



# Eurostat Structural indicators



**Table:** General Economic Background  
(ecobac)

**Structural Indicators:** GDP per capita in PPS  
Real GDP growth rate  
Labour productivity (per person  
employed and per hour worked)  
Unit labour cost growth  
Public balance  
General government debt

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Dissemination Standard (SDDS).

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## Summary Methodology

### 1. Analytical framework, concepts, definitions, and classifications

The overall structure is in accordance with ESA 1995 (European System of national and regional Accounts of the Community). The ESA 95 regulation may be referred to for more specific explanations on methodology.

- **Gross Domestic Product per capita in Purchasing Power Standards (PPS), EU-15 = 100**
- **Growth rate of Gross Domestic Product at constant prices, base year 1995, in %**

**Gross domestic product (GDP)** is the central aggregate of National Accounts. GDP at market prices is the final result of the production activity of resident producer units. (ESA 1995, 8.89). It can be defined in three ways:

- a. GDP is the sum of gross value added of the various institutional sectors or the various industries plus taxes and less subsidies on products (which are not allocated to sectors and industries). It is also the balancing item in the total economy production account (output approach);
- b. GDP is the sum of final uses of goods and services by resident institutional units (actual final consumption and gross capital formation), plus exports and minus imports of goods and services (expenditure approach);
- c. GDP is the sum of the uses side in the generation of income account for the total economy (i.e. compensation of employees, taxes on production and imports less subsidies, gross operating surplus and mixed income of the total economy) (income approach).

If these approaches are pursued independently, their results should be explicitly balanced, so that a single GDP figure results. Most of the national accounts main aggregates from the expenditure and the output side are compiled both in constant prices and in current prices. Constant price data indicate the development of volumes, while current price data reflects volume and price movements. Both evaluations are compiled by the Member States. Current price data only is available for some aggregates, notably from the income approach to GDP. GDP is expressed at market prices, that is including taxes and subsidies on production and imports.

**Purchasing Power Standards (PPS)** are a fictive 'currency' unit that eliminates differences in purchasing power, i.e. different price levels, between countries. Thus, the same nominal aggregate in two countries with different price levels may result in different amounts of purchasing power. Figures expressed in Purchasing Power Standards are derived from figures expressed in national currency by using **Purchasing Power Parities (PPP)** as conversion factors.

These parities are obtained as a weighted average of relative price ratios in respect to a homogeneous basket of goods and services, both comparable and representative for each country. They are fixed in a way that makes the average purchasing power of one Euro in the European Union equal to one PPS. Further information on PPPs may be found under the explanations given for the indicators "Relative price levels and price convergence".

**Total population (ESA 1995, 11.05):** On a given date, the total population of a country consists of all persons, national or foreign, who are permanently settled in the economic territory of the country, even if they are temporarily absent from it. This means that total population is defined using the concept of residence rather than nationality. Population figures from National Accounts may vary from those of population statistics.

**The calculation of GDP per capita in PPS is intended to allow the comparison of levels of economic activity of different sized economies (per capita) irrespective of their price levels (in PPS). It is less suited for comparisons over time.**

The calculation of the annual growth rate of GDP at constant prices is intended to allow comparisons of the dynamics of economic development both over time and between economies of different sizes, irrespective of price levels.

#### **Labour productivity**

- **GDP per person employed (EU-15=100)**
- **GDP in PPS per hour worked (EU-15=100)**

**Gross domestic product (GDP)** is the central aggregate of National Accounts. GDP at market prices is the final result of the production activity of resident producer units. (ESA 1995, 8.89). See the GDP indicators above for more details. For productivity measures, GDP at current prices expressed in PPS is used. GDP is evaluated at market prices, that is including taxes and subsidies on production and imports.

The **number of persons employed** is equal to **total employment** (according to National Accounts concepts) (ESA 1995, 11.11) which covers all persons - both employees and self-employed - engaged in some productive activity that

falls within the production boundary of the system. Persons employed cover employees and self employed. Employees include persons engaged by an employer under a contract of employment, civil servants, armed forces, owners of corporations and quasi-corporations if they work in these enterprises (see ESA 11.12). Persons temporarily not at work because of illness, injury, holiday or vacation, strike or training leave are also considered as employed. The definitions used are consistent with ILO definitions. It should nevertheless be noted that data refer to National Accounts concepts as opposed to national labour statistics concepts. Figures may therefore differ from labour statistics.

**Total hours worked** (ESA 1995, 11.26) represent the aggregate number of hours actually worked as an employee or self-employed during the accounting period, when their output is within the production boundary. Total hours worked is the preferred measure of labour inputs for the system of national accounts.

**Purchasing Power Standards (PPS)** are a fictive 'currency' unit that takes into account purchasing power, i.e. different price levels. They are fixed in a way that renders the average purchasing power of one Euro in the European Union equal to one PPS. See above for more details.

GDP in PPS per person employed is intended to give an overall impression of the productivity of national economies. It should be kept in mind, though, that this measure depends on the structure of total employment and therefore may, for instance, be lowered by a mere shift from full-time to part-time work.

GDP in PPS per hour worked is intended to give a clearer picture of productivity. As pointed out explicitly in the European System of National Accounts, total hours worked is the preferred measure of labour inputs. Unfortunately, it is also more difficult to measure than total employment.

- **Unit labour cost growth**

This is defined as the growth rate of the ratio: compensation per employee in current prices divided by GDP per total employment in current prices.

**Compensation of employees** (at current prices) (ESA 1995, 4.02) is defined as the total remuneration, in cash or in kind, payable by an employer to an

employee in return for work done by the latter during the accounting period. Compensation of employees consists of wages and salaries, and of employers' social contributions. It is available in current prices only.

**Employees** (National Accounts concepts - Wage and salary earners) (ESA 1995, 11.12). Employees are defined as all persons who, by agreement, work for another resident institutional unit and receive remuneration.

**Gross domestic product (GDP)** is the central aggregate of National Accounts. GDP at market prices is the final result of the production activity of resident producer units. (ESA 1995, 8.89). See the GDP indicators above for more details. Here, GDP at current prices is used. GDP is expressed at market prices, that is including taxes and subsidies on production and imports. In the income approach to GDP, compensation of employee is a part of GDP.

**Total employment** (National Accounts concepts) (ESA 1995, 11.11) covers all persons - both employees and self-employed - engaged in some productive activity that falls within the production boundary of the system. It should be noted that data refer to National Accounts concepts as opposed to labour statistics concepts. Numbers may therefore differ from official labour statistics.

Unit labour cost compares remuneration (compensation per employee) and productivity (GDP per employment) to show how and to what degree the remuneration of employees is related to the productivity of their labour. It is the relationship between how much each worker is paid and the amount each worker produces. Its growth rate is intended to give an impression of the dynamics of the participation of the production factor labour in output.

- **Public balance (general government net borrowing (-) / net lending (+))**

For EU and Norway, public balance refers to the concept of general government net borrowing (-) /net lending (+) in the European System of Accounts (ESA95). The ESA95 methodology is referred to in Council Regulation 2223/96 and Council Regulation 2558/2001 amending Council Regulation 2223/96 as regards the reclassification of settlements under swaps arrangements and under forward rate agreements. The data are compiled according to the Protocol on the Excessive Deficit Procedure (EDP) annexed to the Treaty on European Union, and Council Regulations 3605/93

and 475/2000. The methodological framework is ESA95 and specific EDP provisions, supplemented by recommendations contained in the Eurostat Manual of government deficit and debt. Candidate Country data are also compiled according to the above methodology but must be considered provisional as they do not yet fully comply with it. Data for Iceland, US and Japan are broadly compatible with EU data, but are not produced in accordance with ESA95 or specific EDP provisions.

The general government sector (S.13 in ESA95) comprises the sub-sectors of central government, state government, local government, and social security funds.

GDP used as a denominator is gross domestic product at current market prices, as defined in ESA95. See the GDP indicators above for more details.

- **General government debt**

For EU and Norway, general government debt refers to consolidated gross debt at nominal value as of December 31. The data are compiled according to the methodological sources mentioned above for public balance. Candidate Country data are also compiled according to this methodology but must be considered provisional as they do not yet fully comply with it. Data for Iceland, US and Japan are broadly compatible with EU data, but are not produced in accordance with ESA95 or specific EDP provisions.

The general government sector (S.13 in ESA95) comprises the sub-sectors of central government, state government, local government, and social security funds.

GDP used as a denominator is gross domestic product at current market prices, as defined in ESA95. See the GDP indicators above for more details.

## **2. Scope of the data**

If possible, all data are given for the EU Member States, EU-15, Euro-zone, the United States and Japan, EFTA countries and - for part of the indicators - Candidate Countries.

Time period covered is usually at least 1995 onwards and mostly 1991 onwards. Longer time series may be available for single EU Member States even if European aggregates are not yet available.

### **3. Accounting conventions**

- **Gross Domestic Product per capita in PPS, EU-15 = 100**

Data are expressed as an index, with the EU-15 value marking 100. Figures therefore have no unit.

The PPS figures were derived from those expressed in national currency by applying purchasing power parities (PPP).

- **Growth rate of Gross Domestic Product at constant prices, base year 1995, in %**

Data are expressed as growth rates in percent. They are derived from data expressed in Euro (ECU before 1999).

#### **Labour productivity**

- **GDP per person employed (EU-15=100)**
- **GDP in PPS per hour worked (EU-15=100)**

For both indicators, data are expressed as an index, with the EU-15 value marking 100. Figures therefore have no unit. For both, GDP in PPS has been derived from national currency figures by applying purchasing power parities (PPP). Hours worked: estimates are based on Eurostat figures and OECD data for the average hours worked per person employed per country. Eurostat data on actual hours worked will not be available before 2003.

- **Unit labour cost growth**

Data are expressed as growth rates in percent. For the two aggregates used in the calculation, compensation of employees and gross domestic product, current price figures expressed in euro (ECU before 1999) have been used,

converted into euro from basic data in national currency using annual average exchange rates for the euro provided by ECB.

- **Public balance**

The data are expressed in percent of GDP and in euro (ECU prior to 1999). All data are for calendar year. For EU, Norway, and (broadly speaking) for the Candidate Countries, valuation principles are in accordance with ESA95. Basic data are in national currency, converted into euro using annual average exchange rates for the euro provided by ECB. Data are compiled on an accrual basis.

- **General government debt**

The data are expressed in percent of GDP and in euro (ECU prior to 1999). All data are end-year stock values. For EU, Norway, and the Candidate Countries, debt is valued in nominal terms rather than market value. Other accounts payable and financial derivatives (as defined in ESA95) are excluded from the definition. Debt is valued at nominal (face) value, and foreign currency debt is converted into national currency using end-year market exchange rates (though special rules apply to contracts). The national data for the general government sector are consolidated between the sub-sectors. Basic data are in national currency, converted into euro using end-year exchange rates for the euro provided by ECB. Data are compiled on an accrual basis.

#### **4. Nature of the basic data**

The ESA 1995 transmission programme describes in detail which figures are collected from the National Accounts departments of Member States' National Statistical Institutes (NSI), when they are due, which derogations have been granted, etc. National accounts data are revised regularly, especially on the event of figures for a new period being published. National release calendars still vary widely, so that, on a European level, some change in national accounts figures can be expected every week. Periods with the highest frequency of revisions are March to April, when first annual figures for the



previous year become available, and September to October, when these are frequently revised.

A huge array of basic data sources is used in the compilation of national accounts in the national statistical institutes. A presentation of these sources is beyond the scope of this explanation.

For EU and Norway, the public finance data (i.e. data for public balance and general government debt) are notified by national authorities (normally ministries of finance) to the European Commission on 1st March and 1st September under the Excessive Deficit Procedure. A set of standard notification tables is used. These tables are also used by the Candidate Countries. Data for Iceland, US and Japan are obtained from the OECD Economic Outlook database (six-monthly).

Purchasing Power Parities calculated on the basis of survey data may not be available for the latest periods covered. As long as these official PPP results are not established by Eurostat, PPP projections are applied. These projections are prepared by the Commission's Directorate General for Economy and Finance (DG ECFIN) using implicit price deflators from National Accounts. (See also the explanations given for the indicators "Relative price levels and price convergence".) Similarly, GDP forecasts produced by DG ECFIN are used for the latest periods as long as the official results have not yet been transmitted.

## **5. Compilation practices**

For some general rules relating to the compilation of national accounts aggregates, please refer to ESA 1995. A presentation of compilation practices in the Member States is beyond the scope of this explanation.

### **Compilation practices for European aggregates**

Aggregate data for the euro-zone and the European Union are in general, derived from adding the respective Member States' data, but since some of the necessary data are not available, some additional estimations or imputations may be required for the presentation of annual data.

Any derived measures for the euro-zone or the European Union, such as GDP per capita, GDP growth, labour productivity or unit labour cost growth,

are calculated directly from the European aggregates rather than from adequately weighing the derived measures for the Member States. EU aggregates for public balance and government debt are also obtained by adding the individual country data in euro (ECU before 1999), without adjustment for consolidation between countries (i.e. liabilities of one Member State government held by another). Cross-checking of the aggregated data is undertaken using country component data. No estimation is used.

## **6. Other aspects**

Current year forecasts for public balance and government debt contained in the EDP notifications of the Member States are not published by Eurostat. For some Member States and some indicators, data may be verified with national press releases.

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