

Methodological innovations of calculating subsistence minimum and its application in Georgia

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The standard of living in the country is the most important category of social sciences, and its scientific research and analysis is relevant, both for countries with developed economies and developing countries. The standard of living in the country is defined by socioeconomic environment, which is changing against rising demands of society that in turn calls for newly identification and change of the standard of living category according to needs in society.

Determining and calculating of correct standard of living is directly related to social policy for planning the welfare of society and in this case it is incumbent of the government to be interested in it as the minimum social guarantor. State should create equal starting conditions for its citizens, according to its main function – justice. Hence every citizen has the right to have real minimum guarantees for existence and development.

The goal of the study was to establish minimum food basket list, based on basic data of energy value and useful substances necessary for man of employment to preserve health and restore capacity for work and to determine total amount for month period.

From this goal, main objectives of subsistence minimum research are:

- To optimize through the study, the subsistence minimum calculating methodology and minimum food basket (qualitatively and quantitatively) and to calculate the real subsistence minimum, this needs necessary changes in given methodology;
- Based on “real subsistence minimum” amount it is necessary to research the consumer basket (set of products, items, things, service and medicines, which is necessary for person);
- To research prices of products and service included in subsistence minimum basket. To determine their amount during the research. At last to determine “real subsistence minimum” in cash;
- Received data, transformed into monetary units, should be compared with official data;
- To formulate recommendations, which will show true picture based on research results for a correct view of the situation and making alterations to it;

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- In the process of changing the rule of subsistence minimum calculation to provide and use the research results at governmental level.

Calculating of subsistence minimum; subsistence minimum =minimum food basket minimum non-food basket (goods and service).

Minimum food basket includes following products: whole-wheat bread, wheat and corn flour, beans, rice, meat, fish, sausages, milk and dairy products, eggs, oil and so on.

Minimum non-food basket includes: clothing and foot-wear, basic household items, necessary personal hygiene products and service, medical care and home first-aid kit, travel expenses and other costs. Here we can also add taxes **and contributions**, which include community taxes (gas, water, electricity, cleansing, telephone and internet).

Calculating subsistence minimum may be also shown in such way: **subsistence minimum =minimum food basket minimum non-food basket + taxes and contributions.**

Minimum food basket and minimum non-food basket together are equivalent to minimum consumer basket.

Minimum food basket provides food supply, which is necessary for human physical development and living and supporting viability, according to physiological norms, caloric value and market prices. Calculating physiological norms of intake for each country is developing by special medical, labor and research institutes, in view of age and gender features, climate conditions, culture, historical traditions in given country.

During the study in Georgia, first and foremost, minimum food basket, necessary for employable man, has been optimized. The following steps were taken for this action:

1. The so-called content-analysis of government and legislative documentation;
2. In-depth interviewing;
3. The results of the food security internal analysis of National s Statistics Office of Georgia the food security in household;
4. The results of the epidemiological study of micronutrient deficits (iodine, iron, vitamins and so on) in Georgia;

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5. The meta-analytic results of studies conducted in Europe. Using the similar method for calculating and experience;
6. The recommendations and guidelines of the World Health Organization regarding the nutrition standards and dietary energy requirements (DER) necessary for functioning of human body, online versions of calorie and energy value count;
7. Basic principles of a healthy diet (World Health Organization).

In determining subsistence minimum, the main features were taken into account to calculate dietary energy requirements and nutrients in a food basket necessary for functioning of human body:

- Age specificities;
- Gender specificities;
- Climatic features;
- Seasonal features;
- Features of food accessibility and consumption;
- Regional specificities;
- Epidemiological specificities;
- The healthy diet recommendations (WHO);
- Features of similar practice in other countries.

We estimate that the daily calorie intake for able-bodied man should not be less than 2500.0 kilocalories, we justify it as follows: working-age population is divided into 3 enlarged age categories, using an example of able-bodied population (table 1).

According to this table, the daily energy value for able-bodied man is 2541.1 kilocalories and after the rounding the daily norm may be 2500.0 kilocalories.

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Table 1. Energy value of daily food products for able-bodied man

Age groups	Daily energy value,kcal	Population of working age ¹	Energy value,kcal
14-18	2750.89	0.070	192.1
19-59	2533.40	0.883	2237.5
60-64	2373.27	0.047	111.5
Total	–	1.0	2541.1

The basic principle of energy value calculation was meet basic metabolic requirements (BMR) of the body and to provide body with additional energy, necessary to able-bodied man in conditions of physical activity to work.

In calculating the subsistence minimum it is important to divide food products into 2 baskets, to avoid the influence of these products and seasonal fruits over prices. For instance, such fruit as watermelon should be included in the summer food- basket and removed from winter food basket, and tangerines should be included in the winter food -basket and removed from summer food basket. It is, therefore, important to divide the food basket as follows: minimum food basket I (spring-summer) and minimum food basket II (autumn-winter).

Table 2. The composition of minimum food basket

Basic food groups	Spring-summer food basket, (kcal)	Autumn-winter food basket,(kcal)
1. Cereals and grains (bread and cereal products)	789.0	814.0
2. Meat and meat products	318.0	375.0
3. Fish and fish products	140.0	140.0
4. Milk and dairy products	201.0	201.0

¹ ANNEX 1: Energy requirements for emergency-affected populations. Developing country profile (demography and anthropometry); Kilocalories per day, pg.38

¹ http://geostat.ge/index.php?action=page&p_id=473&lang=eng

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5.	Vegetables	259.0	254.0
6.	Fruits	291.0	194.0
7.	Sweets	135.0	135.0
8.	Animal and vegetable fats	104.0	104.0
9.	Alcoholic beverages	50.0	50.0
10.	Other products	213.0	233.0
Total		2500.0	2500.0

The subsistence minimum was calculating in accordance to April data, and the result is subsistence minimum in April 2014. This study aims to implement new methodological approach, in view of calculating in that manner subsistence minimum, it will be more real.

According to our survey, official distribution **70/30** was forcefully replaced by **55/45** ratio. This ratio is choosed on the basis of the following argument: a) if the shares of minimum food and non-food baskets in minimum consumer basket in in 90-s of XX century were 70/30, and the share of the food costs of a consumer in the consumer basket was 53/47, which is 32/68 for today, we receive 49/51 ratio of minimum consumer basket.

$$70/30 _ 53/47$$

$$X _ 32/68$$

$$X = 49/51$$

b) As a result of our study on household, on average, the share of the food costs in family is in the range of 55-60%.

c) We receive 56/44 ratio when comparing costs of minimum food and non-food baskets. In calculating subsistence minimum we receive the sum of food and pseudo non-food baskets values. We call minimum non-food basket pseudo non-food basket, as it is impossible to determine list of non-food products and services that is necessary for a person. So we use such non-food products, which are minimum necessary for able-bodied man, e.g. T-shirt, pants, footwear, socks and minimum household items such as soap, toothpaste, toothbrush, laundry detergents, washing-us liquids, matches and so on, plus utility taxes and travel expenses.

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So after calculating the monetary value of food basket, we calculate subsistence minimum as follows:

Estimated cost of food basket _0.55

Minimum non-food basket _0.45

Subsistence minimum =minimum food basket +minimum non-food basket.

We calculate the value of food basket according to monetary value of food products daily ration, so total value of each daily product is daily value of subsistence minimum, and the amount multiplied by 30 calendar days gives the value of subsistence minimum a month.

At first, subsistence minimum was calculated according to food basket II, although as a result of the market practical examination, some products from fruit and melon categories, which were not on the shelves or were too expensive, have been removed from the food basket, (e.g. in April the cost of 1kg of tangerines was 4 GE, and the cost of 1kg of peaches -12 GEL), so it became necessary to establish the food basket, according to April data.

We removed the following products from April food basket: peaches, tangerines, persimmon, and freed kilocalories were divided on cereals and other fruits. It is justified, because the daily norm of food was not reduced and the ratio of proteins (21.4%), fats (33.3%) and carbohydrates (52.7%) with total food value was not disturbed.

We have used prices from 11markets of 8 cities, we examined central food market in each city, and there were examined 4markets in Tbilisi: Samgori, Didube, central station (“deserters market”) and Carrefour.

Prices were chosen by special questionnaire, in view of that we used prices of three different sellers, the price after bargain was entered into specific field, and the difference between the reserve price and bargained price affected bargain cost it and was included in calculation of ultimate cost of food basket (value of food basket * K).

Prices from each market(city) were averaged with the use of shares of population of this region.

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Subsistence minimum was calculated according to as for entire Georgia, so for its certain regions, where the ratio of food and non-food baskets (55/45) was kept as it was. The results of the study are as follows (table 3):

Table 3. Subsistence minimum (April)

Regions - Cities	With mollified methodology	With strict methodology²
Tbilisi	310.60	317.92
Kakheti - Telavi	311.03	318.36
Shida Kartli – Gori	302.05	309.17
Imereti - Kutaisi	287.04	293.81
Adjara - Batumi	305.19	312.38
Kvemo Kartli – Marneuli	308.12	315.38
Samckhe-Javakheti - Akhalcikhe	310.02	317.33
Samegrelo - Zugdidi	308.32	315.59
Georgia	309.84	317.14

We use flexible and rigorous methods in the study, that means following: calculating subsistence minimum with flexible methodology is calculating with method described above and in calculating with rigorous methodology we use interest losses of products, such as fruits and vegetables. Their food processing (peeling, volume of unsuitable waste) is reducing the weight volume of these products, so to distribute the man with net amount of his daily food norm, it needs to add the net weight of products to the mass of unsuitable waste.

Our practical research result was that daily consumption of the food basket increase the volume of ratio of the surplus value amounted 1.043. So, **Subsistence minimum with strict methodology = minimum food basket*1.043 + minimum non-food basket.**

Calculating according to this methodology is acceptable as for Georgia so for other developing countries, where subsistence minimum has social importance and its calculation is also

² Loss % - excluding

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important, as correctly calculated subsistence minimum must be the main guide for correct social policy.

“Real” consumer basket will be expanded as a result of economic development and improvement of standard of living, as demands for products which are designated as luxury will increase. Minimum consumer basket, which with minimum food determines subsistence minimum, will be also updated. That’s why continuous monitoring and revision of both food and non-food basket is needed.

Appropriate methodology for subsistence minimum calculating is an important guide for social policy in Georgia, that is to: reflect changes of living standards of population; determine the poorer population for targeted social welfare; determine minimum amount of pensions and allowances; unify minimum wages with subsistence minimum and exempt from tax incomes below subsistence minimum.

The main results of study are:

1. Kilocalories of food products were reviewed and increased from 2300.0 kcal to 2500.0 kcal;
2. Two food baskets were established (conditionally “winter” and “summer”);
3. Necessary products were added and the food products (list) were mounted;
4. 11 markets in 8 city were examined;
5. The proportion of pseudo non-food basket was determined – 55/45 based on research and analysis;
6. Pseudo non-food basket was established for determination and revision the proportions between food and non-food.

In accordance to this (flexible) methodology subsistence minimum for able-bodied man is 309.0 GEL.

Practical examination of food products (including the interim % losses) was carried out for transparent subsistence minimum (rigorous methodology).

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Accordingly, subsistence minimum for able-bodied man, calculated by “rigorous methodology” is 317.0 Gel.

We propose specific shares of minimum incomes spent on food and non-food in minimum consumer basket, that is based on methodologically based discussions and examples.

To improving methodology for subsistence minimum calculation we propose minimum food basket I and minimum food basket II, for differentiation spring-summer and autumn-winter food products, and to remove summer products that have high prices or are not on the shelves and increase the prices.

Methodology for calculating subsistence minimum in this topic could be used as in Georgia so in other developing countries, where the social situation of the country is particularly important and calls for adequate governmental social policy, and subsistence minimum calculated based on scientifically credible methodology will be the guide of targeted social policy for the country.

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