Twinning Project

Contract: GE 16 ENI ST 06 18

Strengthening the Capacity of the Georgian Statistical System

Component 2: "*Enhancing Methodological Soundness in the National Accounts in line with EU standards*"

Sub-component 2.1: "Compilation methods of National Accounts and new products"

MISSION REPORT

Activity: 2.1.G (RS) "Assessment of current situation of Price Statistics and preparation of a working plan for developing a HICP"

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1. General comments

This mission report was prepared within the EU Twinning Project "Strengthening the Capacity of Georgian Statistical System". The mission was held within the sub-component 2.1: "Compilation methods of National Accounts and new products". Due to COVID-19 the mission was carried out as a Remote Session in the period from October 19th to October 23rd 2020. The mission was mainly devoted to identifying the requirements for producing a Harmonized Index of Consumer Prices (HICP) and identify the necessary changes to the Georgian CPI to make it compliant with the HICP and thus make Geostat able to produce and publish a HICP.

The purposes of the mission were:

- Introduction to current situation in the field of Price Statistics
- Introduction to previous work on Consumer Price Index (CPI)
- Preparation of a work plan on the way towards developing a Harmonized Index of Consumer Prices (HICP)

The consultants would like to express their gratitude to the Geostat staff who participated in the mission, for the kind support and valuable information received during the mission.

The views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of the European Union, Geostat, Statistics Denmark, or other statistical institutions involved in the implementation of the project.

2. Assessment and results

The mission started out with Geostat presenting the current state of play regarding the national Consumer Price Index (CPI). In general the Georgian CPI is based on sound international methods and is a very good starting point for also producing an (experimental) HICP. A Georgian HICP would better enable comparisons of inflation rates with EU countries. There are however some deviations between the national CPI and the requirements for producing a HICP.

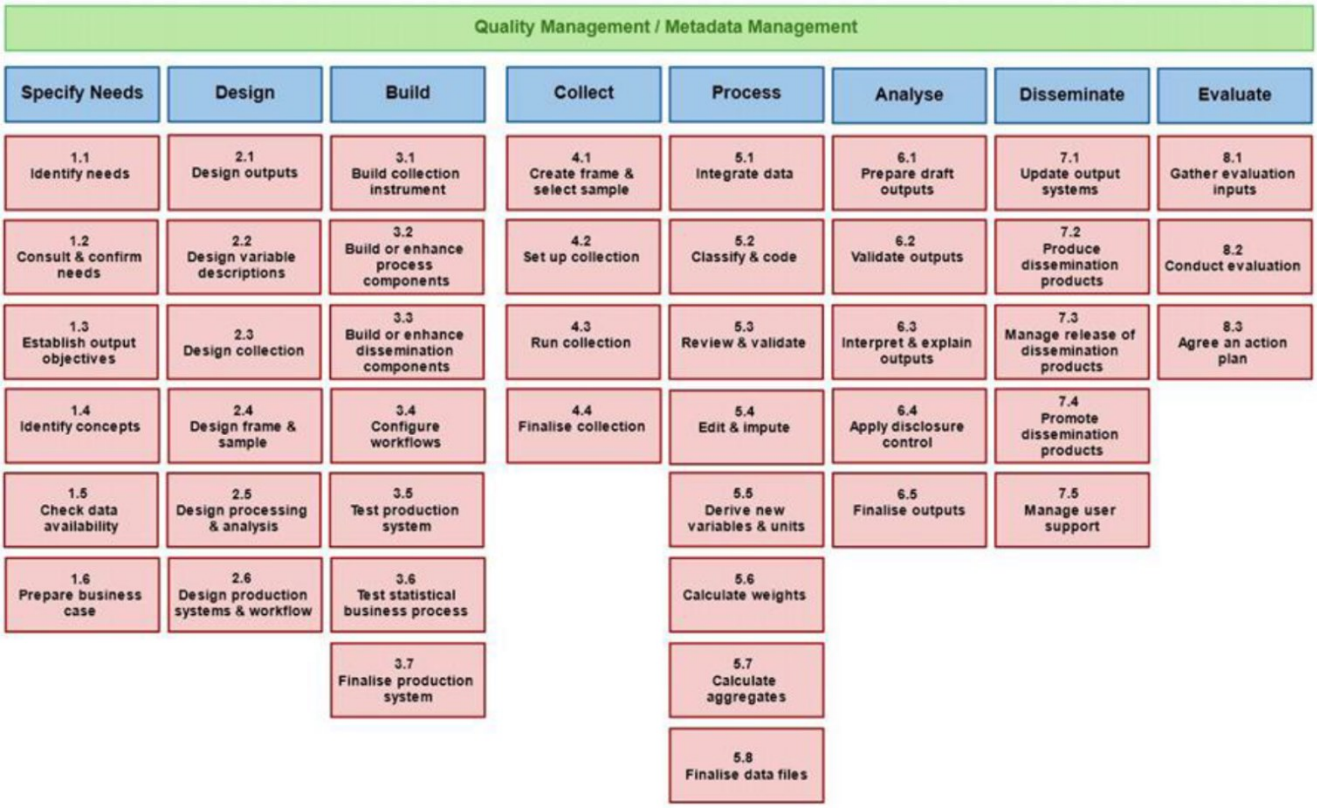
The legal requirements for the HICP can be found in the following two HICP Regulations:

- European Parliament and Council Regulation (EU) 2016/792 of 11 May 2016
- Commission Regulation (EU) 2020/1148 of 31 July 2020

To structure the discussion of the legal requirements regarding a HICP and identification of where the current methods in the national Georgian CPI have to be changed, the Generic Statistical Business Process Model (GSBPM) was used. This model divides the different statistical production processes into different "boxes". All requirements in the HICP Regulations were connected to the GSBPM but not all "boxes" were needed for this.

The HICP Regulations covers the production of the HICP but also the production of some related statistics, namely a HICP with constant taxes (HICP-CT) and a price index for owner-occupied housing (OOH) as well as a House Price Index (HPI) and finally a flash HICP (only euro-countries). This project only covers the production of a HICP but if Geostat wanted to be fully in compliance with all the requirements in the HICP Regulations the related statistics should in principle also be produced.

<u>GSBPM:</u>



4.1 Create frame and select sample.

- The HICP shall only cover Household final monetary consumption expenditure (HFMCE) and transactions between households shall not be covered (except for rents when a private consumer acts as a landlord). This is already the case in the national CPI.
- Data should be representative for the full country in the HICP. The current data collection in the national CPI is collected from 6 cities from 6 regions across Georgia. 82 percent of the consumption in Georgia takes place in these cities/regions and hence a very large proportion of the consumption in Georgia is covered be the data collection. Nevertheless, it would be interesting to examine whether the data is reasonable representative for the remaining 18 percent of the consumption in Georgia. Hence, it is recommended to analyse this issue.
- The HICP requires that a target sample is representative of the target universe by defining elementary aggregates and selecting individual products for these elementary aggregates. The number of individual products and elementary aggregates shall depend on the weight of the subclass and the variance of price movements of the individual products belonging to it. This is to some extent already the case in the national CPI. More prices are being collected for products groups with higher variance, e.g. for electronics. But so far the weight of product groups has not been explicitly taken into account when updating the sample. It is recommended to start this already at the next update of the sample.
- The sample behind the HICP should be updated at least once a year to keep it representative over time. This is already the case in the national CPI.

4.3 Run collection.

- The HICP shall be based on observed prices. This is already the case in the national CPI.

- Prices for health, education and social services shall be net of reimbursements. This is already the case in the national CPI to the extent possible.
- If conditions for a tariff changes it shall be reflected as a price change in the HICP. This is already the case in the national CPI.
- Prices that depend on income shall be changed when the income changes in the HICP. Such prices are currently not in the basket of the national CPI as they are not representative.
- Insurance prices in the HICP shall be actual premiums. This is already the case in the national CPI.
- If an individual product has been made available to consumers free of charge and a price is charged subsequently, this shall be shown as a price increase in the HICP and vice versa. No such cases has been experienced before in Georgia but will be included if it happens.
- Discounts shall be included in the HICP if attached to an individual product and can be claimed at time of purchase. Discounts available to all consumers are already included in the national CPI.
- The HICP shall include charges that are levied directly on consumers in exchange for the service provided and can be expressed as a flat fee or a proportion of the transaction price. If the price of a service is determined as a proportion of the price, the proportion multiplied by the price of a representative unit transaction shall be used as an observed price. The national CPI already includes some financial services that are expressed as a proportion of the price. This representative unit transaction is not currently adjusted with a relevant index. This will need to be changed to produce a HICP.
- Prices for goods shall be included in the HICP when purchased. This is already the case in the national CPI.
- Prices for services shall be included in the HICP when the consumption commences. This is not currently the case in the national CPI and will have to be changed to produce a HICP.
- The prices in the HICP shall be collected across at least one working week and product groups with volatile prices shall be collected across more than one working week, This is already the case in the national CPI.

5.2 Classify and code.

- The European Classification of Individual Consumption according to Purpose (ECOICOP) shall be used in the HICP. This is currently not the case in the national CPI where the older UN COICOP 1999 is being used. The ECOICOP must be used to compile a HICP.

5.4 Edit and impute.

- Prices shall only be estimated for at most two months in case of missing prices. After this a replacement shall be selected. This is already the case in the national CPI.
- Old prices cannot be used for estimation (carry forward) unless justified. Overall mean imputation is used in the national CPI, so this is already in compliance.
- When replacements are selected in the HICP, the replacement shall be similar to the product it replaces but also still be representative. Both goals are taken into account when making replacements in the national CPI.
- When there is no quality difference between an old and replacement product in the sample the quality adjustment method direct comparison shall be used in the HICP. If on the other hand there is a quality difference then a quality adjustment method shall be applied. This is already the case for some product groups in the national CPI but not all. Hence, the quality adjustment procedures needs to be looked into before being fully in compliance with the HICP rules.
- The quality adjustment method that equals the quality difference with the price difference must not be used in the HICP except in duly justified cases. This is already the case in the national CPI.
- Seasonal products shall be estimated in the out of season periods with a seasonal imputation method (or seasonal weights method). This is already the case in the national CPI.

5.6 Calculate weights.

- The calculated weights at the level of elementary aggregates (EA) shall be price updated. This is currently not the case in the national CPI and must be changed to compile a HICP.
- The EA weights shall be based on national accounts data from year t-2 (updated to year t-1 in case of significant changes). The national accounts data can be supplemented with data from other sources, e.g. the household budget survey (HBS). This is already the case in the national CPI.
- The weight from insurance shall be based on implicit service charges. This is already the case in the national CPI.

5.7 Calculate aggregates.

- The HICP shall use the annually chained Laspeyres-type formula. This is already the case in the national CPI.
- The HICP shall be published with 2015=100. The national CPI is currently published with 2010=100.
- Sub-indices of the HICP accounting for less than one part in a thousand of the total expenditure need not be produced and published in the HICP. This convention is already followed in the national CPI.
- Price indices for narcotics, games of chance, prostitution, life insurance and FISIM shall not be produced in the HICP. This is also the case in the national CPI.
- When calculating price indices from the level of individual prices to the level of elementary aggregates in the HICP the index formula should be one of two options:
  - an index formula that ensures transitivity. The price index of prior periods shall not be revised when using transitive index formulae; or
  - an index formula that ensures time reversibility and compares the prices of individual products in the current period with the prices of those products in the base period. The base period shall not be changed frequently if such change leads to significant violation of the transitivity principle.

  The national CPI uses the Jevons formula and hence, isin compliance with this requirement.

7.1 update output systems.

- The HICP shall be published monthly, 15 days after the end of the reference month at the latest. The national CPI is also monthly and is published 5 days after the reference month at the latest.

7.2 Produce dissemination products.

- The HICP regulation requires the production/update of two metadata documents every year:
  - The HICP inventory with detailed methodological descriptions
  - An annual standard quality report

  To be in compliance with the HICP regulations Geostat will have to produce these documents.

3. Conclusions and follow up

The structured discussions of the legal HICP requirements identified 8 numbers of instances where the current Georgian CPI deviates from the HICP requirements. These instances and the work needed to solve them has been put into the below action and time plan. Hence the majority of instances where the national CPI is already in compliance with the HICP requirements are not shown in the work plan below.

In all the cases below Geostat is responsible for carrying out the work but assisted by the Danish experts whenever needed. After the completion of each point below Geostat will send an email to the Danish experts stating the current status and briefly describe the work done and any problems encountered. The next activity will take place 17-21 of May 2021(week 20). At this activity Geostat will summarize the work carried out in connection with the work plan and the Danish experts will assess the quality of the created Georgian HICP.

Actions needed for moving forward:

Work plan

	Description	Example	Deadline
Key for the 1999 COICOP and the ECOICOP	There should be a key/converter between the 1999 COICOP and the ECOICOP to make it possible to use the ECOICOP for compiling a HICP.		13/11-2020
Conversion of national account data to ECOICOP	In order to calculate the weights for the HICP the national account data for household consumption should be received on the ECOICOP codes down to a four digit level.		24/01-2021
Conversion of household budget survey data to ECOICOP	In order to calculate the weights for the HICP the household budget survey data should be received on the ECOICOP codes down to at least a five-digit level.		11/12-2020
It-system able to calculate using the new ECOICOP classification	The IT-system has to be adapted to work with the new ECOICOP classification.		31/12-2020
Calculation of ECOICOP weights	The weights should be calculated using the ECOICOP classification.		31/01-2021
Price updating the ECOICOP weights	The weights for the HICP have to be price updated to December t-1 from year t-2.		31/01-2021
Include services in the HICP when consumption commences.	Services like air tickets and package holidays that are booked before the actual consumption of the services, should be collected at the time the consumers book the services but included in the index the month where the services are actually consumed.	Let say that most consumers book air tickets three months in advance. In that case, the prices for air tickets that are included in the calculation of the October index have to be collected in July.	20/01-2021
Quality changes	When there are quality differences between an old and new product in a replacement situation, a quality adjustment method should be used. If on the other hand there are no quality differences then the method direct comparison should be used. Each replacement situation should be treated case by case and there should not be a default method. This should be implemented for the product groups electronics and cars. After those two product groups, it should also be implemented for other product groups where it is not currently the case.	It is possible to set up different rules, for when to use different methods. If there are price collection of a blue phone but the phone no longer are available in blue but only in black and that is the only difference then it could be fair to say, that it is of same quality and use direct comparison. Another situation could be in price collection of a pair of pants where it is made of 90% cotton and 10% elastane. If the new pair of jeans have a composition of 88% cotton	For electronic goods and cars the implementation should take place before the end April. For other product groups it is an ongoing work.

		and 12% elastane then it could be seen as same quality, but if it had been 80% and 20% instead, then it should be seen as a new quality. Here the rule could be that plus minus 2% in the composition of fabric is still seen as identical quality but if more, then it should be seen as a different quality. Another example could be with price collection of a water resistant phone. There now comes a new phone of the same brand, and the only difference is that this new one is waterproof down to 3 meters. In Denmark we would say that these two phones are of identical quality. But if there in total was three small differences there not by themselves, would be enough to say that the phones are of different quality then the sum of the three small differences could be enough to say that it was of different quality. If the improvement of some product is not of any value for the consumers, then it is not an improvement and the product should be seen as of identical quality.	
When the price is a percent of an amount	In cases where the price of a product is a percent of the amount, the amount has to be adjusted with an appropriate index once a year. An appropriate index is often the total CPI/HICP. The resulting price change as a result of the adjusted amount should be included as a price change in the HICP. The task here is to ensure that this adjustment will take place once a year for the relevant prices in the HICP basket.	In the case where the cost of taking a loan is 1 percent of the amount you loan, the loan value have to be adjusted with the total CPI/HICP once a year (since the consumer will have to borrow more money over time, to receive a fixed inflation-adjusted amount and hence will pay a higher fee for taking the loan).	31/12-2020
Number of prices for each product group	Once a year it should be controlled if the distribution of collected prices is ideal or if a redistribution of the collected prices can improve the quality of the indices.	As a rule of thumb the number of prices collected for each elementary aggregate (EA) should depend of the weight of the EA and on the price volatility within the EA.	31/12-2020

Analyze coverage of Georgia	It should be analyzed whether or not the six cities also are representative for the rural areas of Georgia. This is probably especially centered around food. Maybe prices from the agriculture statistics could be used to analyze whether or not the data collected in the six cities are representative for the rural areas as well. Depending on the outcome of the analysis further actions regarding price collections in rural markets might have to be taken.		September 2021
Metadata	Fill in the HICP inventory and the Standard quality report from Eurostat and update them once a year going forward.		30/04-2021
Calculation of indices	The calculation of the HICP will take place each month just after the calculations of the national CPI. The first month with calculations is February with the calculations of the HICP for January. The calculations will be evaluated at the last activity of this project or bilateral when needed.		Following the national CPI from 2021. The monthly calculations should be finished no later than the 14th of the month.
Dissemination	At the last activity of this project the possible dissemination of the HICP will be discussed. Before the last activity, there should be a proposal for the dissemination.		7/05/2021
Next/last activity	Geostat will summarize the work carried out in connection with the work plan and the Danish experts will assess the quality of the created Georgian HICP.		17-21 May 2021

Annex 1. Terms of Reference

EU Twinning Project GE 16 ENI ST 06 18

19th October – 23rd October 2020

Component 2: Enhancing methodological soundness in the National Accounts in line with the EU standards

Sub-component 2.1: Compilation methods of National Accounts and new products

Mandatory results for activities 2.1.G (RS) and 2.1.H of sub-component 2.1:

- The Harmonized Consumer Price Index is developed and disseminated by the Geostat
- Expert assessment about the quality of the created index is in place

Activity 2.1.G (RS) "Assessment of current situation of Price Statistics and preparation of a working plan for developing a HICP"

1. Purpose of the activity

- Introduction to current situation in the field of Price Statistics
- Introduction to previous work on Consumer Price Index (CPI)
- Preparation of a work plan on the way towards developing a Harmonized Index of Consumer Prices (HICP)

2. Expected output of the activity

- Overview of the current situation of Price Statistics in Georgia
- Overview of tasks to be completed by Geostat
- Stepwise work plan outlined
- ToR for next activity prepared
- Mission report written

Annex 2. Persons met

Geostat
Mr. Giorgi Tetrauli, Head of Price Statistics Department

RTA Twinning Team
Mr. Steen Bielefeldt Pedersen, Resident Twinning Advisor