

## Report on GVA of multiregional enterprises

A survey of regional indicators used for the compilation of GOS of multi-regional enterprises

ANNEXES

Bas de Vet Zoetermeer, 5 December 2016

## **EUROPEAN COMMISSION**

Directorate-General for Regional and Urban Policy Directorate B Policy Unit B.1 Economic Analysis

Contact: Lewis Dijkstra E-mail: lewis.dijkstra@ec.europa.eu@ec.europa.eu

*European Commission B-1049 Brussels* 

## Report on GVA of multiregional enterprises

A survey of regional indicators used for the compilation of GOS of multi-regional enterprises

## *Europe Direct is a service to help you find answers to your questions about the European Union.*

Freephone number (\*):

## 00 800 6 7 8 9 10 11

(\*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

## LEGAL NOTICE

This document has been prepared for the European Commission however it reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

More information on the European Union is available on the Internet (http://www.europa.eu).

Luxembourg: Publications Office of the European Union, 2016

ISBN 978-92-79-65732-0 doi: 10.2776/29128

 $\ensuremath{\mathbb{C}}$  European Union, 2016 Reproduction is authorised provided the source is acknowledged.

Methodological survey on Regionalisation of GOS of multi-regional enterprises

## Andreas.Krueger@ec.europa.eu

To: Monica.Maeseele@nbb.be. Frank.Thalheimer@stala.bwl.de, henar.lopez.arce@ine.es, maresca@istat.it. nfm.mens@cbs.nl, Kerstin.Gruber@statistik.gv.at, d.doniec@stat.gov.pl, filipa.soares@ine.pt, trevor.fenton@ons.gov.uk, bethan.west@ons.gsi.gov.uk, Andrej.Mikus@statistics.sk, Katerina.Malinova@czso.cz. Jaroslav.Kahoun@czso.cz bastiaan.de.vet@gmail.com CC: 30 maart 2016 17:29 datum: onderwerp: Methodological survey on Regionalisation of GOS of multi-regional enterprises

Dear all,

We would like to come back on the methodological question of how gross operating surplus (GOS) of multi-regional enterprises is regionalised in EU Member States.

The average share of gross operating surplus (GOS), including mixed income of the 28 EU-Member States in gross value added (GVA) amounts to an average of 44%. Greece with a share of 64% has the highest ratio while Sweden, with a share of 36%, has the lowest ratio. These high values explain why Eurostat and DG REGIO are very interested to understand better how NSIs are regionalising GOS for multi-regional enterprises, with the objective of assessing and subsequently improving the comparability of regional GVA data among Member States. This survey focuses on the compilation method for GOS of the local units of multi-regional enterprises, i.e. mixed income is not looked at.

The main problem is that data on GOS for the local units of multi-regional enterprises are generally not available and have to be based on regional indicators. These regional indicators have a considerable impact on the resulting GVA. In order to assess the comparability across Member States, it is relevant to know which indicators have been used by the different NSIs for the allocation of GOS of multi-regional enterprises to their local units in different NUTS-2 regions and at NACE Rev. 2 (A\*10).

Your cooperation is crucial for a better understanding of the used methodologies for the regionalisation of GOS of multi-regional enterprises. Therefore, we would kindly request you to complete the attached questionnaire as well as the Excel file on meta data. In terms of the reference year we would prefer 2012 which by now should be definitive for most countries. If you consider a different reference year more suitable please let us know.

If you have further questions, please contact our expert Bas de Vet (<u>bastiaan.de.vet@gmail.com</u>) directly. We would kindly ask you to return the completed questionnaire on GOS and the Excel file on meta data to us and to Bas de Vet until **30 June 2016**.

Thank you very much in advance for your support in this important matter.

Best regards

Andreas

Andreas Krüger Regional Accounts

## European Commission Eurostat

Unit C-2: National and regional accounts production. Balance of payments.

BECH E2 / 825 L-2920 Luxembourg

+352 4301-36397 Andreas.Krueger@ec.europa.eu

4 bijlagen

Questionnaire: Share of gross operating surplus in total gross value added

## Contents

- <u>1.</u> <u>Introduction</u> 4
- 2. Explanation of the file "Share of GOS in GVA example" and "Share of GOS in GVA to be completed" 5

.

- <u>2.1</u> <u>Country</u>5
- <u>2.2</u> <u>ESA 2010</u> 5
- 2.3 <u>Reference year</u> 5
- 2.4 Regional detail 5
- 2.5 Industrial detail 5
- 2.6 The variables 5
- 3. Overview 6
- 4. The file "Meta data on indicators used" 6
- 5. <u>Transmission of the data</u> 6

## 1. Introduction

The average share of gross operating surplus (GOS) and mixed income of the 28 EU-Member States in gross value added (GVA) of these states is 44%. Greece with a share of 64% has the highest ratio while Sweden, with a share of 36%, has the lowest ratio.<sup>1</sup>

The large differences in shares of GOS are to a large extent related to differences in the share of self-employed persons in total employment, relevant for the share of mixed income in the total for GOS and mixed income. The average share for self-employed persons regarding the 28 EU-Member States is 15,8%. Greece and Sweden have a share of respectively 33% and 5%.<sup>2</sup>

These data show that GOS and mixed income are next to compensation of employees an important component part of GVA. Mixed income is based on data from self-employed persons. GOS is based on regional and multi-regional legal entities (incorporated enterprises) and owner occupiers of dwellings. This survey focuses on the share of GOS of multi-regional enterprises in total GVA.

Both incorporated and unincorporated enterprises contribute respectively to GOS and mixed income. At the national level, estimates for GOS and mixed income are in principle based on a variety of sources. For instance, the Structural Business Survey (SBS) based on information at enterprise level or administrative data from tax authorities with generally data on enterprise level too. These data are as a rule not available for local kind of activity units (KAU's) of multi-regional units.

For the administrations of these enterprises are generally not designed for providing all needed data regarding the composition of GVA. For instance, establishments used for producing intermediate products that are used in establishments of the enterprise in other regions, are not producers for the market and these data are generally not readily available in the administration of the enterprise.

This poses a problem for those enterprises that have establishments in different regions (multi-regional enterprises). For generally, no data are available about output, intermediate consumption and value added, though in many cases wages paid, number of employees or hours worked are available for these establishments. This implies that in principle, data for GOS of the separate establishments cannot be directly based on the administration of a multi-regional enterprise.

<sup>&</sup>lt;sup>1</sup> Eurostat database, (nama\_10\_gdp), last update 27-10-2014, NA\_ITEM, gross value added and gross operating surplus and mixed income. Data for 2013. GVA of UK was not available.

<sup>&</sup>lt;sup>2</sup> Eurostat database, (nama\_10\_a10\_e), last update 29-10-2014, NA\_ITEM, total employment (domestic concept) and self-employed (domestic concept).

The consequence is that GVA and GOS for the establishments of a multi-regional enterprise have to be based on indicators, like the regional distribution of compensation of employees, number of employees or hours worked by the employees.

The next section provides information about the questionnaire. See the file "Share of GOS in GVA\_3".

2. Explanation of the file "Share of GOS in GVA\_example" and "Share of GOS in GVA\_to be completed"

The first file "Share of GOS in GVA\_example" provides a numerical example. The second file "Share of GOS in GVA-to be completed" provides an empty file that has to be completed.

## 2.1 Country

Here should the country name be filled in.

## 2.2 ESA 2010

The compilation of the share of GOS has to be based on ESA 2010. 2.3 Reference year

The reference year is in principle based on the year with definite or final data. This should be preferably 2012, though definitive or final data for the reference years 2011 or 2010 are acceptable if the data for 2012 or 2011 are still provisional and probably based on more general extrapolation methods for most of the industries. It is assumed that the share of GOS in GVA for the multi-regional enterprises will not show considerable shifts for these years. 2.4 Regional detail

The data to be delivered to Eurostat should be based at NUTS 2. 2.5 Industrial detail

The data to be delivered to Eurostat should be at NACE Rev.2, A\*10 including the manufacturing industry (section C), though it up to the countries to compile the data at greater industrial detail. 2.6 The variables

The following text is based on the file "Share of GOS in GVA\_3"; Example Section A.

The variables needed for the compilation of the share of GOS of multi-regional enterprises in total GVA are: total GVA of the industry (column 3) and GOS of multi-regional enterprises in the same industry (column 6). These data are in millions of euro (MIO  $\in$ ) or in millions of the national currency (MIO NAC). If an industry does not have multi-regional enterprises, the columns 5, 6 and 7 do get zero's for all regions.

For verification purposes, it is relevant to include data for the multi-regional enterprises on compensation of employees (column 5) and other taxes less subsidies on production (column 7), though the focus is on GOS.

For the regionalisation of GOS it is relevant to know which indicators are used: the regional distribution of compensation of employees (column 8), number of employees (column 9), hours worked (column 11) or other indicators (column 11). It is sufficient to indicate for an industry only

once with an (X) which indicator has been used. If the industry does not have multi-regional enterprises, column 11 has to be filled in with "no multi-regional enterprises".

In the example of section A, there were no multi-regional enterprises. In that case, the regional totals for GOS in MIO  $\in$  or MIO NAC have to be filled in column 16 (No multi-regional enterprises). So, zero MIO  $\in$  for all regions. In the example of sections B-E, column 13 (Number of employees) has been filled in.

The columns 17 to 21 provide for each industry at A\*10 the percentage shares of total GOS of multiregional enterprises in total GVA of this industry.

3. Overview

The sheet "Regional totals A10" gives an overview of the shares of GOS of the total of all industries in total GVA of all industries according to the distribution keys used.

4. The file "Meta data on indicators used"

The file "Meta data on indicators used" is intended to provide information about the sources (reference to surveys or administrative data) from which the indicators are taken and whether there were any changes in the indicators used for the regionalisation of GOS of multi-regional enterprises.

It is also useful to know, if NSI's intend to change the indicator for the regionalisation of GOS of multi-regional enterprises.

5. Transmission of the data

The NSI's are requested to provide the requested information before June 30, 2016.

Preliminary findings for the GOS of multi-regional enterprises project The questionnaire has been provided March 30 to eleven EU-countries with the request to complete the questionnaire before July 1, 2016.

The countries involved in the project are: AT, BE, CZ, DE, ES, IT, NL, PL, PT, SK and UK.

A summary of the results are provided in ANNEX 1.

So far, NL, PT and UK provided data on the share of GVA and GOS of multi-regional enterprises in total GVA. The main results were:

NL: The share of GVA of multi-regional enterprises at NUTS-2 level varies between 37 and 60% of total GVA. Share of GOS of multi-regional enterprises at NUTS-2 level varies between 14 and 42% of total GVA.

PT: The share of GVA of multi-regional enterprises at NUTS-2 level varies between 15 and 38% of total GVA. Share of GOS of multi-regional enterprises at NUTS-2 level varies between 0 and 18% of total GVA.

UK: The share of GVA of multi-regional enterprises at NUTS-2 level varies between 35 and 57% of total GVA. Share of GOS of multi-regional enterprises at NUTS-2 level varies between 12 and 22% of total GVA.

Five other countries provided qualitative information about the method used. It regarded: BE, CZ, DE, ES and PL

Three countries provided a reaction, though no information about the regionalisation of GVA and GOS of multi-regional enterprises. It regarded: AT, IT and SK. I have sent an email to IT and SK for further information.

## Main problem

15.

Delivery of GOS (B.2g) is not compulsory in the ESA 2010 transmission programme of data. That is correct. And the main reported problem was, that it is difficult to regionalise other taxes less subsidies on production for multi-regional enterprises.

Though at NUTS-2 level, GVA (B.1g) and D.1 at A\*10 is compulsory. This implies that GOS (B.2g) can be approached by the balance B.1g-D.1. It has still to be corrected by other taxes less subsidies on production of multi-regional enterprises. At this stage it should be mentioned that other taxes less subsidies (D.29-D.39) is generally very small compared to GVA. So, one could decide not correcting he balance B.1g-D.1, because it barely influences the result. If one wants to correct B.1g-D.1 for D.29-D.39, one could do the following:

At national level D.29-D.39 is available for A\*21/A\*64 (see table 3 of the ESA 2010 transmission programme of data), though not for multi-regional enterprises. So, the national total of D.29-D.39 has to be allocated to the national totals for uni-regional and multi-regional enterprises for the industries (A\*21/A\*64). An indicator for the allocation at the chosen industrial level has to be used. As generally done the indicator could be the share of

employed persons of the uni- and multi-regional enterprises in the total employment of the industry. When the national total of D.29-D.39 has been estimated, the next step would be to regionalise this total, using for instance the regional distribution of employed persons of multi-regional enterprises. After that, GOS (B.2g) can be estimated for each industry at NUTS-2 level.

So my conclusion is, that I understand the argument that B.2g is not in the Eurostat transmission programme. However, this is in my opinion not sufficient

## **General remarks**

DG-Regio is interested in GOS of multi-regional enterprises. Regarding the reaction so far, we have seen that it is difficult to compile this information, because it is not compulsory and not part of the compilation system. So, it is extra work for them. The countries that compiled GOS for multi-regional enterprises, use generally the same indicator, they used for the regionalisation of GVA of multi-regional enterprises. So, it might be questioned to focus more on the regionalisation of GVA of multi-regional enterprises instead of GOS. Probably, this information could be provided more easily.

The hesitation of the majority of countries to compile GOS of multi-regional enterprises is also related to the extra work they have to do. So, the question here is how well their automation system and basic data allow extra analysis. This could be a topic for a workshop, how the NSI's could improve their compilation system.

Main findings based on information in CIRCABC (2008 – 2009) See the attached file.

| Countries | Multi-region<br>(MRE) | al enterprises<br>treated | Indicator                                      | r used for mu  | Iti-regionalisa             | tion                   | MRE in com                 | pilation table                      | Remarks (with reference to the inventory indicated by "x"  |
|-----------|-----------------------|---------------------------|--|--|-----------------------------|------------------------|----------------------------|-------------------------------------|--|
|           | Yes                   | No                        | Compensation<br>of employees<br>per local unit | Wages and<br>salaries per<br>local unit  | Employees<br>per local unit | No<br>detailed<br>info | Yes                        | Share of<br>MRE in total<br>GVA (%) |  |
| 1         | 2                     | 3                         | 4  | 5  | 5                           | 7                      | 8                          | 9                                   | 10   |
| AT        | X                     |                           |  |  | x                           |                        | x                          | 21,4                                | "Für multiregionale Einheiten des Typs ,UB' oder ,U' bzw.<br>wenn beim Typ ,U' Betriebe unterschiedlicher NACE-<br>Klassifikationen vorhanden sind, muss die BWS für die LKAUs<br>geschätzt werden (Pseudo-bottom-up-Methode)."  |
| BE        | x                     |                           |  | x  |                             |                        | x                          | 19,2                                | "In the case of multi-district-enterprises (i.e. enterprises<br>having local units in more than one NUTS 3-region) the<br>pseudo bottom up method is used (distribution key = wages<br>and salaries per local unit)."  |
| BG        | ×                     |                           |  |  |                             | x                      | x                          | 1,2                                 | "The transactions of multi-regional units are allocated to the correct regions, based on the direct information, or based on the regional key indicator."  |
| cz        | x                     |                           |  | x  | x                           |                        | х                          | 21,6                                | "variables like as number of employees, wages and salaries<br>and investments in enterprises, which have multi-regional<br>character"  |
| DE        | X                     |                           |  | Wages and<br>salaries per<br>local unit<br>for the<br>labour part<br>and GFCF<br>(10 years)<br>for the<br>capital part |                             |                        | Not explicitly<br>included | 0                                   | BdV: The compilation table does not provide explicit<br>information about multi-regional enterprises, though explicitly<br>and extensively mentioned in the inventory. The compilation<br>will be done firstly at state (NUTS1) and district (NUTS3) level.<br>And secondly at NUTS2 level. NUTS2 is the sum of NUTS3. |

| Countries | Multi-region<br>(MRE) | al enterprises<br>treated | Indicator                                      | used for mu                             | lti-regionalisat            | ion                    | MRE in compilation table |                                     | Remarks (with reference to the inventory indicated by "x"  |
|-----------|-----------------------|---------------------------|--|---|-----------------------------|------------------------|--------------------------|-------------------------------------|--|
|           | Yes                   | No                        | Compensation<br>of employees<br>per local unit | Wages and<br>salaries per<br>local unit | Employees<br>per local unit | No<br>detailed<br>info | Yes                      | Share of<br>MRE in total<br>GVA (%) |  |
| 1         | 2                     | 3                         | 4  | 5                                       | 5                           | 7                      | 8                        | 9                                   | 10   |
| DK        |                       | X                         |  |   |                             | х                      | Х                        | 0,5                                 | BdV: Not really discussed.   |
| EL        |                       | Х                         |  |   |                             | х                      | X                        | 6,9                                 | BdV: Not mentioned in the inventory.   |
| FI        | and a xable           |                           |  |   | X or turnover               |                        | X                        | 1,2                                 | "The industry desegregation method means that the<br>transactions of National Accounts are divided to<br>establishments relative to, for example, turnover or<br>employment. In the top-down method the transactions of the<br>industry are estimated with the indicator which should<br>correlate in the best possible way with the described<br>phenomenon." |
| FR        | Х                     |                           |  | x                                       | or X                        |                        | Х                        | 19,2                                | "The added value of a company (as well as its other<br>accounting variables) is then distributed between its<br>establishments according to the key corresponding to the<br>source with which it was paired (wage bill for CLAP, workforce<br>for REPER)."   |
| HU        | x                     |                           |  | x                                       |                             |                        | x                        | 0,8                                 | "In the case of multi-regional enterprises (above 49<br>employees) having regional units in more than one county the<br>gross value added figures are allocated to counties<br>proportionally to the wages and salaries of their local units."   |

| Available | information                                      | n for the con             | nplation of GV                                 | /A of multi                             | regional enterprises in the currently available inventories (CIRCABC); September 2016 |                        |            |                                     |   |
|-----------|--|---------------------------|--|---|---|------------------------|------------|-------------------------------------|---|
| Countries | Multi-region<br>(MRE)                            | al enterprises<br>treated | Indicato                                       | r used for mu                           | Ilti-regionalisa  | tion                   | MRE in com | pilation table                      | Remarks (with reference to the inventory indicated by "x"   |
|           | Yes  | No                        | Compensation<br>of employees<br>per local unit | Wages and<br>salaries per<br>local unit | Employees<br>per local unit   | No<br>detailed<br>info | Yes        | Share of<br>MRE in total<br>GVA (%) |   |
| 1         | 2  | 3                         | 4  | 5                                       | 5   | 7                      | 8          | 9                                   | 10  |
| IE        | X  |                           |  | x                                       |   |                        | x          | 100                                 | "First of all each local unit has its percentage of its enterprise's<br><b>Total Earnings Paid</b> or wages bill calculated. Secondly, this<br>percentage is used to distribute the "profit" figure calculated<br>from the enterprise data to the relevant local units. This<br>"profit" figure is then used to distribute the remainder of NOS<br>and COC as outlined above. The use of Remainder of Output<br>instead of Earnings is being examined for the manufacturing<br>industry and it is hoped to use that in the future." |
| П         | Because of the<br>method used<br>implicitly done |                           |  |   | x   |                        |            |                                     | "The estimate of the value added by worker drawn from the<br>enterprises balance-sheets surveys (to be multiplied per<br>labour units to obtain the bringing back to the universe) is the<br>average between direct estimate (values for the economic<br>activity units at local level of the domain object of survey) and<br>a synthetic estimate (values relative to a macro/area, which<br>the domain object of estimation is part of)."   |
| LT        | X  |                           |  | x                                       |   |                        | x          | 3                                   | "The majority of these sub-activities are active in more than<br>one region and for these multi-regional enterprises pseudo<br>bottom-up method is used. Therefore, regionalizing gross<br>value added of those activities, two indicators were chosen:<br>wages and salaries and consumption of fixed capital."  |

| Countries | Multi-region<br>(MRE) | al enterprises<br>treated | Indicator                                      | used for mu                             | lti-regionalisat            | tion                   | MRE in comp | ilation table                       | Remarks (with reference to the inventory indicated by "x"  |
|-----------|-----------------------|---------------------------|--|---|-----------------------------|------------------------|-------------|-------------------------------------|--|
|           | Yes                   | No                        | Compensation<br>of employees<br>per local unit | Wages and<br>salaries per<br>local unit | Employees<br>per local unit | No<br>detailed<br>info | Yes         | Share of<br>MRE in total<br>GVA (%) |  |
| 1         | 2                     | 3                         | 4  | 5                                       | 5                           | 7                      | 8           | 9                                   | 10   |
| LV        | X                     |                           |  |   | x                           |                        | x           | 28                                  | "3.2.1. If producer (mostly large and medium enterprises)<br>operates in more than one region and performs more than<br>one activity, allocation by regions is depends on information<br>from 1-Annual (detailed information on performed activities)<br>and 1-LKAU (number employees). When local kind of activities<br>is shown, controls on number of employees are made. If there<br>are no employees, local KAU is not taken into account." |
| MT        |                       | X                         |  |   |                             | x                      |             | 0                                   | "The method used to calculate Regional Accounts for the<br>Maltese Islands is primarily the top-down approach"   |
| NL        | x                     |                           |  |   | x                           |                        | x           | 16,6                                | "Third, the variables of large KAUs that operate in multiple<br>regions is distributed based on the number of jobs per<br>establishment (community)."  |
| PL        | x                     |                           |  |   | x                           |                        | X           | 1,1                                 | "Indicators on the basis of data on employment by factual<br>place of work by powiats (Z-06 report) are applied to<br>distribution these categories."  |
| РТ        | x                     |                           |  |   | x                           |                        | x           | 21,7                                | "In consequence, this administrative source enables to<br>identify, among each IEH micro-data, the mono or multi-<br>regional ones. In this last case, data on output, intermediate<br>consumption and GVA are split by regions using the<br>correspondent employment data of <i>Quadros de Pessoal</i> ."   |

| Countries | Multi-region<br>(MRE)                                       | al enterprises<br>treated  | Indicator                                      | used for mu                             | lti-regionalisat            | ion                    | MRE in compilation table |                                     | Remarks (with reference to the inventory indicated by "x"   |
|-----------|---|--|--|---|-----------------------------|------------------------|--------------------------|-------------------------------------|---|
|           | Yes   | No   | Compensation<br>of employees<br>per local unit | Wages and<br>salaries per<br>local unit | Employees<br>per local unit | No<br>detailed<br>info | Yes                      | Share of<br>MRE in total<br>GVA (%) |   |
| 1         | 2   | 3  | 4  | 5                                       | 5                           | 7                      | 8                        | 9                                   | 10  |
| RO        |   | Probably based<br>on the mixed<br>method   |  |   |                             | Probably<br>turnover   | x                        | 7,4                                 | "The mixed method relies on the information provided by the<br>SBS ( chapter regarding information on the headquarter, local<br>units and their main indicators - turnover, expenditures with<br>employees, the average number of employees, the average<br>number of persons involved in unit activities gross<br>investments, net investments)."  |
| SE        | No data about<br>multi-regional<br>enterprises<br>available | Compilation is<br>basically at<br>municipal level<br>using<br>employment<br>as distribution<br>key |  |   | X                           |                        |                          | 0                                   | "Turnover per employee is calculated for every 3- digit<br>industry for enterprises with kind of activity units with more<br>than one industry. Then the number of employees per local<br>kind of activity unit is multiplied by the industry average<br>regarding turnover per employee for the relevant industry of<br>the local kind of activity unit. In such a manner we can derive<br>a fictional turnover for each local kind of activity unit." |
| SI        |   | Mainly top-<br>down method<br>used with<br>wages and<br>salaries as<br>main indicator              |  |   |                             | x                      |                          | 0                                   | "The main weakness of the methodology is that it is entirely<br>based on the top-down calculation."   |

| Countries | Multi-region<br>(MRE) | Ilti-regional enterprises Indicator used for multi-regionalisation MRE in compilation (MRE) treated |  | ilation table                           | Remarks (with reference to the inventory indicated by "x" |                        |     |                                     |  |
|-----------|-----------------------|---|--|---|---|------------------------|-----|-------------------------------------|--|
|           | Yes                   | No  | Compensation<br>of employees<br>per local unit | Wages and<br>salaries per<br>local unit | Employees<br>per local unit                               | No<br>detailed<br>info | Yes | Share of<br>MRE in total<br>GVA (%) |  |
| 1         | 2                     | 3   | 4  | 5                                       | 5   | 7                      | 8   | 9                                   | 10   |
| SK        | x                     |   |  |   |   | x                      | x   | 15                                  | "Data on districts corresponding to NUTS 4 are available. In<br>case of multi-regional units, the information from a separate<br>module from the annual questionnaire of production branches<br>Roč 1-01 (for reporting units with 20 employees and morVA<br>per local unit (P1-P2) is available." |
| UK        |                       | x   | x  |   |   |                        |     | 0                                   | BdV: Regional GVA in the UK is compiled exclusively using a top-down approach and the method of compilation is completely income-based.  |

Main results of the limited survey of GOS of multi-regional enterprises The Excel file will be given separately.

| ropics  | AT   | BE  |
|---|--|---|
| Reactions so far (Y/N)                                    | Y  | Y   |
| Quantification of GOS of MRE (Y/N)                        | Ν  | N   |
| GOS of MRE - Explicitly estimated at regional level (Y/N) | N  | N   |
|   |  |   |
| Estimation of GVA (B1g) by sector approach                |  |   |
| S11   |  |   |
| P1  | Data by sector/branche                     | Adm. Data by sector/branche                     |
| P2  | Data by sector/branche                     | Adm. Data by sector/branche                     |
| B1g   | Balance of P1 - P2                         | Balance of P1 - P2                              |
| Multi-regional enterprises: indicator used                | Wages and salaries of the local unit       | Number of emplotyees                            |
| S12   | -  | · ·   |
| P1  |  | N.A.  |
| P2  |  | N.A.  |
| B1g   |  | Top-down; compensation of employees             |
|   | Comp. of empl. or number of employees per  | Comp. of employees per local unit               |
| Multi-regional enterprises: indicator used                | local unit                                 |   |
| S13   |  |   |
| P1  |  | N.A.  |
| P2  |  | N.A.  |
|   | Comp. of empl. or number of employees per  | Top-down; compensation of employees             |
| Blg   | local unit                                 | ,, employees                                    |
|   | Comp. of empl. or number of employees per  |   |
| Multi-regional enterprises; indicator used                | local unit                                 | Comp. of employees per local unit               |
| S14   |  |   |
| P1  |  | Adm. Data by sector/branche                     |
| P7  |  | Adm. Data by sector/branche                     |
| B1g   |  | Balance of P1 - P2                              |
| Multi-regional enterprises: indicator used                | ΝΔ   | ΝΔ  |
| S15   | 19.7%                                      | 14464   |
| P1  |  | NΔ  |
| P7  |  | ΝΔ  |
| B1p   |  | Top-down: compensation of employees             |
| 5×5   | Comp. of empl. or number of employees per  | Comp. of employees per local unit               |
| Multi-regional enterprises: indicator used                | local unit                                 | comp, or employees per local drift              |
| india enterprises, indicator used                         |  |   |
| Estimation of GVA (B1g) by industry production approach   |  |   |
| P1  |  |   |
| P2  |  |   |
| - R1g   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
| Multi regional enterprises indicator unad                 | · · · · ·                                  |   |
| Ros   |  | · · · · · · · · · · · · · · · · · · ·           |
| Additional info   | 90100                                      |   |
| Additional into   |  |   |
|   |  |   |
| Estimation of GVA (B1a) by industry income anaroach       |  | <u></u>   |
| D1  |  |   |
|   |  |   |
| COL   |  |   |
|   |  |   |
|   |  |   |
| Additional info   |  |   |
| General approach  |  |   |
| General approach  |  |   |
| General approach  |  |   |
| Demerar approach  | GOS not compiled explicitly (as a belance) | GOS not compiled explicitly (as a balance)      |
| nemark  | GOS not complied explicitly (as a balance) | substruction complied explicitly (as a balance) |
|   |  | 1   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |

| Topics  | Steeling and the second s   |  |
|---|--|--|
|   | CZ   | DE   |
| Reactions so far (Y/N)                                    | Y  | Y  |
| Quantification of GOS of MRE (Y/N)                        | N  | N  |
| GOS of MRE - Explicitly estimated at regional level (Y/N) | N  | N  |
|   |  |  |
| Estimation of GVA (B1g) by sector approach                |  |  |
| 511   |  |  |
| P1  | Adm. Data by sector/branche  |  |
| P2  | Adm. Data by sector/branche  |  |
| B1g   | Adm. Data by sector/branche  |  |
| Multi-regional enterprises; indicator used                | Comp. of employees per local unit  |  |
| S12   | La construcción de la construcci |  |
| P1  | N.A.   |  |
| P2  | N.A.   |  |
| B1g   | Top-down; compensation of employees  |  |
|   | Comp. of employees per local unit  |  |
| Multi-regional enterprises; indicator used                |  |  |
| S13   |  |  |
| P1  | N.A.   |  |
| P2  | N.A.   |  |
|   | Top-down; compensation of employees  |  |
| B1g   |  |  |
|   |  |  |
| Multi-regional enterprises; indicator used                | Comp. of employees per local unit  |  |
| \$14  |  |  |
| P1  | Adm. Data by sector/branche  |  |
| P2  | Adm. Data by sector/branche  |  |
| Blg   | Balance of P1 - P2   |  |
| Multi-regional enterprises; indicator used                | N.A.   |  |
| S15   |  |  |
| P1  | N.A.   |  |
| P2  | N.A.   |  |
| Blg   | Top-down; compensation of employees  |  |
|   | Comp. of employees per local unit  |  |
| Multi-regional enterprises; indicator used                |  |  |
|   |  |  |
| Estimation of GVA (B1g) by industry production approach   |  |  |
| P1  |  | Known by enterprise                          |
| P2  |  | Known by enterprise                          |
| Blg   |  | Known by enterprise                          |
| u u u u u u u u u u u u u u u u u u u                     |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   | and the second se  |  |
| Multi-regional enterprises: indicator used                |  | Number of employees per local unit           |
| GOS   |  | Not compiled explicitly (as a balance)       |
| Additional info   |  |  |
|   |  | NACE Rev.2 divisions                         |
|   |  | NUTS-2 done by aggregating NUTS-3            |
| Estimation of GVA (B1g) by industry income approach       |  | ,      |
| D1  |  |  |
|   |  | Number of employees per local unit           |
| GOS   |  |  |
|   |  | Turnover by company splitted on the basis of |
|   |  | the number of employees per local unit       |
| Additional info   |  |  |
| General approach  |  | Firstly NUTS 0> NUTS 1                       |
| General approach  | 1, 1 444   | Secondly NUTS 1> NUTS 3                      |
| General approach  |  | NUTS 2 = sum NUTS 3                          |
| Remark  |  | Other taxes less subsidies included in GOS   |
|   |  |  |
|   |  |  |
|   |  |  |
| 1   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |

\_\_\_\_

| Topics  |  | Countries                                 |
|---|--|---|
| торіся  | ES   | IT  |
| Reactions so far (Y/N)                                    | Y  | Y Y                                       |
| Quantification of GOS of MRE (Y/N)                        | N  | Ň   |
| GOS of MRE - Explicitly estimated at regional level (Y/N) | N  | N   |
|   |  |   |
| Estimation of GVA (B1g) by sector approach                |  |   |
| 511   |  |   |
| P1  |  |   |
| P2  |  |   |
| B1g   | 100 July 10 Ju |   |
| Multi-regional enterprises; indicator used                | · · · · · · · · · · · · · · · · · · ·  |   |
| S12   | and the second sec   | ··· · · · · · · · · · · · · · · · · ·     |
| P1  |  |   |
| P2  |  | ······                                    |
| B1g   |  |   |
|   |  |   |
| Multi-regional enterprises: indicator used                |  |   |
| S13   |  |   |
| P1  |  |   |
| P2  |  |   |
|   | 30 '9 S  | ······                                    |
| Blg   |  |   |
|   | · · · · · · · · · · · · · · · · · · ·  |   |
| Multi-regional enterprises: indicator used                |  |   |
| S14   |  |   |
| P1  |  |   |
| P7  |  |   |
| Bla   | · · · · · · · · · · · · · · · · · · ·  |   |
| Multi-regional enterprises indicator used                 |  |   |
| C15   |  |   |
| 515   |  |   |
| P1  |  |   |
| P2  |  |   |
| big   |  |   |
|   |  |   |
| Multi-regional enterprises; indicator used                |  |   |
|   |  |   |
| Estimation of GVA (B1g) by industry production approach   |  | 6 <sup>4</sup>                            |
| P1  | Known by establishment   |   |
| P2  | Known by establishment   |   |
| B1g   | Known by establishment   |   |
|   |  |   |
|   |  | _   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
| Multi-regional enterprises; indicator used                |  |   |
| GOS   | Not compiled explicitly (as a balance)   |   |
| Additional info   |  |   |
|   |  | 1 P.                                      |
|   |  |   |
| Estimation of GVA (B1g) by industry income approach       |  |   |
| D1  |  |   |
|   | No info  |   |
| GOS   | 41.1.1.1   |   |
|   |  |   |
|   | No info  |   |
| Additional info   |  |   |
| General approach  |  | d an                                      |
| General approach  | 100  |   |
| General approach  |  |   |
| Remark  |  | Micro-based estimation of GVA possible at |
|   |  | regional and sub-regional level possible  |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |

| GOS | of MRE - | Summary of | reactions ( | 1 | Decem | ber | 2016) |
|-----|----------|------------|-------------|---|-------|-----|-------|
|     |          |            |             |   |       | -   |       |

| Tonics  |   |   |
|---|---|---|
| 100105  | NL  | PL  |
| Reactions so far (Y/N)                                    | Y   | Υ   |
| Quantification of GOS of MRE (Y/N)                        | Υ   | N   |
| GOS of MRE - Explicitly estimated at regional level (Y/N) | N   | N   |
| Estimation of GVA (B1s) by sector approach                | *- · · · · · · · · · · · · · · · · · · ·      |   |
| S11   |   |   |
| P1  | · · · · · · · · · · · · · · · · · · ·         | Survey: data at enterprise and local level    |
| P?  |   | Survey: data at enterprise and local level    |
| Blg   |   | Balance of P1 - P2                            |
| Multi-regional enterprises; indicator used                |   | Adm. data; data at enterprise and local level |
| S12   | E TO      |   |
| P1  |   |   |
| P2  |   |   |
| B1g   |   |   |
|   |   | Number of employees per local KAU             |
| Multi-regional enterprises; indicator used                |   |   |
| S13   |   |   |
| P1  |   |   |
| P2  |   |   |
|   |   |   |
| 81g   |   |   |
| Multi regional enterngicas, indicator used                |   | Number of employees per local KALL            |
| sia   |   | number of employees per local KAO             |
| P1  | · · · · · · · · · · · · · · · · · · ·         | · · · · · · · · · · · · · · · · · · ·         |
| P?  | · · · · · · · · · · · · · · · ·               |   |
| Blg   |   | Not specified                                 |
| Multi-regional enterprises: indicator used                |   | N.A.  |
| \$15  |   |   |
| P1  |   |   |
| P2  |   |   |
| B1g   |   | Not specified                                 |
|   |   |   |
| Multi-regional enterprises; indicator used                |   |   |
|   |   |   |
| Estimation of GVA (B1g) by industry production approach   |   |   |
| P1  | Known by enterprise (128 industries)          |   |
| P2  | Known by enterprise (128 industries)          |   |
| B1g   | Balance of P1 - P2                            |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
| Multi-regional enterprises; indicator used                | Compensation of employees per local unit      |   |
| GOS   | Not compiled explicitly (as a balance)        |   |
| Additional info   |   |   |
|   |   |   |
|   |   |   |
| Estimation of GVA (B1g) by industry income approach       |   |   |
| D1  | Compensation of employees per local unit      |   |
|   |   |   |
| GUS   | Compensation of employees per local unit      |   |
|   |   |   |
| Additional info   |   |   |
| Additional Into   |   |   |
| General approach  |   |   |
| General approach  |   |   |
| Remark  | Share of GVA of multi-regional enterprises at |   |
|   | NUTS-2 level varies between 37 and 60% of     |   |
|   | total GVA. Share of GOS of multi-regional     |   |
|   | enterprises at NUTS-2 level varies between 14 |   |
|   | and 42% of total GVA.                         |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |

| Topics  |   |  |
|---|---|--|
| Topics  | PT  | SK   |
| Reactions so far (Y/N)                                    | Y   | Y  |
| Quantification of GOS of MRE (Y/N)                        | Y   | N  |
| GOS of MRE - Explicitly estimated at regional level (Y/N) | N   | N  |
|   |   |  |
| Estimation of GVA (B1g) by sector approach                |   |  |
| S11   |   |  |
| P1  | Data available for local KAUs               |  |
| P2  | Data available for local KAUs               |  |
| B1g   | Balance of P1 - P2                          |  |
| Multi-regional enterprises; indicator used                | Data available for local KAUs as a balance  |  |
| S12   |   |  |
| P1  | Data available for local KAUs               |  |
| P2  | Data available for local KAUs               |  |
| B1g   | Balance of P1 - P2                          |  |
|   | Data available for local KAUs as a balance  |  |
| Multi-regional enterprises; indicator used                |   |  |
| S13   |   |  |
| P1  | Indicator = sum of P2 and D1                |  |
| P2  | Data are available for local KAUs           |  |
|   | Calaculated as a balance of P1 and P2       |  |
| B1g   |   |  |
|   |   |  |
| Multi-regional enterprises; indicator used                | GOS is calculated as a balance              |  |
| S14   |   |  |
| P1  | Data available for local KAUs               |  |
| P2  | Data available for local KAUs               |  |
| B1g   | Balance of P1 - P2                          |  |
| Multi-regional enterprises; indicator used                | Data available for local KAUs as a balance  |  |
| S15   | 1 C C C C C C C C C C C C C C C C C C C     |  |
| P1  | Indicator = sum of P2 and D1                |  |
| P2  | Data are available for local KAUs           |  |
| B1g   | Calaculated as a balance of P1 and P2       |  |
|   | GOS is calculated as a balance              |  |
| Multi-regional enterprises; indicator used                |   |  |
|   |   |  |
| Estimation of GVA (B1g) by industry production approach   |   |  |
| P1  |   |  |
| P2  |   |  |
| Ble   | · · · · · · · · · · · · · · · · · · ·       |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
|   |   |  |
| Multi-regional enterprises: indicator used                |   |  |
| GOS   | 14  |  |
| Additional info   |   |  |
|   |   |  |
| ·······   |   |  |
| Estimation of GVA (B1g) by industry income approach       |   |  |
| D1  |   |  |
|   |   |  |
| GOS   |   |  |
|   |   |  |
|   |   |  |
| Additional info   |   |  |
| General approach  |   |  |
| General approach  |   |  |
| General approach  |   |  |
| Remark  | Share of GVA of multi-regional enterprises  | From the statistical survey, the available   |
|   | at NUTS-2 level varies between 15 and 38%   | data are on P1 and P2 solit by branches and  |
|   | of total GVA Share of GOS of multi-regional | regions. The GVA calculation in regions is   |
|   | entermrises at NUTS-2 level varies between  | hased on data coming from appual             |
|   | 0 and 18% of total GVA                      | etatistical survey. The data an employment   |
|   | o and 16% OF total GVA.                     | and of wages paid are used as important      |
|   | -   | tools in the process of periors lighting Out |
|   |   | in order to verify its corrects              |
|   |   | in order to verify its correctness.          |
|   |   |  |

| GOS of MRE - Summary of reactions (1 December 2016       | 5)     |   |
|--|--------|---|
| Tonics   |        |   |
| Topics   |        | UK  |
| Reactions so far (Y/N)                                   |        | Y   |
| Quantification of GOS of MRE (Y/N)                       |        | Y   |
| GOS of MRE - Explicitly estimated at regional level (Y/N | )      | N   |
|  |        |   |
| Estimation of GVA (B1g) by sector approach               |        |   |
| S11  |        |   |
| P1   |        |   |
| P7   |        |   |
| Blø  |        | · · · · · · · · · · · · · · · · · · ·   |
| Multi-regional enterprises: indicator used               |        |   |
| c17  |        |   |
| D1   |        | (   |
| P1   |        |   |
| P1-  |        |   |
| DIR  |        |   |
| Nulti regional enterprises, indicator unor               |        |   |
| regional enterprises; indicator used                     |        |   |
| 515  |        |   |
| P1   |        |   |
| P2   |        |   |
|  |        |   |
| B1g  |        |   |
|  |        |   |
| Multi-regional enterprises; indicator used               |        |   |
| 514  |        |   |
| P1   |        |   |
| P2   |        |   |
| B1g  |        |   |
| Multi-regional enterprises; indicator used               |        |   |
| S15  |        |   |
| P1   |        |   |
| P2   | 1110   |   |
| B1g  |        |   |
|  |        |   |
| Multi-regional enterprises; indicator used               |        |   |
|  |        |   |
| Estimation of GVA (B1g) by industry production appro     | bach   |   |
| P1   |        |   |
| P2   |        |   |
| B1g  |        | Each Local Unit will have a value for GVA   |
|  |        | and CoE. However, not every Local Unit is   |
|  |        | sampled for the ABS. The ABS system   |
|  |        | produces an "apportioned universe" to   |
|  |        | ensure each Local Unit has a figure,  |
|  |        | regardless of whether or not it was sampled   |
|  |        | for aGVA and for CoE. Using the universe,   |
|  |        | any Reporting Unit with Local Units in  |
|  |        | different NUTS2 regions were identified. An   |
|  |        | estimate for GOS was then produced only   |
|  |        | for those Local Units meeting the criteria.   |
|  |        | 1.00.0  |
| Multi-regional enterprises; indicator used               |        | Idem  |
| GOS  |        | Idem  |
| Additional info  |        |   |
|  |        |   |
|  |        |   |
| Estimation of GVA (B1g) by industry income approach      | 1      |   |
| D1   |        | Number of employees (see production   |
|  |        | approach for market services)   |
| GOS  |        | Number of employees (see production   |
|  |        | approach for market services)   |
|  | ii lih | 2015  |
| Additional info  |        |   |
| General approach   |        | All de la companya de |
| General approach   |        |   |
| General approach   |        |   |
| Remark   |        | Share of GVA of multi-regional enterprises  |
|  |        | at NUTS-2 level varies between 35 and 57%   |
|  |        | of total GVA. Share of GOS of multi-regional  |
| 1  |        | enterprises at NUTS-2 level varies between  |
| 4  |        | 12 and 22% of total GVA.  |
|  |        |   |
| 1  |        |   |
|  |        | 1   |
|  |        |   |

## Summary of qualitative info for regional GVA of MRE

| Method used                               | AT | BE              | CZ              | DE                  | ES |
|---|----|-----------------|-----------------|---------------------|----|
|   |    |                 |                 |                     |    |
| Indicators used for regional GVA of MRE   |    |                 |                 |                     |    |
| Wages and salaries of the local unit      | X  | X               | 1245-1- ST      |                     |    |
| Comp. of empl. or number of employees per | Х  | X               | Х               | Strand Star Stevens |    |
| local unit                                |    |                 | Real Providence |                     |    |
| Administrative data at local level        |    |                 |                 |                     |    |
| Regional GOS of MRE                       |    |                 |                 |                     |    |
| To be estimated as a balance              |    | B FARMER STRATE |                 |                     |    |
| Not compiled explicitly                   | Х  | X               |                 | X                   | X  |
| Germany                                   |    |                 |                 |                     |    |
| Compilation at NUTS 1 and NUTS 3 (prod.   |    |                 |                 |                     |    |
| Method)                                   |    |                 |                 |                     |    |
| Wages and salaries of the local unit      |    |                 |                 |                     |    |
| Number of employees per local unit        |    |                 |                 | X                   |    |
| Compilation at NUTS 1 and NUTS 3 (income  |    |                 |                 |                     |    |
| method)                                   |    |                 |                 |                     |    |
| Wages and salaries of the local unit      |    |                 |                 | THE REPORT OF THE   |    |
| Number of employees per local unit        |    |                 |                 | X                   |    |
| Turnover (based on number of employees    |    |                 |                 | x                   |    |
| per local unit)                           |    |                 |                 |                     |    |
| Spain                                     |    |                 |                 |                     |    |
| GVA at local unit level available         |    |                 |                 |                     | X  |
| Italy                                     |    |                 |                 |                     |    |
| Micro based info on GVA                   |    |                 |                 |                     |    |

| SK | × |   | I |  |  |  |  |  |   |
|----|---|---|---|--|--|--|--|--|---|
| PL | × | × | X |  |  |  |  |  |   |
| IT |   |   | × |  |  |  |  |  | × |

Draft proposal for the Regional GVA Inventory; industry approach <Country> <Statistical Office> <National Accounts Department>

Theme 41: National and Regional Accounts

# Regional GVA Inventory; industry approach

Date: xx-xx-201x

Contact

## Chapter 1 Summary: overview of organisation, methodology and sources

- 1.1 Organisation of the statistical process for compiling regional GVA
- 1.2 Overview of the methodology of regional GVA compilation
  - 1.2.1 Regional territory
  - 1.2.2 Statistical unit and residence
  - 1.2.3 Classifications of industries and sectors
  - 1.2.4 Business register
  - 1.2.5 Methods used at the regional level
- 1.3 Main sources used for the compilation of regional GVA

1.4 Compilation and reference table and meta data table

- Chapter 2 Release and publication timetable, revision policy, access for the public
  - 2.1 Timetable for release and publication of provisional and final estimates
    - 2.1.1 Publication calendar
    - 2.1.2 Current revisions
  - 2.2 Policy on benchmark revisions
  - 2.3 Comparability over time
  - 2.4 Transmission to international institutions other than Eurostat
  - 2.5 Accessibility for the public
  - 2.6 Policy for metadata

3.1

## Chapter 3 Methodology for the calculation of regional GVA

- Principles applicable to all industries
  - 3.1.1 Available sources and information
  - 3.1.2 Use of benchmarks and extrapolations
  - 3.1.3 Treatment of multi-regional enterprises, sources and variables used
  - 3.1.4 Treatment of ancillary activities
  - 3.1.5 Treatment of the Extra-regio
  - 3.1.6 Approach to exhaustiveness
  - 3.1.7 Calculation of FISIM by user industries
  - 3.1.8 Adjustments for commuting
  - 3.1.9 Transition from GVA to GDP
  - 3.1.10 Method used for the compilation of regional GDP per capita
- 3.2 Specific methods and sources for compiling regional GVA
  - 3.2.1 Agriculture, hunting and forestry and Fishing (A)

## - Information needed for each industry A to U

- Sources and variables used
- Bottom-up, Pseudo bottom-up, Mixed or Top-down method used
- Statistical unit used
- Treatment of multi-regional units, sources and variables used
- Compilation table
- Accuracy of the estimates (A, B or C-method)
- 3.2.2 Mining and quarrying (B)
- 3.2.3 Manufacturing (C)
- 3.2.4 Electricity, gas and water supply (D and E)
- 3.2.5 Construction (F)
- 3.2.6 Wholesale and retail trade; repair (G)
- 3.2.7 Transport and storage (H)
- 3.2.8 Accommodation and food service activities (I)

- 3.2.9 Information and communication (J)
- 3.2.10 Financial and insurance activities (K)
- 3.2.11 Real estate activities, treatment of services of owner-occupied dwellings (L)
- 3.2.12 Professional, scientific and technical activities; administrative and support service activities (M and N)
- 3.2.13 Public administration and defence; compulsory social security (O)
- 3.2.14 Education (P)
- 3.2.15 Human health services and social work activities (Q)
- 3.2.16 Arts, entertainment and recreation and Other service activities (R and S)
- 3.2.17 Activities of households as employers; undifferentiated goodsand services-producing activities of households for own use (T)
- 3.2.18 Extra-territorial organisations and bodies (U)
- 3.3 Methods and sources for compiling regional GVA at current prices for the most recent year (preliminary data)
- **3.4** Regional GVA at constant prices and regional growth rates

## Chapter 4 Quality assessment and improvement

- 4.1 Self-assessment of the methodology for compilation of regional GVA
- 4.2 Plans for further improvement

Annex 1 – Regional GVA, compilation and reference table (overview)

Annex 2 – Meta data of sources and variables used for the regionalisation of GVA by industry

Draft proposal Regional GVA inventory; sector by industry approach

<Country> <Statistical Office> <National Accounts Department>

Theme 41: National and Regional Accounts

# Regional GVA inventory; sector by industry approach

Date: xx-xx-201x

<u>Contact</u>

## CONTENTS

## 1 Summary: overview of organisation, methodology and sources

- 1.1 Organisation of the statistical process for compiling regional GVA
  - 1.2 Overview of the methodology of regional GVA compilation
    - 1.2.1 Regional territory

1.2.2 Statistical unit and residence

- 1.2.3 Classifications of industries and sectors
- 1.2.4 Business register
- 1.2.5 Methods used at the regional level
- 1.3 Main sources used for the compilation of regional GVA
  - 1.3.1 Non-financial corporations (S.11) and households (S.14)
  - 1.3.2. Financial corporations and general government (S.12 and S.13)
  - 1.3.3 Non-profit institutions (NPI) serving households (S.15)
  - 1.3.4 Enterprises having more than one local unit located in different regions (multi-regional enterprises)
- 1.4 Compilation and reference table and meta data table

## 2 Release and publication timetable, revision policy, access for the public

- **2.1 Timetable for release and publication of provisional and final estimates** 2.1.1 Publication calendar
  - 2.1.2 Current revisions
  - 2.2 Policy on benchmark revisions (i.e. occasional revisions)
  - 2.3 Comparability over time
  - 2.4 Transmission to international institutions other than Eurostat
  - 2.5 Accessibility for the public
  - 2.6 Policy for metadata

## 3 Methodology for the calculation of regional GVA

## 3.1 Principles applicable to all industries

- 3.1.1 Available sources and information
- 3.1.2 Use of benchmarks and extrapolations
- 3.1.3 Treatment of multi-regional enterprises, sources and variables used
- 3.1.4 Treatment of ancillary activities
- 3.1.5 Treatment of the Extra-regio
- 3.1.6 Approach to exhaustiveness
- 3.1.7 Calculation of FISIM by user industries
- 3.1.8 Adjustments for commuting
- 3.1.9 Transition from GVA to GDP
- 3.1.10 Method used for the compilation of regional GDP per capita
- 3.2 Methods and sources for compiling regional value added at current prices
  - 3.2.1 Non-financial corporations (S.11)
    - 3.2.1.1 Agriculture, hunting and forestry and Fishing (A)
      - Information needed for each industry A to U
        - Sources and variables used
          - Bottom-up, Pseudo bottom-up, Mixed or Top-down method used

- Statistical unit used
  - Treatment of multi-regional units, sources and variables used
- Compilation table
- Accuracy of the estimates (A, B or C-method)
- 3.2.1.2 Mining and quarrying (B)
- 3.2.1.3 Manufacturing (C)
- 3.2.1.4 Electricity, gas and water supply (D and E)
- 3.2.1.5 Construction (F)
- 3.2.1.6 Wholesale and retail trade; repair (G)
- 3.2.1.7 Transport and storage (H)
- 3.2.1.8 Accommodation and food service activities (I)
- 3.2.1.9 Information and communication (J)
- 3.2.1.10 Real estate activities (L)
- 3.2.1.11 Professional, scientific and technical activities; administrative and support service activities (M and N)
- 3.2.1.12 Education (P)
- 3.2.1.13 Human health services and social work activities (Q)
- 3.2.1.14 Arts, entertainment and recreation and Other service activities (R and S)
- 3.2.1.15 Activities of households as employers; undifferentiated goodsand services-producing activities of households for own use (T)

## 3.2.2 Households (S.14)

- 3.2.2.1 Agriculture, hunting and forestry and Fishing (A)
- 3.2.2.2 Construction (F)
- 3.2.2.3 Wholesale and retail trade; repair (G)
- 3.2.2.4 Transport and storage (H)
- 3.2.2.5 Accommodation and food service activities (I)
- 3.2.2.6 Information and communication (J)
- 3.2.2.7 Financial and insurance activities (K)
- 3.2.2.8 Real estate activities (L)
- 3.2.2.9 Professional, scientific and technical activities; administrative and support service activities (M and N)
- 3.2.2.10 Human health services and social work activities (Q)
- 3.2.2.11 Arts, entertainment and recreation and Other service activities (R and S)
- 3.2.2.12 Activities of households as employers; undifferentiated goodsand services-producing activities of households for own use (T)

## 3.2.3 Financial institutions (S.12)

- 3.2.3.1 The central Bank (S.121)
- 3.2.3.2 Other monetary financial institutions (S.122)
- 3.2.3.3 Other financial intermediaries (S.123) and financial auxiliaries (S.124)
- 3.2.3.4 Insurance corporations and pension funds (S.125)

## 3.2.4. General government (S.13)

- 3.2.4.1 Central government (excluding social security funds)
- 3.2.4.2 State government (excluding social security funds)
- 3.2.4.3 Local government (excluding social security funds)

## 3.2.4.4 Social security funds

3.2.5 Non-profit institutions serving households (S.15)

- 3.3 Methods and sources for compiling regional GVA at current prices for the most recent year
- 3.4 Regional GVA in volume and regional growth rates

## 4 Quality assessment and improvement

- 4.1 Self-assessment of the methodology for the compilation of regional GVA
- 4.2 Plans for further improvements

Annex 1 – Regional GVA, compilation and reference table (overview)

Annex 2 – Meta data of sources and variables used for the regionalisation of GVA by sector and industry

Meta data of sources and variables used for the regionalisation of GVA by industry and compilation table

Annex 8 will be provided separately.

t

#### Annex 8 - Compilation table of GVA by industry

| away y            | Seq. No. | Seq. No.       | Seq. No. | Industries  | Bottom-up methods |                |               |                   |                               |         |  |  |
|-------------------|----------|----------------|----------|---|-------------------|----------------|---------------|-------------------|-------------------------------|---------|--|--|
| NACE              |          |                |          |   | SUPV              | ry data        | Survey data   | Second States and |                               |         |  |  |
| Rev. 2            | A*10     | A*10 A*38 A*64 |          | and the second second second second   | exhaustive (      | census based)  |               |                   | GVA Sub-total of bottom-up    |         |  |  |
| section           | 1052     | 11.016         |          |   | mono-regional     | multi-regional | mono-regional | multi-regional    | Sample based                  | methods |  |  |
|                   | 1000     | 1.1.1          |          |   | GVA               | GVA            | GVA           | GVA               | GVA (grossing-up of the data) |         |  |  |
|                   |          | 1.5.5.6.5      |          | 1   | 2                 | 3              | 4             | 5                 | 6                             | 7       |  |  |
|                   |          |                | 1        | Crop and animal production, hunting and related<br>service activities   |                   |                |               |                   |                               |         |  |  |
| A                 | 1        | 1              | 2        | Forestry and logging  |                   |                |               |                   |                               |         |  |  |
|                   | 1995     |                | 3        | Fishing and aquaculture   |                   |                |               |                   |                               |         |  |  |
| В                 |          | 2              | 4        | Mining and quarrying  |                   |                |               |                   |                               |         |  |  |
| с                 | -        | 3              | 5        | Manufacture of food products, beverages and tobacco<br>products   |                   |                |               |                   |                               |         |  |  |
| (≖ 2a of<br>A*10) |          | 4              | 6        | Manufacture of textiles, wearing apparel, leather and<br>related products   |                   |                |               |                   |                               |         |  |  |
|                   |          |                | 7        | Manufacture of wood and of products of wood and<br>cork, except furniture; manufacture of articles of<br>straw and plaiting materials |                   |                |               |                   |                               |         |  |  |
|                   |          | 5              | 8        | Manufacture of paper and paper products   |                   |                |               |                   |                               |         |  |  |
| See.              | 1        |                | 9        | Printing and reproduction of recorded media   |                   |                |               |                   |                               |         |  |  |
|                   |          | 6              | 10       | Manufacture of coke and refined petroleum products  |                   |                |               |                   |                               |         |  |  |
|                   | S. Cont  | 7              | 11       | Manufacture of chemicals and chemical products  |                   |                |               |                   |                               |         |  |  |
|                   |          | 8              | 12       | Manufacture of basic pharmaceutical products and pharmaceutical preparations  |                   |                |               |                   |                               |         |  |  |
|                   |          | 9              | 13       | Manufacture of rubber and plastic products  |                   |                |               |                   |                               |         |  |  |
|                   |          |                | 14       | Manufacture of other non-metallic mineral products  |                   |                |               |                   |                               |         |  |  |
|                   | 2        | 10             | 15       | Manufacture of basic metals   |                   |                |               |                   |                               |         |  |  |
|                   |          |                | 16       | Manufacture of fabricated metal products, except<br>machinery and equipment   |                   |                |               |                   |                               |         |  |  |
|                   |          | 11             | 17       | Manufacture of computer, electronic and optical<br>products   |                   |                |               |                   |                               |         |  |  |
| e santa           | Startes  | 12             | 18       | Manufacture of electrical equipment   |                   |                |               |                   |                               |         |  |  |
|                   |          | 13             | 19       | Manufacture of machinery and equipment n.e.c.   |                   |                |               |                   |                               |         |  |  |
|                   |          |                | 20       | Manufacture of motor vehicles, trailers and semi-<br>trailers   |                   |                |               |                   |                               |         |  |  |
|                   |          | 14             | 21       | Manufacture of other transport equipment  |                   |                |               |                   |                               |         |  |  |
|                   |          |                | 22       | Manufacture of furniture; other manufacturing   |                   |                |               |                   |                               |         |  |  |
|                   |          | 15             | 23       | Repair and installation of machinery and equipment  |                   |                |               |                   |                               |         |  |  |
| D                 |          | 16             | 24       | Electricity, gas, steam and air conditioning supply   |                   |                |               |                   |                               |         |  |  |
| F                 |          | 17             | 25       | Water collection, treatment and supply  |                   |                |               |                   |                               |         |  |  |
| E                 |          | 17             | 26       | Sewerage, waste management and remediation<br>activities  |                   |                |               |                   |                               |         |  |  |
| F                 | 3        | 18             | 27       | Construction  |                   |                |               |                   |                               |         |  |  |
|                   |          |                | 28       | Wholesale and retail trade and repair of motor vehicles and motorcycles   |                   |                |               |                   |                               |         |  |  |
| G                 |          | 19             | 29       | Wholesale trade, except of motor vehicles and<br>motorcycles  |                   |                |               |                   |                               |         |  |  |

|        |        |             | 30               | Retall trade, except of motor vehicles and motorcycles  |  |   |      |  |
|--------|--------|-------------|------------------|---|--|---|------|--|
|        |        |             | 31               | Land transport and transport via pipelines  |  |   |      |  |
|        | 4      |             | 32               | Water transport   |  |   |      |  |
| н      |        | 20          | 33               | Air transport   |  |   |      |  |
|        |        |             | 34               | Warehousing and support activities for transportation   |  | - |      |  |
|        |        |             | 35               | Postal and courier activities   |  |   |      |  |
| 1      |        | 21          | 36               | Accommodation and food service activities   |  |   |      |  |
|        |        | 22          | 37               | Publishing activities   |  |   |      |  |
| 4      | 5      |             | 38               | Motion picture, video and television programme<br>production, sound recording and music publishing<br>activities; programming and broadcasting activities                   |  |   |      |  |
|        |        | 23          | 39               | Telecommunications  |  |   |      |  |
|        |        | 24          | 40               | Computer programming, consultancy and related<br>activities; information service activities   |  |   |      |  |
|        |        |             | 41               | Financial service activities, except insurance and<br>pension funding   |  |   |      |  |
| к      | 6      | 25          | 42               | insurance, reinsurance and pension funding, except<br>compulsory social security  |  |   |      |  |
|        |        |             | 43               | Activities auxiliary to financial services and insurance<br>activities  |  |   |      |  |
|        |        | 26          | 44               | Real estate activities  |  |   |      |  |
| L      | 7      | <b>2</b> 6a | 44a of<br>which: | Of which: Imputed rent of owner-occupied dwellings  |  |   |      |  |
| See al |        |             | 45               | Legal and accounting activities; activities of head offices; management consultancy activities  |  |   |      |  |
|        |        |             | 46               | Architectural and engineering activities; technical testing and analysis  |  |   |      |  |
| м      |        | 28          | 47               | Scientific research and development   |  |   | <br> |  |
|        | in the | 30          | 48               | Advertising and market research   |  |   | <br> |  |
|        |        | 29          | 49               | Other professional, scientific and technical activities;<br>veterinary activities   |  |   |      |  |
|        | 8      |             | 50               | Rental and leasing activities   |  |   |      |  |
|        |        |             | 51               | Employment activities   |  |   |      |  |
| N      |        | 30          | 52               | Travel agency, tour operator and other reservation<br>service and related activities  |  |   |      |  |
|        |        |             | 53               | Security and investigation activities; services to<br>buildings and landscape activities; office<br>administrative, office support and other business<br>support activities |  |   |      |  |
| 0      |        | 31          | 54               | Public administration and defence; compulsory social security   |  |   |      |  |
| Р      | 9      | 32          | 55               | Education   |  |   |      |  |
| Q      |        | 33          | 56               | Human health activities   |  |   |      |  |
|        | 1000   | 34          | 57               | Social work activities  |  |   | <br> |  |
| R      |        | 35          | 58               | Creative, arts and entertainment activities; libraries,<br>archives, museums and other cultural activities;<br>gambling and betting activities                              |  |   |      |  |

|   |    | 10.00 | 59 | Sports activities and amusement and recreation activities  |
|---|----|-------|----|--|
|   |    |       | 60 | Activities of membership organisations   |
| 5 | 10 | 36    | 61 | Repair of computers and personal and household goods   |
|   |    |       | 62 | Other personal service activities  |
| т |    | 37    | 63 | Activities of households as employers;<br>undifferentiated goods- and services-producing<br>activities of households for own use |
| υ |    | 38    | 64 | Activities of extraterritorial organisations and bodies  |

| F                |                                       | Top-down                              | methods                        |                                      |   |  |                       |  |
|------------------|---------------------------------------|---------------------------------------|--------------------------------|--------------------------------------|---|--|-----------------------|--|
| -                | GVA based on closely related          | survey, census or administrative data | GVA based on extrapolations or | GVA sub-total of top-down<br>methods | GVA total of bottom-up and top-<br>down methods | Adjustment to National Accounts<br>GVA | National Accounts GVA |  |
|                  | variables                             | GVA based on less related variables   | models                         |                                      |   |  |                       |  |
|                  | 8                                     | 9                                     | 10                             | 11                                   | 12 = 7 + 11                                     | 13 = 14 - 12                           | 14                    |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| ┝                |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| +                |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| Ī                |                                       |                                       |                                |                                      |   |  |                       |  |
| ┢                |                                       |                                       | 1                              |                                      |   |  |                       |  |
| ╞                |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| ŀ                |                                       |                                       |                                |                                      |   |  |                       |  |
| ł                |                                       |                                       |                                |                                      |   |  |                       |  |
| ╞                |                                       |                                       |                                |                                      |   |  |                       |  |
| $\left  \right $ | · · · · · · · · · · · · · · · · · · · |                                       |                                |                                      |   |  |                       |  |
| L                |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| ľ                |                                       |                                       |                                |                                      |   |  |                       |  |
| ┢                |                                       |                                       |                                |                                      |   |  |                       |  |
| ┝                |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| ╞                |                                       |                                       |                                |                                      |   |  |                       |  |
|                  | · · · · · · · · · · · · · · · · · · · |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| t                |                                       |                                       |                                |                                      |   |  |                       |  |
| ┢                |                                       |                                       |                                |                                      |   |  |                       |  |
| ┝                |                                       |                                       |                                |                                      |   |  |                       |  |
| F                |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
|                  |                                       |                                       |                                |                                      |   |  |                       |  |
| L                |                                       |                                       |                                |                                      |   |  |                       |  |

## HOW TO OBTAIN EU PUBLICATIONS

## Free publications:

- one copy: via EU Bookshop (http://bookshop.europa.eu);
- more than one copy or posters/maps: from the European Union's representations (http://ec.europa.eu/represent\_en.htm); from the delegations in non-EU countries (http://eeas.europa.eu/delegations/index\_en.htm); by contacting the Europe Direct service (http://europa.eu/europedirect/index\_en.htm) or calling 00 800 6 7 8 9 10 11 (freephone number from anywhere in the EU) (\*).

(\*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

## **Priced publications:**

• via EU Bookshop (http://bookshop.europa.eu).

## **Priced subscriptions:**

• via one of the sales agents of the Publications Office of the European Union (http://publications.europa.eu/others/agents/index\_en.htm).

