

Regional Accounts Methods: GVA and GFCF by activity

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Overview

- Introduction
- General principles of the methodology

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Political context

- Tens of billions of euros are spent on regional policy every year
- Allocated on the basis of regional gross domestic product per capita
- High quality requirements
- Essential to have sound agreements for issues such as regions and industries

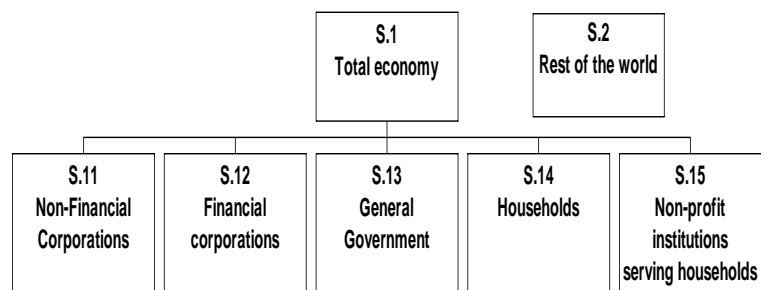
ESA framework for the economy

- Sector accounts
- Input-output tables
- Accounts by industry

Statistical units

- Institutional Units
- Local Kind-of-Activity Units (LKAU)

Classification of institutional sectors



Classification of industries

NACE Rev. 1 at A 17 level

Code	Industry
A	Agriculture, hunting and forestry
B	Fishing
C	Mining and quarrying
D	Manufacturing
E	Electricity, gas and water supply
F	Construction
G	Wholesale & retail trade; repair of motor vehicles, personal & household goods
H	Hotels and restaurants
I	Transport, storage and communication
J	Financial intermediation
K	Real estate, renting and business activities
L	Public administration and defence; compulsory social security
M	Education
N	Health and social work
O	Other community, social and personal service activities
P	Private households with employed persons
Q	Extra-territorial organisations and bodies

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Relationship between NACE-Sections and ESA-Sectors

Sectors	Non-financial corporations	Financial corporations	General government	Households	Non-profit institutions serving households
NACE Rev.1 Sections (A 17)	S.11	S.12	S.13	S.14	S.15
A Agriculture, hunting and forestry	Private agricultural co-operatives		Government owned farms and forests	Self-employed farmers, agricultural production by households	
B Fishing				Self-employed craftsmen	
C Mining and quarrying					
D Manufacturing					
E Electricity, gas & water supply			Public utilities		
F Construction			Own account production of buildings and other structures	Own-account production of dwellings by households	
G Wholesale & retail trade; repair of motor vehicles, personal & household goods					
H Hotels and restaurants					
I Transport, storage and communication			Public transport		
J Financial intermediation		Including services auxiliary to financial intermediation		Self-employed insurance brokers	
K Real estate, renting and business activities	Commercial letting Private research institutes	Letting by insurance corporations	Government housing Public research institutes	Letting by households, Self-employed scientists	Letting by non-profit organisations serving households
L Public administration and defence; compulsory social security			Public administration and defence services compulsory social security services	Lawyers	Other research institutes
M Education	Private schools and universities		Public schools and universities	E.g. music teachers	
N Health and social work	Private, non-profit and public hospitals		Public social organisations, public baths and spas	Physicians in private practice	E.g. foundations supporting educational institutions
O Other community, social and personal service activities	Business and trade associations, chambers of commerce Privately funded theatres		Public utilities (sewage and garbage disposal, street cleaning)	Professional artists and athletes, hairdressers etc.	Churches, political parties, trade unions etc. Clubs, associations
P Private households with employed persons	Laundry services etc.			Private households with employed persons	
Q Extra-territorial organisations and bodies					

General principles of regional accounts

- The regional accounts are, in principle, based on the same concepts as the national accounts (see ESA 13.01).
- The **numerical consistency** between national and regional accounts must be guaranteed (see ESA 13.16).
- Regional accounts are currently limited to recording **production activities by industry** and to accounts for some institutional sectors like **households**. The reasons are conceptual difficulties and data problems (see ESA 13.03).

System of regional accounts

AGGREGATES BY INDUSTRY

- Gross value added (GVA)
- Compensation of employees
- Employment
- Employees
- Gross fixed capital formation (GFCF)
- Gross domestic product per region (GDPR)

HOUSEHOLD ACCOUNTS

- allocation of primary income account
- secondary distribution of income account

GENERAL GOVERNMENT ACCOUNTS (draft)

General principles of the methodology

Regional territory

The regional territory includes:

- a) the region that is part of the geographical territory of a country
- b) any free zones, including bonded warehouses and factories under customs control in the region.

(ESA 13.05)

Regional classification: NUTS

NUTS = Nomenclature of Territorial Units for Statistics

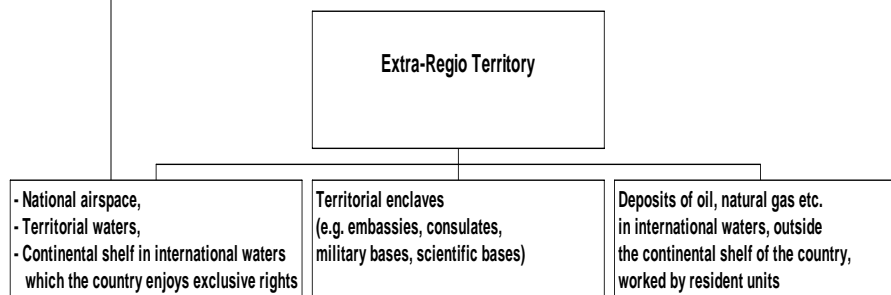
Principles:

- largely based on an **administrative breakdown**
- territorial units of a general nature
- **hierarchical classification**

No legal act: NUTS only has a quasi-legal status

Extra-Regio territory

Diagrammitel



Residence principle vs. territorial approach

- **Residence principle**

=> allocation to the region where the unit is resident

- **Territorial Approach**

=> allocation to the region where the economic activities are actually carried out

=> Generally application of the residence principle in regional accounts

(see ESA 13.19)

Statistical and institutional units for regional accounts

- **Statistical unit**

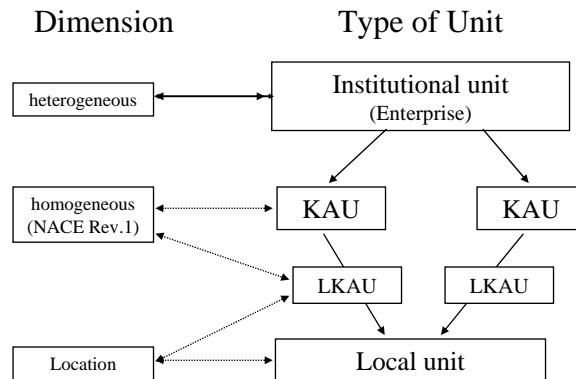
=> Local kind-of-activity unit (**LKAU**)

- **Institutional units**

=> Uni-regional unit

=> **Multi-regional unit**

Local kind-of-activity unit (LKAU)



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Uni-regional institutional units

- have their **centre of economic interest in one region** where most of their activities take place. All transactions are allocated to this region;
- are for example small enterprises, households, local governments etc. The centre of economic interest of households is the region where they live, not the region where they work.

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Multi-regional institutional units

- have their centre of economic interest in **more than one region**;
- are for example enterprises with local units in more than one region, **central government**;
- may have **transactions which are difficult to regionalise** (e.g. financial transactions like the payment of dividends).

Bottom-up methods

Bottom-up

- Based on information on **units that are resident in the region**;
- figures are calculated by adding individual values until the regional aggregate is established;
- require the adjustment of regional to national values

Pseudo-Bottom-up

- Used if **no full information on local KAUs** is available
- Estimates for local KAUs are calculated with information from enterprise
- The estimated figures for the local KAUs can then be aggregated just like in the pure bottom-up approach.

Top-down methods

Top-down

- "Top-down" because the national total is allocated directly to the regions without attempting to first calculate estimates for individual units;
- the national figure is distributed **using an indicator** or key which is as close as possible to the variable to be estimated;
- distribution key is based on local KAU or local unit data

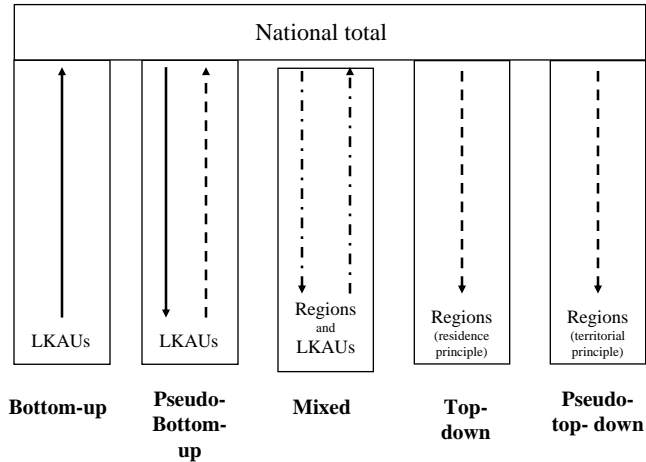
Pseudo-Top-down

- distribution key is **not based on local KAU** or local unit data but on some other indicator (which might be based on the territorial principle)

Mixed methods

- are **combinations** of bottom-up and top-down methods;
- are the norm

Regionalisation methods



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Compiling GVA: income vs. output approach

GVA by industry can be estimated in two ways:

Output approach

Output
- Intermediate consumption
= GVA

= GVA

Income approach

Compensation of employees
+ Gross operating surplus
+ Other taxes less subsidies on production
= GVA

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Valuation of GVA

- **Output** is to be valued at **basic prices**.
- Products used for **intermediate consumption** are to be valued at **purchasers' prices** at the time they enter the process of production.
- As a consequence GVA per industry is valued at basic prices.

(see ESA 3.47 and 3.72)

From regional GVA to GDP per region

GDPR at market prices is calculated in the following way:

GVA at basic prices per region
- FISIM per region
+ Taxes less subsidies on products per region
(including VAT)
= GDP per region (GDPR) at market prices

The sum of GDPR at market prices of all regions, including the extra-regio territory, equals national GDP at market prices.

How to regionalise FISIM

PROBLEMS

- Part of the output of bank services is the net interest payments of producer units to the banks.
- This implies that net interest payments are included as output of the banks, but have not been deducted as intermediate consumption from the output of all industries. To avoid double counting, however, it is necessary to deduct the amounts included in the GVA of industries and regions which use bank services.
- The borrowers and lenders may be in different regions as well as in different industries. However, there is almost no industrial or regional information on interest flows.

How to regionalise FISIM (continued)

PRESENT SOLUTION

- The whole value of the output of FISIM has to be allocated to user sectors either as the intermediate consumption or final consumption.
- S.122 (excluding Money-Market Funds) and S.123 (excluding Investment Funds) i.e. mainly secondary banks are FISIM producers. Other institutional sectors and sub-sectors are FISIM consumers.
- The calculations are based on interest flows on deposits and loans.

How to regionalise taxes and subsidies

Basic prices

(include D.29 other taxes on production less D.39 other subsidies on production)

+ D.21 Taxes on products

D.211 Value added type taxes

D.212 Taxes and duties on imports excluding VAT

D.214 Taxes on products, except VAT and import taxes

- D.31 Subsidies on products

= Market prices

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Compiling GFCF

1. The **allocation of gross fixed capital formation (GFCF) should be consistent with the allocation of GVA.**
2. The general principle of allocating GFCF by region is ownership just as in the accounts of the total economy. Fixed assets owned by a multi-regional unit are allocated to the LKAUs where they are used. As in national accounts fixed assets obtained through **operational leasing** are recorded in the region of the owner and those obtained through **financial leasing**, in the region of the user. (ESA 13.20)
3. Second hand assets: When existing assets move between industries and regions, the total price paid should be included in the GFCF in one industry or region and the price received should be deducted from GFCF in the other.

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Any questions?



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