



# AMECO Annual Macro-Economic Database

## Reference metadata on methodology and quality<sup>1</sup>

Concept Name	Description
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<b>A</b>	<b>Data description (metadata)</b>
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Data description	<p>AMECO is the annual macro-economic database of the European Commission's Directorate General for Economic and Financial Affairs (DG ECFIN). One of its main functions is to serve as a data repository for DG ECFIN's Economic Forecasts. The database is regularly cited in Commission publications and is indispensable for the analyses and reports of the Directorate General.</p> <p>The database contains data for the EU, the euro area, EU Member States, candidate countries and other OECD countries, for a total of over 50 countries. Data is organized in eighteen chapters, from population and employment via main national accounts aggregates such as gross domestic product to sector accounts and the cyclical adjustment of public finance variables.</p> <p>AMECO online is freely accessible to everyone and updated twice a year on the dates of release of the European Commission's Spring and Autumn economic forecasts, respectively. The interactive online version of the database always reflects the data of the most recent forecast, with data for previous AMECO vintages available in the dashboard or as text files in the AMECO archive.</p> <p>Most of the data in AMECO is directly sourced from published official statistics provided by Eurostat, the Statistical Office of the European Union. Some data is also sourced from national statistical institutes (NSIs) and, in particular for non-EEA countries, from international institutions such as the OECD or the IMF. For monetary and financial statistics, the European Central Bank together with the European System of Central Banks are the major suppliers.</p> <p>Data on the cyclical adjustment of public finance variables based on potential and trend GDP as well as capital stock data and total factor productivity are all calculated by ECFIN.</p> <p>The most recent available two years (Spring forecast) or three years (Autumn forecast) in the AMECO database are forecasts. Historical data are generally based on the available official statistics according to the latest national accounts and balance of payments standards, namely the European System of Accounts (ESA 2010) and BPM6 for EEA countries and SNA 2008 for the US and most other OECD countries. Long AMECO time series back in time beyond of what is available from official sources according to latest accounting standards are generated through a mechanical rule (by applying annual growth rate available from data vintages under previous accounting standards (ESA95 and ESA 79) to the earliest available level data point of a corresponding variable under the current accounting standard).</p>
Statistical population	<p>The national accounts population of a country consists of all resident statistical units (institutional units or local kind of activity units). A unit is a resident unit of a country when it has a centre of predominant economic interest on the economic territory of that country, that is, when it engages for an extended period (one year or more) in economic activities on this territory.</p> <p>National accounts are exhaustive. This means that all resident statistical units are covered.</p> <p>The population of the countries' national accounts data includes, in principle, all resident statistical units. The population of the euro area and EU aggregates includes, in principle, all statistical units resident in the euro area respectively the EU. However, deviations might occur where the population in the received country data does not include all resident units.</p>
Reference period	The usual reference period for the AMECO data is the calendar year. AMECO does not contain any quarterly or monthly data.
Frequency of dissemination	AMECO online is updated twice a year on the dates of release of the European Commission's Spring and Autumn economic forecasts, respectively.
Geographical reference area	<p>The reference area for all data contained in AMECO is the total economy of a country.</p> <p>The following countries are covered by AMECO:</p> <ul style="list-style-type: none"> <li>- All 27 EU Member States</li> <li>- EFTA countries (CH, IS, NO)</li> <li>- Non-EU countries and candidate countries: United Kingdom, Albania, Montenegro, North Macedonia, Serbia, Turkey, Australia, Canada, Japan, Korea, Mexico, New Zealand, United States.</li> </ul> <p>In addition, AMECO provides estimates for EU and Euro Area aggregates.</p> <p>AMECO does not contain regional data at the subnational level.</p>
Unit of measure	<p>With the exception of some variables concerning population and labour that are usually expressed in number of persons, full-time equivalents or hours, the macro-economic data contained in AMECO show all flows and stocks in monetary terms: in euros or other national currency (usually in billions).</p> <p>In addition to measurement in current prices, some variables are also expressed in chain-linked volumes</p>

<sup>1</sup> This document is based on a template provided by Eurostat and based on the SIMS standard for reporting about reference metadata and quality of statistical products. The content is the sole responsibility of the publisher.

	(with 2015 as the current reference year).
	Concerning data in national currency for the Euro area countries: Starting from 2002, euro area countries publish national series in EUR. National currency data for all years prior to the switch of the country to euro have been converted using the irrevocably fixed euro conversion rate. For presentation purposes, the currency denomination has changed, with the prefix EURO and the ISO code of the former currency (e.g. EURO-BEF for Belgium). This approach conserves the historical continuity of national series. However, cross country comparisons and aggregations should continue to be based only on historical series established in ECU up to 1998 and their statistical continuation in EUR from 1999 onwards. Exchange rates and purchasing power parities have also been converted in the same manner.
Basic statistical concepts and definitions	The statistical concepts and definitions of the national accounts and balance of payments variables contained in AMECO are described in the ESA 2010 and BPM 6, respectively. For further detail on individual variables, in particular those not corresponding to national accounts or balance of payments, please check the variable descriptions in <a href="#">AMECO online</a>
Classifications used	Given that the AMECO data are sourced from official statistics producers, classifications are in line with those being used by official statistics. These are mainly (and unless otherwise noted in the detailed annexes to this overview) the ESA 2010 for national accounts variables and their breakdowns by institutional sectors and BPM 6 for balance of payments variables. Breakdowns by industry follow the NACE Rev. 2 classification for economic activities.
Statistical Confidentiality	Not applicable
<b>B Data quality</b>	
Relevance	As the annual macro-economic database of DG ECFIN, AMECO serves as a data repository for DG ECFIN's Economic Forecasts and as a basis for the Commission's evidence based policy making. AMECO data are publicly available for information and documentation purposes.
Timeliness	AMECO online data become available to users on the days of publication of the European Commission's Spring and Autumn Economic Forecasts. The annual data published with the Spring forecast usually include forecast data for the current year and the following year. Annual data published with the Autumn forecast cover the current year, as well as years t+1 and t+2.
Accuracy and reliability	<b>Source data:</b> The great majority of the AMECO data is directly supplied to ECFIN by Eurostat, or, in the case of non-EEA countries, from the OECD, IMF and NSIs. For some EU Member States, AMECO also uses data publicly available from NSIs in addition to the data available from Eurostat. Monetary data and exchange rates are mostly supplied by the ECB. Figures on the total economy net capital stock (AMECO chapter 8) are calculated in the AMECO database using the perpetual inventory method at the level of the total economy, involving assumptions about an initial capital stock and Eurostat series on gross fixed capital formation and consumption of fixed capital. Note that the AMECO net capital stock data differ from capital stock data compiled by NSIs and disseminated by Eurostat Total factor productivity, potential and trend GDP, and related variables are compiled by DG ECFIN in a model based approach (for details see <a href="https://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp535_en.pdf">https://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp535_en.pdf</a> ). <b>Data collection and methods used:</b> The bulk of the AMECO data is supplied by Eurostat, the ECB, or international organisations such as the OECD and the IMF. Some variables are also sourced directly from publicly accessible databases at NSIs. Aggregate estimates for the EU and the Euro Area are compiled in AMECO, as are conversions from values in national currencies to Euro. Upon reception, AMECO source data undergo some completeness and consistency checks before being included in the database. During the period after forecast publication and until the release of the next forecast, the data in AMECO online are not dynamically updated with any revision or update there may be to underlying source data. In other words, the AMECO online data always reflect the data vintages available from data suppliers at the time of the cut-off date for a given economic forecast produced by ECFIN.
Accessibility and clarity	<b>Publications:</b> The most recent version of AMECO is accessible through the interactive <a href="#">AMECO online</a> website or can be downloaded in <a href="#">zip file format</a> . Previous vintages are available as zipped text files in the <a href="#">AMECO Archive</a> . <b>Quality documentation:</b> The quality of AMECO data is assured by directly using, wherever possible, data from official statistics which are in line with international statistical accounting standards (e.g. ESA 2010, SNA 2008, BPM 6) and produced according to the quality criteria applying to official statistics. Backcast data generated by using a mechanical procedure involving growth rates taken from historic vintages produced under previous accounting standards are obviously not of the same quality as data points sourced directly from official statistics. Concerning the data quality for years covered by forecast please see <a href="https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/about-economic-forecasts_en">https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/about-economic-forecasts_en</a> .
Coherence and comparability	<b>Geographical:</b> Geographical comparability is ensured by using data that have been compiled according to the same international accounting standards, in particular ESA 2010/SNA2008 and BPM6, or by applying

the same compilation methods as well as variable checks across all countries involved.

**Over time:**

The AMECO database provides long time series of macroeconomic variables, reaching back to 1960, where possible and depending on the availability underlying source data for a given country.

AMECO time series generally consist of three distinct periods:

- Years covered by forecast data, i.e. the three most recent years reported in the database.
- Historic data covered by statistics available at the time of forecast production from Eurostat, NSIs, ECB or international institutions (OECD, IMF) according to concepts and methodologies in line with current accounting standards. In the case of EU Member States, for example, these are data according to ESA 2010 which usually start in 1995 for most series and countries.
- Backcast data back in time beyond of what is available from official sources according to latest accounting standards: these are usually generated through a simple mechanical rule by applying annual growth rates available from data vintages under previous accounting standards (ESA95 and ESA 79) to the earliest available level data point of a corresponding variable under the current accounting standard (with the exception of Government finance data).

Users should be aware of the limited quality of the data which have been backcast in such a way, compared to the time series data points sourced directly from official statistics.

The AMECO online database and text files do not include direct information on which years of a time series for a given variable and country has been sourced from official statistics and which years have been backcast in AMECO. In case of doubt, users are advised to check against the available time coverage at the official statistics producer (e.g. Eurostat) or to contact the AMECO team at DG ECFIN.

## C Contact and update

Contact organisation	European Commission, Directorate General for Economic and Financial Affairs (DG ECFIN)
Contact name	DG ECFIN, Unit B3 Models and databases
Contact email address	<a href="mailto:ECFIN-AMECO@ec.europa.eu">ECFIN-AMECO@ec.europa.eu</a>
Metadata update	08/09/2022

## ANNEX

### Overview of AMECO data sources for main variables

<b>Variables</b>	<b>Main data source</b>	<b>Other data sources</b>
National accounts variables (GDP, GFCF, consumption etc.)	Eurostat national accounts	NSIs, OECD, IMF
Population and employment	For national accounts population and employment data: Eurostat national accounts;  For demographic statistics and labour force: Eurostat demographic statistics and EU labour force survey	NSIs, OECD, IMF
Harmonised CPI	Eurostat	
Harmonised unemployment rates	Eurostat	
National CPI	IMF (IFS)	
Industrial production	Eurostat	
Money supply	ECB and country websites	
Purchasing power parities	Eurostat, OECD, WEO	
Exchange rates	ECB, Eurostat	
Interest rates	Eurostat	
Potential output	ECFIN	
Trend output	ECFIN	
NAIRU unemployment	ECFIN	
Public finance one-off and discretionary measures	ECFIN	
Intra-extra EU trade	Eurostat	
Bilateral trade weights	IMF (Direction of Trade)	