

Twinning Project

Contract: GE 16 ENI ST 06 18

Strengthening the Capacity of the Georgian Statistical System

Component 3: “*Development of Business Statistics*”

Sub-component 3.1: “Short Term Business Statistics Indicators”

MISSION REPORT

Activity: 3.1.A “Overview of best practice and data analysis”

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1. General comments

This mission report was prepared within the EU Twinning Project "Strengthening the Capacity of Georgian Statistical System". This was the first mission within the sub-component 3.1: "Short Term Business Statistics Indicators" and was mainly devoted to an overview of best practice and data analysis.

The purposes of the mission were:

To present, discuss and work on the below mentioned subjects:

- Overview of best European practice regarding STS indicators
- Analyze data sources – administrative and survey
- Quality assessment of data
- Meeting with data suppliers e.g. the Revenue Services
- Metadata, descriptions and definitions of input data – issues with data.
- Coverage on e.g. sectors and size

The consultants would like to express their gratitude to all officials and individuals met for the kind support and valuable information which he received during the stay in Georgia and which highly facilitated the work of the consultant.

The views and observations stated in this report are those of the consultant 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 consultants gave a brief overview of the data requirements according to FRIBS. The current STS regulation is divided into sector specific annexes each with their own indicators. With FRIBS the format has been transposed so it will henceforth, when FRIBS is adopted, be organised according to indicator rather than sector. One important change in comparison with the current legislation is that the service sector is to be given more emphasis.

This mission focused in particular on the turnover and production indices as they are closely related. The table below shows which NACE sections should be covered by each indicator. The PPIs (Producer Price Indices) are included in the table as they are important as deflators for the volume/production indices.



NACE Sections	Indicator				
	Turnover	Domestic/non-domestic Turnover	Volume of Sales	Production volume	(S)PPI
A Agriculture					
B Mining	X	X		X	ex B0721
C Manufacturing	X	X		X	C2446, C254, C301, C303, C304,
D Electricity etc				X (ex D353 steam and air conditioning)	
E Water supply					E36
F Construction				X	CPA 41.00.1 excluding 41.00.14
G Trade	X		X		
H Transport	X			X	X
I Accommodation	X			X	X
J Information	X			X	X
K Financial					
L Real estate	X			X	X
M Prof. Scientific and	X (ex M701(head office), M72(r&d), M75 (vet))			X (ex M701(head office), M72(r&d), M75 (vet))	X
N Administration and support service	X			X	X

Geostat wishes to explore the possibilities of using existing sources, i.e. administrative data and the business survey, for the production of the STS indicators. There are three different types of sources available in Geostat which are relevant for this.

1. Monthly VAT data set from the Revenue Service.
2. Monthly income and salaries data set from the Revenue Service
 - a) legal unit data set
 - b) data set with individual salary data
3. Business survey carried out by GEOSTAT
 - a) Annual
 - b) Quarterly

In addition to these sources the Statistical Business Register is obviously also relevant as it provides the population frame for the statistics.

Data sources

1. Monthly VAT data set from the Georgian Revenue Services

Geostat receives a data set from the Georgian Revenue Service on a monthly basis containing VAT data. The data is received approximately 20 days after the end of each month and should thus be available in time for the production of monthly indicators.

The data set covers around 50.000 legal units out of the 180.000 active legal units in the Georgian SBR. This means that there is a rather good monthly coverage of the economic activity via this data source.

The threshold for compulsory reporting of VAT is 500.000 GEL in annual turnover. This is a relatively high threshold, but many legal units with an annual turnover less than 500.000 GEL choose to report VAT voluntarily as the VAT registration can be beneficial in regard to customers, credit, and investors.

Some NACE groups are exempted from VAT – these include agriculture, health care, and the pharmaceutical industry. Of these only the latter is relevant for the STS indicators. The Revenue Service should be contacted for a full list of exempted activities.

The dataset includes variables which contain information about the income of each legal unit, which is divided into income liable to VAT and income exempted from VAT, cf. annex 3

Currently the total income of the legal units is calculated by adding all information on income. The total income variable calculated in this manner is used by National Accounts for the calculation of growth rates. The data used by National Accounts is not published.

There are many well-known issues with administrative data such as VAT data;

- Small legal units are not included in the monthly file. This will probably affect the measurement of some NACE activities more than others. Retail trade is more likely to suffer from under coverage than manufacturing.
- VAT is often incurred more on income than turnover per se, such as operating income, sale of asset etc. This is also the case in Georgia and further analysis should be carried out to measure the extent and also to develop methods to deal with this issue. The Business surveys could be useful in that regard.
- Some activities are exempt from VAT. This could lead to under coverage in certain activity groups.

Specifically concerning the data received by Geostat the issues are:

- It is not 100 pct. clear what sort of data is recorded in the variables used in the calculation of total turnover. A clear definition of these variables is crucial.
- It is also not clear to what extent some of the variables are incomplete as it appears that it may be voluntary for the legal units to report data on this.
- The Activity codes are not updated in the data file from the Revenue services.

2. Monthly income and salaries data set from the Georgian Revenue Services

Geostat also receives monthly data on salaries and income. One file includes data pr. legal unit and contains information on sum of wages, minimum and maximum wage and a company income variable (referred to as production). This data file includes 80.000 legal units and thus cover a larger proportion of the business sector than the VAT data. All legal units, which have employees, are required to report these data to the authorities. The other file includes salary data pr. employee and contains around a million rows pr. month.

The income variable in the legal unit data set could be an alternative source for turnover estimation. It can supplement VAT data as it contains around 30.000 legal units more than the VAT data. These additional 30.000 legal units are presumably smaller legal units which presumably also constitute a small fraction of the business survey.

Some specific issues with these data are:

- The most important issue is to get a thorough understanding of what sort of information is contained in the legal unit income variable of this data set. The variable is referred to as C31.

- The NACE codes are not entirely updated. Some NACE rev. 1 codes may be included as well as NACE 2.

1. *Quarterly and Annual Business Survey*

Geostat performs a quarterly business survey with a sample of around 12,000 out of 130,000 active enterprises. The sample is selected from the statistical business register for a year at a time and supplemented during the year in case enterprises with significant turnover or employment emerges. Larger enterprises have a higher probability to be included with the largest enterprises always included in the sample. The reporting is done both electronically (85 percent of reports) and on paper.

A similar annual business survey is also done with a sample of around 15,000 enterprises. A detailed analysis of the existing business survey and the methodology has not been performed, but the consultants' general impression is that the overall methodology and results are of good quality and valid.

The survey includes a detailed break-down on turnover, which may be useful when it comes to the calculation of the industrial production index. The survey also contains data on stock changes, which likewise can be used for the calculation of the production index.

The potential use of the quarterly business survey in the production of monthly indicators could be to provide adjustment factors for elements not covered in the monthly data from the Revenue Services. It could be adjustment for stock changes; traded goods and the conceptual differences between turnover and the revenue reported in the VAT data file from Revenue Services. The latter could prove to be difficult and might need other solutions, e.g. a specific monthly survey.

Of course with it being quarterly data, the adjustment factors will not be available with the right frequency. Moreover there will be a considerable lag, as the quarterly adjustment factor will be available several months after the reference period. In case of significant structural changes or high volatility, this will affect the usability of the survey data in producing adjustment factors for the monthly indices.

Suggestions and conclusions

Geostat has access to very promising administrative sources, and conducts an extensive annual and quarterly business survey. Using and combining these sources it should be possible to come a long way in terms of producing especially turnover indices, but also to make a start on production indices.

The frequency and timeliness of the administrative sources is very good as is the coverage. Some things need to be analysed further though:

First of all, it is necessary to get precise information of the contents and definitions of the relevant variables in the administrative data that Geostat receives from the Revenue services. During the discussions a number of questions regarding the data from Revenue Services arose. Geostat will contact the Revenue Services in order to acquire the necessary additional information.

All the information on the data sources from Revenue Services should be recorded in a metadata file. It should be detailed enough to be the repository for all information and the document to refer to in case of questions.

Secondly, there are conceptual differences between turnover and revenue reported to Revenue Service which should be taken into account:

Revenue may include both true turnover and sales of asset etc. Since the latter can be of a very arbitrary and fluctuating nature, it can be difficult to account for it at the time of production of the indicator, whereas an

analysis of the differences is possible when the data from the quarterly and annual business surveys are available. This ex post analysis should be done on 2017 and 2018 data in order to quantify the extent, especially subdivided on kind of activity and size of enterprise.

Thirdly, the coverage of individual NACE sections may vary. The coverage could be low in a particular NACE section if:

- The average legal unit within the section is small
- The activities carried out within the section are exempted from VAT

This should be analysed by comparing the administrative data with population data, e.g. from the Statistical Business register, and by getting information from the Revenue Service about VAT rules.

The problem with under coverage is that the affected NACE sections do not enter the calculation of the indices with full weight and the resulting indices will be systematically biased

Fourthly, potential quality issues of the data should be analysed further:

A preliminary analysis comparing “turnover” and number of units from the three data sources and the statistical business revealed that there are significant differences between the sources not all of which can be explained by the differences in definitions or coverage. This needs to be further analysed by joining data at micro level (enterprise level). Through an analysis of this it should be possible to pinpoint where the issues are in data.

Finally, some analysis should be carried out in order to evaluate the feasibility of using data on the breakdown of turnover and stock changes from the quarterly business survey to enrich the monthly administrative turnover data in order to produce production indices.

Depending on the outcome of these analyses, it may be necessary to consider a small supplementary data collection for some of the NACE sections and for some of the larger legal units. This could be relevant if:

- It is impossible/difficult to adjust for the conceptual differences between turnover and VAT data at the time of production.
- The administrative data contains insufficient (or no) information about exports
- It proves too difficult to use the quarterly business survey for the adjustment of turnover and stock changes.

Some of these choices will however depend on which route will be taken in regard to the calculation of the indicators. One option (which is commonly used) could be to use deflated turnover without stock changes as a proxy for production. Another possibility, which is subject to analysis in future missions, is to take a stepwise approach where preliminary indicators are calculated using existing data, with a view to fine tune these later using some of the measures described above.

3. Conclusions and follow up

- There are many possibilities with the data sources available to Geostat.
 - The administrative data has very good coverage both in terms of the share of the business sector and frequency
 - The quarterly and annual business survey similarly has good coverage, and contains variables which can be used to calculate adjustment factors necessary for the calculation of the production index; these are
 - Stock changes
 - Breakdown of turnover

- Whilst there are many possibilities, there are also some issues or challenges with data which should be addressed and analysed further; these include
 - Conceptual differences
 - Data coverage
 - Missing information, e.g the split between domestic and non-domestic turnover.
- There are a number of follow up actions to be taken
 - The revenue services should be contacted for clarification about the content of the administrative data Geostat receives
 - Work on metadata should be started as soon as information about data is received
 - Analyses of the differences between the three data sources should be carried out.
 - An overview table combining the sources at 2 digit NACE level should be compiled.
 - The conceptual differences between the sources should be further illuminated
 - A micro data set combining VAT data (C1-C4) and data from the salaries file (C31), and preferably also turnover data from the business survey. The data cover as many periods as possible and should contain both raw data and validated data at the level of enterprise and reference period.

Actions needed for moving forward:

Action	Deadline	Responsible person
Get information from the Revenue services about the contents of the administrative data. In particular fields C1 – C4 in the VAT data, and C31 in the salary data.	November, 2019	Geostat
Begin drafting a Metadata document with description of data sources	November, 2019	Geostat
Create an overview table combining the data sources and analyse the differences at 2 digit NACE level	November, 2019	Geostat
Analyse and describe the conceptual differences between different measures of turnover in the data sources	November, 2019	Geostat
Create a micro data set combining the different data sources	November, 2019	Geostat

Annex 1. Terms of Reference

Terms of Reference

EU Twinning Project GE 16 ENI ST 06 18

October 7th – October 10th 2019

Component 3: Development of Business Statistics

Sub-component 3.1: Short Term Business Statistics Indicators

Mandatory results and benchmarks for sub-component 3.1

- Short-term business statistics indicators developed

Indicators of Achievement (baseline and targets):

- Availability of STS – indices as test calculations
 - **Baseline:** 2019 – n/a
 - **Target:** January 2021 – Indices on turnover, volume and hours worked calculated
- Number of staff trained in STS indices on turnover, volume and hours worked
 - **Baseline:** 2019 – n/a
 - **Target:** January 2021 – 3 staff members

Activity 3.1.A: Overview of best practice and data analysis

1. Purpose of the activity

To present, discuss and work on the below mentioned subjects:

- Overview of best European practice regarding STS indicators
- Analyze data sources – administrative and survey
- Quality assessment of data
- Meeting with data suppliers e.g. the Revenue Services
- Metadata, descriptions and definitions of input data – issues with data.
- Coverage on e.q. sectors and size

2. Expected output of the activity

- Overview of existing needs in accordance of FRIBS
- Overview of available data sources for monthly and quarterly STS
- Data sources are analyzed
- Data quality and coverage are discussed
- Existing metadata are analyzed and shortcomings are identified
- Mission report written
- Input on ToR for next mission
- Work plan for sub-component 3.1 is discussed and updated

Annex 2. Persons met

Geostat

Mr. Gogita Todradze, Executive Director,
Ms. Mariam Kavelashvili, Deputy Head of Strategic Planning, Coordination and Communication Department,
Mr. Giorgi Sanadze, Head of Business Statistics Department,
Ms. Tinatin Ksovveli, Head of Short Term Statistics Division of Business Statistics Department,
Mr. Mamuka Benashvili, Chief Specialist of Short Term Statistics Division of Business Statistics Department,
Ms. Liana Zaridze, Chief Specialist of Short Term Statistics Division of Business Statistics Department,
Ms. Mariam Gogenia, Senior Specialist of Short Term Statistics Division of Business Statistics Department,
Ms. Nino Beridze, Specialist on a contract basis of Business Statistics Department.

RTA Twinning Team

Mr. Steen Bielefeldt Pedersen, Resident Twinning Advisor
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Annex 3. Monthly VAT data set from the Georgian Revenue Services

The dataset includes the following variables which contain information about the income of the legal units.

Variable	Label
C1	18/20% dasab. br.(C1)
C2	0% dasab. br. gaTav. CaTv. ufl.(C2)
C3	br. rom. ar ibegr. an ar ganix. dRg-iT dasab. oper. an saq./moms. miwod. (gaTav. Catv.ufl. gar.)(C3)
C4	br. rom. ar ibegr. an ar ganix. dRg-iT dasab. oper. an saq./moms. miwod. CaTv. dRg ar eqv.gauqm.(C4)

- C1 indicates the income which is liable for VAT. The recorded data is not the sum of the VAT incurred but the income on the basis of which VAT should be calculated.
- C2 Income which is exempt from VAT?
- C3 Other exemption from VAT?
- C4 Exemption from VAT?

Currently the total income of the legal units is calculated by adding these four columns.