



Importance of the Agflation Rate calculation During a Pandemic

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Abstract

Scholars of economic security see the hunger strike caused by rising food prices as the most dangerous form of protest. Such anti-government protests are usually resulted from a frustration caused by the government's actions to overcome the food crisis during pandemic. While talking about future food crises, we must take into account the fact that the cause of tension is usually not only the amount of food consumed per capita, but also the quality of food available to the Earth's population.

The World Bank has set up a Food Riot Radar to monitor hunger strikes worldwide. According to the Food Riot Radar data, in 2007-2014, 110 hunger strikes took place throughout the world. Therefore, it is important for each country to constantly monitor the food prices. This should be a task not only of the government, but also of the National Statistics Office. In December 2020, Geostat - National Statistics Office of Georgia - initiated a new Law on Official Statistics, which requires the assessment of food safety risks and challenges based on calculation only the Consumers Price Index (CPI).

As underlined by Vladimer Papava and Vakhtang Charaia, the Georgian Economists, Consumers Price Index (CPI) - the main inflation index, regrettably fails in developing, import dependent countries. Some of the commodity groups do not reflect the problems of the very poor population. Agrarian inflation – agflation, introduced by the WB in 2008 undeservedly forgotten nowadays. The article suggests to Geostat using the agflation index, along with CPI, for observing changes in food prices just-in-time during a pandemic. The article shows that applying the agflation instrument along with the CPI, allows the Government to have a clearer picture. They do not exclude but complement each other.

The Ministry of Environmental Protection and Agriculture of Georgia has made an important contribution in this regard using the theoretical assumption of above mentioned Georgian economists. Department of the Policy Analysis studies the data on food prices provided by the regional offices of the LEPL National Food Agency on a daily basis, unlike Geostat, which selectively analyzes consumer prices in six Georgian cities only monthly. Ministry's data creates a clear and complete picture of the situation in various municipalities, which, in turn, allows the Ministry to identify the most vulnerable regions to apply subsidies or involve more local farmers in various state programs. In order to combine information on prices and consumption volumes from the regions, the IT service should develop an unified system with the basic rates as of the onset of the pandemic. The employee in each municipality of the country will enter only current local data on food price and consumption in the Excel IT program. The program shall instantly calculate the agflation rate and its dynamics in a given region from the beginning of the pandemic to the current day. In the article on the real example of one of the Georgian municipalities is shown, how many different are the indices of agflation and consumer prices at the beginning and the end of the so-called first and second waves of the pandemic.

Keywords: Food Security; Consumer Price Index; Monitoring; Pandemic; Agflation

Introduction

There has been a recent fluctuation in food prices in Georgia, which has been exacerbated by the Covid19 pandemic and has already resulted in food crisis. Historically, food crisis have often been the cause of political and social unrest. In early 1970ies, some mechanisms were created to combat the food price inflation – agflation - and its negative consequences worldwide. Despite these measures and the so-called Green Revolution, food prices have been significantly rising since the beginning of this century. This resulted in the 2010-2012 wave of political unrest in different regions of the World, including the Arab Spring events. Georgia also suffered serious problems last decade. As indicated in George Anjaparidze's (VeritasGlobal CEO and Founder) research: "In 2017, 43% of the labor force in Georgia was employed in agriculture compared to 49% in 1991. Georgia has the highest proportion of employment in agriculture of any country in Europe. Germany, France, Italy and Spain all employ less than 5% of their labor force in the sector. The proportion of the work force employed in the agriculture sector in Georgia is comparable to levels observed in Cameroon (47%), Liberia (46%) and Benin (42%). Furthermore, the value created by Georgian farmers is a fraction of their European peers. In 2017, an average Georgian farmer created value (output net of inputs) of \$1,311 whereas a Swiss farmer created value of \$30,884. Put differently, 1 Swiss farmer created as much value as about 24 Georgian farmers" [1].

Moreover, since the early days of the 2020 pandemic, there has been a fluctuation in the prices of cereals, meat, oil and other products. Food crises is a natural process for the entire biosphere, as well as for humanity living in it. Periods of hunger strikes and subsequent crises (political and social) have been quite common throughout the history. The development of international institutions and the understanding of the importance of the food scarcity problems have contributed to the creation of the food security concept and its widespread use both globally and at the level of individual states. Series of grain crises that took place in the 1970s were of great importance in this regard too. These processes have exposed the gap between the level of food supply in developed countries and the so-called Third World states. To overcome these challenges, the Food and Agriculture Organization of the United Nations (FAO) developed the Global Concept of Food Security in 1974. It was submitted to the World Food Conference in Rome, in which the HQ of the Organization is located. According to this docu-

ment, food security is defined as the availability of sufficient food supplies and one's access to them.

The following paradox has been observed since the beginning of this century: thanks to advanced technologies, the yield of basic food crops has increased, while dependence on climate fluctuations has decreased. At the same time, there has been a sharp rise in prices in world food markets during the crisis, exacerbating the social problems in the world's poorest countries, which suffer from both overpopulation and food shortages. The 2001 FAO Doha (Qatar) Summit showed that solving food problems became quite complicated at the global level. At this meeting, developing countries did not support the concept of fighting hunger, which was based on the liberalization of world trade. This meant their support towards more protectionism, i.e. a shift from food security to food sovereignty.

There are serious concerns that the entire agro-food system of the planet will not be able to fully feed 9 billion people. Moreover, scholars of economic security see the hunger strike caused by rising food prices as the most dangerous form of social protest. Such anti-government protests are usually resulted from a frustration caused by the government's actions to overcome the crisis. While talking about future food crises, we must take into account the fact that the cause of tension is usually not only the amount of food consumed per capita, but also the quality of food available to the Earth's population.

Methodology

The National Statistics Office of Georgia (GeoStat) carries out observations of 1700 economic entities across the country in 6 cities to identify the Consumers Price Index (CPI) – main Inflation index, and analyzes the information obtained and publishes it on a monthly basis. Statistics, the methodology is quite correct although we should keep in mind that, unfortunately, the consumer basket, according to which the above inflation is calculated, does not reflect key issues for the society, especially for poorer citizens in developing countries. This is due to the fact that the main interests of the population are oriented only on the changes in prices of several groups of commodities and services and not on all of the components of the consumer basket. Regretfully, an official inflation index CPI and developing a relevant policy based on it, due to the above reasons, cause dissatisfaction among the population of many countries worldwide, especially in developing countries.

According to experts, in the conditions of the pandemic, step by step, food security will be given special importance, and statistical-analytical research in this field will be carried out in many developing countries. One of the central tasks of food security will be statistics of the Agflation rate.

In our article, the Agflation rate calculation carried out based on Quantitative and Qualitative research. Study held in several stages: in the first stage, all statistics manuals have been collected from relevant GeoStat sources, after which a database was created, which was divided into three main groups of decisions of the GeoStat:

- Decisions that set the types of inflation;
- Solutions that explain the peculiarities of food inflation statistics;
- Decisions not related to food inflation statistics.

In the second stage, the impact of each event was determined and two main groups were identified:

- Food prices whose impact on the growth extends nationally, i.e. to the whole country;
- Foods, the price of which is local in scope and covers the region, district, town and village.

In the third stage, according to the Ministry's LEPL National Food Agency, the vector of direct impact on inflation was determined and three main groups were identified:

- Daily recorded prices that directly affect food inflation;
- Daily recorded prices that indirectly affect food inflation;
- Daily recorded prices whose impact on food inflation is so negligible that they can be ignored.

The above data were compared between the two central agencies of Georgia: GeoStat and the Ministry of Environment and Agriculture in the period between the first and second waves of the pandemic from March to December 2020. Quantitative research has confirmed the notion that there is a significant difference between the GeoStat Consumer Price Index and data from the Ministry's LEPL National Food Agency, which focused solely on food prices. This supports the view of economists that it is necessary, in addition to consumer prices, to calculate the rate of inflation during a pandemic.

Macroeconomic problems of the agricultural sector in Georgia

It is well known that 56% of the labor force in Georgia is still employed in the agricultural sector. However, the share of agricul-

ture in the sectoral structure of GDP by the beginning of 2020 was only 9%. These numbers reflect the extremely low efficiency of the agricultural sector. What is the cause of the problems in Georgia's agriculture and what caused the crisis in this field?

Since 2013, state funding for agriculture has increased. For example, in 2013, 170.3 million GEL was allocated from the central budget for the development of the sector, and in 2014, about 188 million. The state funding received by the agricultural enterprises themselves is large, and the total assets of these enterprises amount to several hundred million GEL. The United Amelioration Company Ltd. of Georgia 310 million GEL and Logistics Company Ltd - 220 million GEL, own the largest assets. Because of the economic transformation caused by the collapse of the Soviet Union, the agrarian sector, for which the rules of a market economy were previously unfamiliar, faced new challenges. It was centrally administered and received large amounts of state subsidies. Lack of private property and collective farming, based on state directives, have reduced the sense of individual responsibility and the ability to make independent decisions among people involved in agriculture. Such a system did not require them to think too much and analyze how to reduce costs, how to deal with competition, or where to sell their products. As a result, neither the Georgian farmer nor the industry as a whole, which faced radically different tasks, was ready to move from a socialist economy to a capitalist one. The transition to a market economy naturally necessitated the emergence of private property, and the then government of independent Georgia decided to relinquish some of its state ownership and, like other post-socialist countries, began a process of large-scale privatization. Privatization affected both land and enterprises. At the initiative of the government, the so-called land reform, under which all rural households received small plots of land as property. Because of mentioned so-called land reform, the bulk of agricultural land was fragmented and on average only 0.88 ha were found in the hands of one family farm. The effects of economies of scale have disappeared, households have not been able to transform into large farms, and the competitiveness of the sector has approached a critical juncture. Along with the lands, agrarian and food enterprises (small and medium size at the first stage, and since 1997 - large) were been alienated, despite optimistic expectations, many of them ceased to function at all.

It became possible for farmers to dispose of vouchers of different values at their own discretion. In addition, the Cabinet of Ministers included various types of agricultural loans in the preferential agro-credit project. Any kind of state aid means a lot to poor farm-

ers. At the same time, state aid was more like sticking paper on the wall of a dilapidated building than a fundamental policy that would put the Georgian agricultural industry on the right path of development. This once again confirmed the need for a proper diagnosis.

Let's start with the fact that Georgian agriculture used to be a part of centralized Soviet agriculture, which relied entirely on state collective farms (kolkhoz). Farmers and their families been paid by the government to carry out certain agricultural work. This solved the financial problems of each family. Homesteads — gardens, vineyards, cattle, or sown fields — were an additional source of income for farmers. It should be noted that homestead farms used to be a kind of relief for collective farms as it depended on them. It also means that they were dependent on the state in terms of financial and economic resources. The destruction of the centralized Soviet economy and collective farming system was such a large-scale phenomenon that Georgia's agriculture failed to shift to a new form of economic formation. Georgian farmers did not become independent entrepreneurs. Consequently, they failed to turn their homestead farms (formerly associated with the collective farm) into independent farms oriented towards a market economy.

The main reason for the failure of agriculture was the fact that Georgian agriculture has lost a number of essential structural levers that are vital to the existence of agriculture in any country.

The "hunger" of capital

The fundamental problem of Georgia's agriculture is also the constant lack of capital, i.e. the funds needed for the proper functioning of the agricultural sector. The farmer, like other entrepreneurs, needs money at any stage of his business: to buy machines or fertilizers, to cultivate the soil, to sow crops, to care for the fields, to harvest, to transport and sell cattle, and so on. And, impoverished Georgian farmers do not have the financial resources to do such a thing.

Credits, which have issued since 2013 under the Government's Preferential Agrocredit Project, does not offer significant "discounts" to farmers. Six out of six such agro-credits are for the formation and maintenance of plants for the processing of agricultural products. The idea of securing such loans is not necessarily bad; however, small households, which mainly support the entire agricultural sector, benefit little from these loans; Farmers cannot set up an enterprise and therefore they are not eligible for loans. The remaining two types of loans, interest-free loans for a period of 6 months (maximum amount is 5 thousand GEL; if the farmer fails

to pay it within six months, a 3 percent fine will be paid monthly) and 12-18-month preferential agricultural loans for medium and large farms - 5 to 100 thousand GEL 5 percent interest. Therefore, the lack of funds remains one of the main agricultural sector problems in Georgia. As a result, the introduction of long-term agricultural loans, which will allow the farmer to maneuver for at least a few years, will be one of the first and foremost steps in solving this problem.

The level of Agflation in the food sector of the country must be determined in order to realize the mentioned investment risks and to determine the effectiveness of investments in agriculture. This will help the government to allocate more and more budget funds in the form of targeted subsidies and subventions, which in turn will allow the government to avoid social confrontation and hanger.

Nevertheless, scientists are looking for new solutions similar to the past Green Revolution, the most important of which may be the sustainable development. The World Bank has set up a Food Riot Radar to monitor hunger strikes worldwide [2]. According to the Food Riot Radar data, in 2007-2014, 110 hunger strikes took place throughout the world. Therefore, it is important for each country to constantly monitor the food prices. This should be a task not only of the government, but also of the National Statistics Office. In December 2020, Geostat initiated a new law on official statistics, which requires the assessment of food safety risks and challenges.

New law on official statistics with old instruments

According to Article 6.1 of the 3rd Chapter (Structure of the National Statistical System) of the Geostat's new Law on Official Statistics, the National Statistical System consists of Geostat, the National Bank and the statistical offices as parts of the Statistical Work Program. Article 2 of this Program (Price Statistics) calculates the Consumer Price Index (CPI) - the general rate of inflation - on a monthly basis [3]. Geostat monitors inflation rate at 1700 trade facilities of six cities (Tbilisi, Kutaisi, Batumi, Gori, Telavi, Zugdidi) on a monthly basis. The result of this monitoring is the creation of the Consumer Basket, which enables the calculation of the CPI. Consumer Basket combines 305 different goods and services [4]. Unlike the National Statistics Office, since the end of March 2020, LEPL National Food Agency has been monitoring food prices on a daily basis. This data are then submitted to the Ministry of Environmental Protection and Agriculture of Georgia, the government body overseeing this Agency. Department of the Policy Analysis of the Ministry studies the data on food prices provided

by the regional offices of the LEPL National Food Agency on a daily basis as well, unlike Geostat, which selectively analyzes consumer prices in six Georgian cities only monthly.

Consumer Baskets are different in each country. They include the most demanded products in the country. In Georgia, 12 most of the most demanded ones are: food and non-alcoholic beverages (30.1%), alcoholic beverages, tobacco (6.4%), clothing and footwear (3.4%), housing, water, electricity, gas and other fuel (8.4%), furniture, household items and decoration, home care (6.6%), healthcare (8.4%), transport (13.1%), communications (3.7%), Leisure, entertainment and culture (6.4%), education (4.7%), hotels, cafes/restaurants (4.1%), other goods/services (4.9%) [5].

According to Geostat, the group of food and non-alcoholic beverages of Basket includes 92 products, which are mainly in line with the list of products monitored daily by the regional offices of the LEPL National Food Agency. However, Geostat obtains monthly data on prices only from 6 big cities, while the prices monitored by the LEPL National Food Agency include the shops (also the so-called trade networks – Zgapari, Nikora, Magniti, Ori Nabiji, etc.) of all cities and villages from all districts/municipalities. This information is gathered on a daily basis, and therefore, is much more operational, than Geostat's monthly (collected from 10th to 20th day of month) data [6]. And, most importantly, LEPL National Food Agency's data focuses on the rise in prices on food and non-alcoholic beverages, i.e. agflation, while the change in prices on other (non-food) consumer goods are not counted, they are not affected on it.

The term agflation (i.e. rising food prices) has been widely used in statistical theories and practices of various countries in first decade of this century, but undeservedly forgotten nowadays. Agflation was coined in 2006-2007 to refer to rising prices on cereals, fruits, eggs, and other non-alcohol beverages [7]. agflation (Agrarian Inflation) means the increase in prices on food and crops compared to the general increase in consumer prices. Agflation is often used in relatively poor countries where food prices have risen at certain times (for example, in India) [8]. In China, the record-breaking 4.8% rise in the 2007 CPI was mainly due to a 12.3% increase in food prices [9].

Agflation during the Covid 19 pandemic

Interest to agflation has particularly been risen during socio-economic crises - it is resulted from a sharp increase in demand for products, or a decrease in supply and the respective increase

in prices. Covid 19 pandemic has created such crises due to the closure of borders, suspension of businesses, unemployment, etc. Amid food threats exacerbated by the pandemic, the prediction of Thomas Malthus, the famous British economist, about Hunger Strike being one of the oldest surviving forms of social protest, has remained relevant to the present day. Moreover, this kind of protest "...is universal as there is practically no place on the world map that has not been touched by food crises and hunger strikes" [10].

The increase in food prices (food is said to be price inelastic) on the world markets is particularly sensitive for Georgia due to the following reasons:

- Change in energy prices worldwide has little effect on retail fuel prices in Georgia, due to an oligopolistic nature of the Georgian energy market; this leaves food prices at a high level;
- Increased natural gas tariffs for Georgia's industrial consumers set in Dec 2020 are likely to increase prices on nitrogen and potassium fertilizers;
- Rising prices on metals are increasing the price of agricultural machinery;
- The rapidly developing Asian countries with multibillion populations have shifted from rice to protein-rich expensive meats and dairy products, the production of which requires 5 times more areas than vegetables;
- Global climate change, combined with soil erosion and irrational land use, is leading to a reduction in arable land, exacerbating food demand-supply imbalances amid rapid global population growth and declining crop production [11];
- Since the beginning of the pandemic, many exporting countries have protected their domestic markets by increasing food prices and imposing export quotas, or restricting exports altogether; this further increases food prices for food importers like Georgia.

Given the above-mentioned, measuring the agflation rate during the Covid 19 pandemic is very important, especially in poor countries, which are characterized by rising food prices.

Numerous studies by Georgian economists have shown that agflation is higher in transition economies, where the food accounts for almost half of the total Consumer Basket [12]. In particular:

- In Georgia - 31% of the basket is food [13],

- Kazakhstan - 60% [10],
- Russia - 50% [14],
- Azerbaijan - 50%,
- Armenia - 50%,
- Turkmenistan - 60%,
- Tajikistan - 57% [15],

In agrarian-developed countries, the picture is quite different - food represents not even a fifth of the Consumer Basket. According to scholars Vladimer Papava and Vakhtang Charaia, food is about 15% of the US Consumer Basket [7], 18% of the EU Consumer Basket [16] and 24% of Turkey's Consumer Basket [17].

Since the onset of the global pandemic, a number of products (cereals, flour, dairy products, plant foods and sugar) have become more expensive not only in the EU, but all over the world. We believe that most of the commodity groups in Geostat's Basket do not actually reflect the problem of the Georgian population. In the country where 30% of the population lives in poverty [18], the dynamics of prices for expensive alcoholic beverages, furniture, leisure and entertainment, hotels, cafes and restaurants are of less importance. Therefore, inclusion of the non-food goods in Consumer Basket is a significant disadvantage of the National Statistical System, which does not adequately reflect the price structure of the goods in Georgia. The current rate of inflation does not fully reflect the perception of the average price levels by the population. This, in turn, raises negative attitude towards the food security. The official rate of inflation in Georgia is low, while the prices on important goods for the low-income population increase significantly. There is a reduction in prices for certain products (cars, furniture, appliances) that are less important for the low-income population [13].

As Vladimer Papava and Vakhtang Charaia point out, the average price level determined by the CPI - traditional inflation indicator - is less relevant for people living in poverty. The dynamics of food prices, i.e. agflation, is more important for the greater part of the population [19]. We also believe that the separate calculation of this indicator (agflation) will be of great importance for Georgia during the pandemic and its aftermath, when the problem of food security becomes more important. The basis for calculating the agflation can be the daily information on food prices from different regions provided by the LEPL National Food Agency. Several methods are used to calculate agflation.

Laspeyres price index

It is defined as the weighted average of prices over two periods: the ratio of volume of food consumed in the base period to changes in the basket of food in the base period in the current period. It is calculated as the ratio of current expenditure on a food basket (P1.Q0) to baseline food expenditure on a food basket (P0Q0), as a percentage: $I_p L = \frac{\sum P1.Q0}{\sum P0Q0}$ (%). This figure does not take into account changes in the structure of food consumption as a result of price changes.

Paache price index

It is also used to determine price changes. In particular, it is defined as the weighted average of prices over two periods: the ratio of volume of food consumed in the base period to changes in the basket of food in the base period in the current period. It is calculated as the ratio of current food expenditure (P1.Q1) to expenditure that would be required to purchase a similar assortment at base period prices (P1Q0), in percentages: $I_p P = \frac{\sum P1.Q1}{\sum P1Q0}$ (%). While reflecting the dynamics of the food basket of the current period, this figure incompletely shows the effect of income, etc. (there are also other indices of agflation). Let us consider an real example: Department of Policy Analysis of the Ministry of Environmental Protection and Agriculture of Georgia receives the data on food prices from the regional offices of the LEPL National Food Agency on a daily basis. Samples of the received tables are provided below (data from a store located in Shida Kartli region).

Prices on similar goods in the same region as of March 27, 2020 (during the first wave of the Covid 19).

Since there are no changes in the structure of food consumption in Table 1 and Table 2 (assumption: 10 kg daily consumption - a constant value for simplicity), it would be more appropriate to calculate the agflation rate using Laspeyres Price Index. Let us take prices of 4 goods as of December 7, 2020 (Table 3) and during the first wave of the pandemic, i.e. March 27, 2020 (Table 4).

The agflation rate in Shida Kartli region in the period of Mar 27-Dec 7 2020 for the named 4 goods would be the following:

$$I_p L = \frac{\sum P1.Q0}{\sum P0Q0} (\%) = \frac{1.89 \times 10 + 1.65 \times 10 + 2.45 \times 10 + 2.60 \times 10}{1.85 \times 10 + 1.29 \times 10 + 2.39 \times 10 + 1.95 \times 10} = 114.8\%$$

Conclusions

During the pandemic, food prices are rising as demand for this group of goods continues and even increases, writes CNN [20]. In

Good	Additional Specification	Quantity/weight	Price as of 7 Dec	Quantity (assumption)
White sugar	Pakistan Geo Impex	1 kg	1.89	10
Wheat flour	Wheat flour 1 tbsp. Weight (Georgia)	1 kg	1.65	10
Pasta	Pakistan Geo Impex	1 kg	2.45	10
Rice	Long Grain Rice	1 kg	2.60	10
Buckwheat	Weighing	1 kg	4.20	
Potatoes - white, local, old	Old, local	1 kg	0.90	
Beans - dried	Weighing "Shulavera"	1 kg	6.15	
Vegetable oil	"Oleina"	1 l.	5.40	
Chicken Legs - Frozen	"Bibilo" - Ukrainian, packaged.	1 kg	5.10	
Beef - boneless		1 kg		
Fish - Mackerel, frozen	packaged, Norway	1 kg	9.95	Provider changed.
Eggs - in 10-piece packaging.	I category. Kumisi.	10 items.	3.30	Sale
Milk - 1 liter package, with 2.5% fat	Sante. 2.5%	1 l.	3.75	
Wheat bread Batoni.	Ipkli, 440 gr.	1 item.	0.65	
Toilet paper- low or medium quality.	Elphie 67m.	1 item.	0.50	
Soap - 72%	150 gr.	1 item.	1.00	
Soap for hands.	Procter and Gamble. 90 gr. Safeguard.	1 item.	1.70	

Table 1

Good	Additional Specification	Quantity/Weight	Price as of 27 Mar	Quantity (assumption)
White sugar	White. Weighing.	1 kg	1.85	10
Wheat flour	High quality.	1 kg	1.29	10
Pasta	Makfa. 0.400 gr	1 kg	2.39	10
Rice	Long Grain Rice	1 kg	1.95	10
Buckwheat	Weighing	1 kg	2.75	
Potatoes - white, local, old	Old, local	1 kg	2	
Beans - dried	0	1 kg	6.15	
Vegetable oil	"Oleina"	1 l.	3.95	
Chicken Legs- Frozen	Frozen.	1 kg	4.49	
Beef -bone-less	0	1 kg	0	
Fish - Mackerel, frozen	Weighing. Frozen.	1 kg	8.99	
Eggs - in 10-piece packaging.	I category. Dila.	10 items.	3.40	Sale
Milk - 1 liter package, with 2.5% fat	Sante. 2.5%	1 l.	3.89	
Wheat bread. Batoni.	Ipkli, 440 gr.	1 item.	0.70	
Toilet paper- low or medium quality.	Aspurtsela.	1 item.	0.55	
Soap - 72%	0.	1 item.	0	
Soap for hands.	Safeguard. Green. 0.9 kg.	1 item.	1.25	

Table 2

recent months, self-isolation and the closure of restaurants have led to a growing number of people eating at home. As a result, the food prices in Georgia have risen faster than the prices of other consumer goods. At this time, the official statistics do not consider the inflation rate separately and attribute the total amount of

Good	Additional Specification	Quantity/Weight	Price as of 7 Dec	Quantity (assumption)
White sugar	Pakistan Geo Impex	1 kg	1.89	10
Wheat flour	Wheat flour 1 tbsp. Weight (Georgia)	1 kg	1.65	10
Pasta	Pakistan Geo Impex	1 kg	2.45	10
Rice	Long Grain Rice	1 kg	2.60	10

Table 3

Good	Additional Specification	Quantity/Weight	Price as of 27 Mar	Quantity (assumption)
White sugar	White. Weighing.	1 kg	1.85	10
Wheat flour	High quality.	1 kg	1.29	10
Pasta	Makfa. 0.400 gr	1 kg	2.39	10
Rice	Long Grain Rice	1 kg	1.95	10

Table 4

other consumer goods to food, which we consider incorrect. The dynamics of food prices in pandemic conditions need to be calculated separate from the general CPI index. In the article discussed above, after 10 months of monitoring the dynamics exclusively of food prices in Georgia separately from CPI, we made the following conclusions:

- The agflation rate increased by 14% during the analysis period. During the same period, the annual inflation rate (CPI) was 3.8% [21]. Unlike CPI, the agflation rate shows the exact change in food and non-alcoholic beverage prices;
- At the same time, the daily data provided by the LEPL National Food Agency creates a complete picture of the situation in various municipalities, which, in turn, allows the Ministry of Environmental Protection and Agriculture of Georgia to identify the most vulnerable regions to apply subsidies or involve more local farmers in state programs;
- In order to combine information on prices and consumption volumes from the regions, the IT service should develop an

unified system with the basic rates as of the onset of the pandemic. The employee in each municipality of the country will enter only current local data on food price and consumption in the Excel IT program. The program shall instantly calculate the agflation rate and its dynamics in a given region from the beginning of the pandemic to the current day.

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