39)f	(40-59)f	(60+)f
Healthy	0.14	0.04	0.02	0.01	0	0	0.08	0.24	0.04	0.06	0.10	0.22
Child with disability	0.46	0.46	0.46	0.46	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Person with disability group II	0	0	0	0	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Refugee	0.14	0.10	0.10	0.10	0.10	0.10	0.10	0.24	0.10	0.10	0.10	0.22
Bedridden	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Lonely pensioner	0	0	0	0.00	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Pregnant	0	0	0	0.12	0	0	0	0	0.12	0.12	0.12	0
Breast-feeding woman	0	0	0	0.01	0	0	0	0	0.04	0.06	0.10	0
Single parent	0	0	0	0.24	0	0	0	0	0.24	0.24	0.24	0
Orphan	0.14	0.04	0.02	0.01	0	0	0	0	0	0	0	0

Note, in contrast to the previous case, this methodology does not need to use optimal adjustment for some groups, which in itself was quite questionable.

4. Final needs coefficients

The final needs index will be a sum of food, caregiver, service, special means and medical service needs. For this, we need to sum up Tables 3, 5, 7, 9 and 16 ($N = K_F + K_C + K_M + K_{SM} + K_S$). The final results are summarized in Table 17.

Table 15: Needs coefficients N

	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39)m	(40-59)m	(60+)m	(18-29)f	(30-39)f	(40-59)f	(60+)f
Healthy	1.24	1.15	1.04	1.21	1.04	1.00	1.04	1.13	0.93	0.92	0.95	1.04
Child with disability	1.58	1.58	1.50	1.70	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	1.64	1.60	1.56	1.50	1.50	1.50	1.50	1.50
Person with disability group II	0	0	0	0	1.56	1.51	1.47	1.41	1.41	1.41	1.41	1.41
Refugee	1.39	1.28	1.15	1.30	1.14	1.10	1.05	1.13	0.99	0.99	0.99	1.12
Bedridden	1.65	1.58	1.46	1.68	1.58	1.53	1.49	1.43	1.42	1.40	1.38	1.38
Lonely pensioner	0	0	0	0	1.33	1.29	1.25	1.18	1.17	1.16	1.14	1.12
Pregnant	0	0	0	1.32	0	0	0	0	1.11	1.11	1.11	0
Breast-feeding woman	0	0	0	1.21	0	0	0	0	1.08	1.09	1.13	0
Single parent	0	0	0	1.44	0	0	0	0	1.14	1.14	1.14	0
Orphan	1.36	1.20	1.04	1.21	0	0	0	0	0	0	0	0

4.1 Comparison to old coefficients

In this subsection, we will try to explain some of the main causes of differences in the final coefficients. Table 18 gives the percentage changes from the previous estimation.

Table 16

Status\Age	(0-3)	(4-6)	(7-12)	(13-17)	(18-29)m	(30-39)m	(40-59)m	(60+)m	(18-29)f	(30-39)f	(40-59)f	(60+)f
Healthy	17	18	9	18	0	0	8	27	5	7	13	28
Child with disability	-7	1	-4	3	0	0	0	0	0	0	0	0
Person with disability group I	0	0	0	0	-9	-10	-10	-11	-10	-9	-8	-7
Person with disability group II	0	0	0	0	-9	-9	-9	-11	-9	-8	-7	-5
Refugee	4	11	-1	5	-10	-11	-11	1	-11	-10	-8	7
Bedridden	-8	-2	-10	0	-12	-12	-12	-12	-13	-13	-13	-12
Lonely pensioner	0	0	0	0	-10	-11	-11	-12	-12	-12	-12	-11

Pregnant	0	0	0	36	0	0	0	0	21	24	27	0
Breast-feeding woman	0	0	0	20	0	0	0	0	13	17	24	0
Single parent	0	0	0	37	0	0	0	0	14	16	19	0
Orphan	3	10	-4	5	0	0	0	0	0	0	0	0

The increase in the coefficients for children's categories (age ranges 0-3, 4-6, 7-12, and 13-17) are quite high. In the 0-3 and 4-6 age categories this is due to the increase in kindergarten prices. In the previous evaluation kindergarten costs were mistakenly not added (they were mentioned in the description, but not used in the calculations), which obviously makes this change more pronounced. In the 0-3 age category part of the increase also comes from an increase in monitoring costs. In the 7-12 and 13-17 age categories the increase is caused by an increase in textbook prices.

As can be seen from Table 17, the coefficients of disability categories decreased, however, if the calculations were made according to the description used in the previous evaluation, it would be not have decreased and there would have been a slight increase. Stomatology expenses of 50 GEL per year (as mentioned in the previous description) were added to the coefficients as 50 GEL per month, which drastically increased the coefficients. However, for groups with positive stomatology needs optimal coefficients were used, taking only about 60% of medical expenses. Using optimal coefficients ceased increase of needs estimation for disability categories, however they were still exaggerated.

The same argument, together with a decrease in psychotherapy, also applies to lonely pensioners.

Removing psychotherapy from medical service needs caused a decrease of coefficients for some of the categories that were using it, namely: orphans, the bedridden, and refugees.

The coefficients for the pregnant category increased as a result of including increased monitoring costs in the medical service needs.

Another significant increase can be seen in the needs of both males and females in the 60+ age categories. This increase is caused by an increase in medical service needs for these categories, namely in terms of medicines and monitoring. These costs were not included in the previous method due to the different way of estimating medical service needs. The same argument applies for the (40-59)m, (40-59)f (18-29)f and (30-39)f categories.

In total, if we take all 80 categories and sum up their needs, in other words if we take one person from each category and sum up their monthly needs we will get that they need 103.85 times subsistence minimum of a healthy, working age male(103.05*149.6=15,416 GEL). In the previous evaluation, this figure was 105.76 (105.76*130=13,749 GEL).