National accounts

Periodicity of the quality report: annual
Published in: September 2017

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9 Other pertinent information
- Contact: National accounts info team, tel: +49 (0) 611 / 75-2626, e-mail: gdp-info@destatis.de
1 General information on the statistics

1.1 Scope of the statistics

In national accounts, the economic activity of all economic units is covered whose permanent seat or place of residence is within the economic territory (domestic concept). An economic territory may be the entire national economy (for example, Germany) or a part of it (for example, a Land). Economic units can be persons and institutions that are combined to form large groups (industries, institutional sectors) for clarity purposes.

1.2 Statistical units

According to the national accounting concepts, three different units of analysis are distinguished, that is institutional units, local kind-of-activity units, and units of homogeneous production.

A unit is an institutional unit if, first, it is an elementary economic decision-making centre, i.e. it performs economic activities on its own authority, and, second, it has a complete business accounting system with information on the use or distribution of the operating surplus including balance sheet. The institutional units are grouped into institutional sectors (non-financial corporations, financial corporations, general government, households, non-profit institutions serving households and the “rest of the world” sector covering all economic units whose permanent seat or place of residence is outside the economic territory). The main purpose of those sectors, which are the basis of the system of accounts in national accounting, is to show the income, accumulation of capital and financing processes.

For a subject-related representation of the economic structure in a breakdown by industries, the local kind-of-activity units should be used. Because of restrictions in the source statistical data, national accounts in Germany generally use the enterprise as a unit of analysis. The units are grouped according to their main activity into industries which, consequently, may still include secondary activities.

Units of homogeneous production are used in input-output accounts to describe production-related interactions. They are defined by production-relevant variables and should be largely homogeneous in terms of output, production technology and input structure. They are grouped into homogeneous branches which, consequently, produce only products of a specific product group and no longer contain any secondary activities.

1.3 Regional coverage

Germany as a whole (from 1991): The data for Germany refer to the territory of the Federal Republic of Germany since 3 October 1990.

Former territory of the Federal Republic (until 1991): The data for the former territory of the Federal Republic refer to the territory of the Federal Republic of Germany as until 3 October 1990; they include Berlin-West.

Based on the federal results, the Länder national accounts working group (www.vgrdl.de) calculates regional accounts for Länder and Kreise (administrative districts), though less detailed than at the federal level and not with a quarterly periodicity.

This quality report refers only to the federal results calculated by the Federal Statistical Office.

1.4 Reference period/date

Reference quarter or reference year – for the former territory of the Federal Republic from 1970 to 1991 and for Germany from 1991 (and selected historical annual data with restricted comparability from 1925).

1.5 Periodicity

Quarterly and annual

1.6 Legal bases and other arrangements

EU law: Council Regulation (EC) No 549/2013 refer to the European System of National and Regional Accounts (ESA 2010) and the associated transmission programme. They prescribe the way in which all Member States must calculate their national and regional accounts data and the results to be transmitted. The ESA concepts are largely in line with those of the System of National Accounts (SNA) of the United Nations, which is used worldwide. At larger regular intervals, both systems are revised. The current SNA 2008 has served as a basis for revising the European System of National and Regional Accounts which, in the form of the new ESA 2010, entered into force on 26 June 2013 and was implemented throughout the European Union as from September 2014. In addition, many specific legal bases are in place at the European level, which cover individual issues such as sector accounts or financial accounts.

Federal law: general provision in the Federal Statistics Law (BStatG Article 3, para. 1, number 7)

Land law: similar general provisions in Land statistics laws

Other bases: Many international handbooks that are not legally binding, for example by the United Nations (UN) (especially SNA 2008), by the Organisation for Economic Co-operation and Development (OECD) and by Eurostat (e.g. Quarterly National Accounts Handbook); participation in the Special Data Dissemination Standard (SDDS) of the International Monetary Fund (IMF) to provide metadata.
1.7 Confidentiality

1.7.1 Confidentiality rules
Pursuant to Article 16, para. 1 of the Federal Statistics Law (BStatG), the bodies of German official statistics must keep individual data secret. Exceptions are individual data which cannot serve to identify a respondent or are aggregated together with the data of other respondents (tables). National accounts data are secondary statistics whose data basis comprises only data that were already published in other statistics and are consequently (no longer) subject to confidentiality.

1.7.2 Confidentiality procedures
Generally, this is not relevant for accounting systems because most of the data used are anonymised data of specialised statistics. No microdata are used because national accounts are based on macro-economic analyses.

1.8 Quality management

1.8.1 Quality assurance
The system of national accounts reflects a complete macroeconomic circuit. The procedure of balancing the gross domestic product may be considered central to a comprehensive system of quality assurance to accompany the process of compiling national accounts. Such a quality assurance approach distinguishes between ex-ante checks (source statistics), ongoing national accounts checks (results), ex-post checks on national accounts (methods used), and external checks and consultations (e.g. Eurostat, European Court of Auditors, IMF). Discussions with user representatives (Deutsche Bundesbank, Federal Ministry of Economics and Technology, Federal Ministry of Finance) take place on every release date; seasonal and calendar adjustment of the quarterly results is based on partnership arrangements with the Deutsche Bundesbank.

The national accounting system is based on harmonised European rules that are laid down in a legally binding form in the European System of National and Regional Accounts (ESA 2010). In addition, they are explained in more detail in a large number of international methodology handbooks (e.g. for the compilation of quarterly national accounts or seasonal and calendar adjustment).

Ensuring exhaustiveness of gross domestic product (GDP) and gross national income (GNI) statistics has been a major goal of German national accounting and a main concern of the European Commission and the GNI Committee in the process of harmonising national accounts at the European level. To this end, several measures have been adopted: input-output accounts reconciliation, reconciliation with the business register, reconciliation with VAT statistics, separate exhaustiveness checks in individual areas of national accounts. Based on these exhaustiveness checks, additional amounts are calculated, if required, for the areas affected by undercoverage. These additional amounts are an integral part of national accounting; their sole purpose is to ensure exhaustiveness of GDP and GNI.

1.8.2 Quality assessment
Due to the early calculation dates, not all source data required for national accounting are available for the first release date. For this reason, the first publication is based to a considerable extent on indicators and estimates. Initially, missing data are estimated or extrapolated on the basis of partly rather provisional indicators. Later the data basis is improved by additional statistics that are successively integrated into the calculations. Only after about four years, almost all source statistics required are available and the national accounts data are considered as “final” (subject to major revisions).

2 Content and user needs

2.1 Content of the statistics

2.1.1 Focal points of the statistics
National accounts integrate various flow and stock accounts for the purpose of providing an overall quantitative picture of economic activity in Germany. The intention is to obtain a comprehensive, clearly structured and sufficiently detailed picture for a period that has elapsed.

Macroeconomic aspects and overall economic structures are shown in a system of tables and in the form of an integrated system of accounts with double-entry recording of any activities covered. National accounts for the Federal Republic of Germany are largely compiled at the Federal Statistical Office.

One of the main aggregates of national accounts is the change rate of the price-adjusted gross domestic product, which indicates the economic development and is also referred to as economic growth.

2.1.2 Classification systems
In national accounts, the results are broken down and systemised using a variety of classifications, most of which are internationally harmonised: Classification of Economic Activities (WZ; NACE at the European level; ISIC at the UN level), Classification of Product Groups (GP, CPA at the European level), Classification of Individual Consumption by Purpose (COICOP), Classification of the Functions of Government (COFOG); in a broader sense also the breakdown of institutional sectors, of national accounts transactions, of national accounts balancing items, of financial transactions and assets and, for supporting purposes, the Nomenclature of Territorial Units for Statistics (NUTS) for regional data.
Particularly important is the breakdown by industry; the approach of breaking the economy down into a total of 64 industries is internationally harmonised; with the exception of some aggregates, the industries correspond to the divisions of economic activity (two-digit items) of the Classification of Economic Activities (WZ 2008), the European NACE Rev. 2 and ISIC Rev. 4 at the UN level.

2.1.3 Statistical concepts and definitions
The German national accounts consist of domestic product calculations, input-output accounts, national wealth accounts, employment accounts, labour volume accounts and financial accounts.
Domestic product calculations are mainly designed to represent, in quantitative terms, market processes. Data on the production, use and distribution of the gross domestic product are calculated and published. The values obtained constitute important figures for assessing and designing economic policies. The main aggregate of domestic product calculations is the gross domestic product (GDP), measuring all goods and services produced in the economic territory, minus intermediate consumption. The change rate of the price-adjusted gross domestic product is an indicator of economic development and also referred to as economic growth.
Input-output tables provide, on a product-by-product basis, detailed insights into interactions within the national economy and with the rest of the world. They serve, for instance, as a basis for analyses of economic structures and of the direct and indirect effects of changes in demand, prices and wages on the economy as a whole and on its individual branches.
National wealth accounts provide data on the level, composition and change of assets. The Federal Statistical Office supplies information on selected non-financial assets of the economy – the focus here is mainly on the stock of fixed assets – and on the stock of consumer durables of households, only. Financial assets, which are another component of national wealth accounts, are calculated and published by the Deutsche Bundesbank.
Employment accounts compiled in the context of national accounts provide quarterly and annual average figures for persons in employment and economically active population based on the ILO concept, as it is called (concept of the International Labour Organization). All relevant sources of employment statistics available are used. The results of employment accounts serve, on the one hand, as autonomous indicators and as reference values to determine for example labour productivities and other quotas, and, on the other hand, as baseline figures for calculating the labour volume accounts.
Labour volume accounts indicate the actual number of hours worked by all persons in employment who perform a gainful economic activity within Germany. For the purpose of national accounts, the relevant results are compiled by the Institute for Employment Research of the Federal Employment Agency in co-operation with the Federal Statistical Office.
Financial accounts contain information on financial transactions in the national economy. They show what institutional sectors (household sector, corporation sectors or general government sector) provide or consume financial resources to what extent and in what form and also how the financial intermediaries (i.e. banks, insurance companies and investment funds) are integrated in the financial circuit. In Germany, the Deutsche Bundesbank is responsible for compiling financial accounts.

2.2 User needs
National users are especially the Federal Government (in particular the Federal Ministry of Economics and Technology (BMWi), the Federal Ministry of Finance (BMF) and the Federal Chancellery), the Deutsche Bundesbank, the German Council of Economic Experts, economic research institutes, universities, trade associations, the media and also the interested public.
National accounts provide important data to the political community, administration and businesses for assessing and shaping economic, financial, social and other policies. Among other things, national accounts data form the basis for expert opinions, economic forecasts, tax revenue estimates, pension adjustments and collective wage negotiations.
Major users of national accounts data at the international level are the Statistical Office of the European Union (Eurostat), the European Central Bank (ECB), the Organisation for Economic Co-operation and Development (OECD), the United Nations (UN) and the International Monetary Fund (IMF).
Within the European Union, the gross national income (GNI) figures are used to calculate the EU own resources. National accounts data are also needed to monitor and control the European monetary policy. The convergence criteria for the European Monetary Union are based on national accounting aggregates (government deficit, government debt and gross domestic product).

2.3 User consultation
National accounting specialist committee; consultations with major users (Bundesbank, BMWi, BMF) on every release date; partnership-based co-operation with the Deutsche Bundesbank on seasonal and calendar adjustment; user workshops and information events (for example, background briefing on the annual GDP press conference in January); user satisfaction surveys (for example, on the timeliness of quarterly GDP calculations (GDP flash estimate)).
3 Methodology

3.1 Source statistics

All suitable surveys of economic statistics that are available by a given time of publication are used to calculate the national accounting results. Usually, definitions and classifications apply in the same way to both source statistics and national accounts. To build on the revised results of source statistics, however, revisions of classifications take place later in national accounts than in the source statistics (e.g. WZ 2008 was integrated into national accounts only in the context of the 2011 revision).

Regarding source statistics that are used in national accounts, there are naturally various time lags between the time when the data become available and the reporting period. As long as the source statistics required for the calculation of a given national accounting aggregate are not yet available, a provisional result is compiled for that aggregate using short-term indicators. When the source data become available for the reporting period concerned, they are integrated into the national accounts thus replacing the indicator calculations. In general, final annual results can be integrated into the calculations with a time lag of 1 + 30 months. This explains the regular revisions of national accounts. Calculating quarterly results and first provisional annual results (not later than in January of the following year) is based exclusively on monthly and quarterly statistics that are received with a time lag of nearly eight weeks. Please see the methodological description of the quarterly calculations (Fachserie 18, Reihe S.31, Quarterly national accounts inventory based on ESA 2010 methodology - Edition 2017, p. 73) as an example of the major data sources used in national accounting.

3.2 Data calculation approaches

\[
\begin{align*}
\text{Production} &= \text{Use} = \text{Distribution} \\
\text{Agriculture, forestry} &\quad \text{Final consumption} \\
\text{Industry, excluding} &\quad \text{Change in} \\
\text{Construction} &\quad \text{fixed capital} \\
\text{Trade, transport,} &\quad \text{Consumption of} \\
\text{accommodation and} &\quad \text{fixed capital} \\
\text{Information and communication} &\quad \text{Exports of goods} \\
\text{Financial and insurance} &\quad \text{Imports of goods} \\
\text{Real estate activities} &\quad \text{Balance of exports} \\
\text{Business services} &\quad \text{Taxes on products} \\
\text{Public services, education,} &\quad \text{Balance of primary income} \\
\text{Other services} &\quad \text{Subsidies on products} \\
\text{Taxes on products less} &\quad \text{Exports of goods} \\
\text{subsidies on products} &\quad \text{Imports of goods} \\
&\quad \text{Balance of goods and services} \\
&\quad \text{received from the rest of the world}
\end{align*}
\]

\text{G r o s s d o m e s t i c p r o d u c t}
All suitable continuous surveys of economic statistics that are available by a given time of publication or revision are used to calculate the national accounting results. Also, other data sources are evaluated, such as administrative data (for example, finance and tax statistics, data of the Federal Employment Agency), business statistics and annual accounts of large enterprises (for example, Lufthansa, Deutsche Telekom, credit institutions), household surveys (sample survey of income and expenditure (EVs), microcensus) and information from associations.

The gross domestic product (GDP) is calculated applying both the production and the use approach. The two results are then balanced to obtain the official GDP and its aggregates to be published. The third calculation option, i.e. a complete calculation of GDP through the distribution approach, cannot be performed in Germany because of incomplete source data on entrepreneurial and property income.

### 3.3 Price and seasonal adjustment; other analytical procedures

The gross domestic product and most of its components can be shown not only in nominal terms (i.e. at current prices), but also in price-adjusted terms. Price adjustment in national accounts is based on a price base changing every year (previous year’s price base). The base year used here is always the previous year, in contrast to the fixed price base applied in the past. Applying the previous year’s price base method thus ensures that current price ratios are always used. Consequently, the calculation of “real” change rates is more exact.

This is what is actually done in the calculation when applying the method of previous year’s price base: the values of a specific year are deflated by means of price indices which are always based on the annual average of the previous year. This produces, first of all, a sequence of annual results at previous year’s prices (for example, results for 2016 at prices of 2015, results for 2015 at prices of 2014, etc.), which, due to the chain-linking of every individual value, form comparable time series. The calculation method applied in Germany to calculate quarterly results is the annual overlap method.

In German national accounts, seasonal and calendar adjustment (i.e. adjusting the original, unadjusted figures for seasonal and calendar variations) of most quarterly data is based on two different methods – on the one hand, the internationally most popular Census X-12-ARIMA method (in partnership-based co-operation with the Deutsche Bundesbank) and, on the other, the so-called Berlin method BV4.1. The results of both methods are published in Fachserie 18 in an individual series (Series 1.3: Domestic product – Seasonally adjusted quarterly results using Census X-12-ARIMA and BV4.1, available in English).

### 3.4 Response burden

As national accounts are an accounting system in which existing results of primary and secondary surveys and from administrative data sources are processed, no additional burden is placed on respondents.

### 4 Accuracy and reliability

#### 4.1 Overall qualitative assessment of accuracy

Generally, sampling and non-sampling errors of the source statistics integrated into national accounts may also be contained in the national accounting results. Also, applying estimation methods and extrapolating time series may lead to inaccuracies. However, this is necessary to meet the user requirements regarding timeliness of the national accounts data. For this reason, a certain degree of inaccuracy is the price to pay for having a high degree of timeliness of the national accounts data.

The quality of the national accounting calculations is continuously checked during the calculation process so that possible shortcomings or errors can be detected and eliminated. Major elements of that quality assurance procedure are the following:

- Source statistics, where produced as part of official statistics and used by national accounts, are subjected to quality control in the relevant specialised departments.
- In national accounts, the source data provided are checked again for completeness and plausibility.
- A major quality assurance element is the far-reaching comparison of the source statistics used in national accounting and of the very results of national accounts with complementary data from other sources.
- The national accounting results are reconciled with the results of input-output accounts.
- Setting up sector accounts always involves checking the system coherence. The production, use and distribution approaches and also the financial accounts based on institutional sectors must be co-ordinated to reflect a closed economic cycle. Any discrepancies will easily be detected in the balancing items of the sectors.

Also, due to their great importance for financial and economic policies and as they are widely used for administrative purposes in the European Union (e.g. payments to the EU budget, calculation of Maastricht criteria), national accounts are regularly subjected to international audits; for example by Eurostat, the European Court of Auditors and the International Monetary Fund (IWF Data-ROSC-Bericht).

#### 4.2 Quality of data sources

Differing assessments of the quality of the diverse data sources can lead to differing adjustment mechanisms and ultimately also to differing results. This, however, is a problem that applies to virtually all accounting systems which are fed from various mutually independent sources that may contain errors. Therefore, the ultimate production of a result
which is coherent and plausible in its structure must not blind us to the scope that exists for estimation in certain of the published overall results.

4.3 Revisions

4.3.1 Revision rules

Revision means the revising of results, for example, by including new data, new statistics and/or new methods into the accounting system. A distinction is made between regular revisions referring to minor corrections for individual quarters or years and comprehensive or major revisions. The latter are fundamental revisions of all national accounts and of very long time series. Such major revisions of national accounts take place approximately every five years (latest revisions in 2014, 2011, 2005 and 1999).

Reasons for comprehensive revisions may be the following:
- introducing new concepts, definitions or classifications into the accounting system;
- integrating new statistical bases for the calculation that have not been applied yet;
- applying new calculation methods;
- modernising the presentation and, where required, introducing new terms;
- enhancing international comparability.

The most recent major revision of national accounts took place in 2014 when the new “European System of National and Regional Accounts” (ESA 2010) was implemented throughout Europe. It replaced the formerly used ESA 1995 as EU accounting framework for a systematic and detailed description of an economy. The ESA 2010 itself is based on the worldwide “System of National Accounts” (SNA 2008). In Germany, the revision covered the entire time series from 1991, so that statistical breaks have been avoided as far as possible.

Regular revisions refer to minor corrections for individual quarters or years. They are performed in the course of current calculations and can generally occur during any release date. Such revisions are performed to include into the system current information that differs significantly from the data bases available before. In this way, data users are supplied with the best possible results for analyses and forecasts.

Usually, the data for the quarters of the current year are checked at every quarterly release date, while data for the last four years, including the relevant quarters, are revised only once a year (in August).

4.3.2 Method of revision

The new concepts of the „European System of National and Regional Accounts“ (ESA 2010) were implemented into the national accounts framework as part of the 2014 major revision of national accounts, which was completed in September 2014 in Germany. The ESA 2010 is a European Regulation, which is binding for all EU member states as of 1 September 2014 (Council Regulation (EU) No. 549/2013 of the European Parliament and of the Council of 21 May 2013, published in the Official Journal on 26 June 2013).

ESA 2010 is the newest internationally compatible EU accounting framework for a systematic and detailed description of an economy. Compared with the formerly used ESA 1995, the methodology is more harmonised and the concepts, definitions, classifications and accounting rules defined in ESA 2010 are more precise and more accurate. The ESA 2010 regulation now contains 24 chapters of methodology in Annex A, including new chapters on important subjects such as pensions and insurance or government accounts. Annex B determines the transmission programme, i.e. the tables to be transmitted to Eurostat by the member states.

The changeover to ESA 2010 requires a major revision of all national accounts data, which has to be completed in September 2014. In Germany, the revision work was mainly performed by the Federal Statistical Office and other institutions, namely the Deutsche Bundesbank. The 2014 major revision involves a thorough revision of the entire German national accounting system, as is always the case in major revisions in Germany. The Federal Statistical Office has therefore recalculated all national accounts aggregates in full detail back to 1991. Thus, methodologically consistent long time series without breaks are available to data users also after the changeover. The 2014 major revision was also used again to integrate new data sources. Data to be mentioned here are in particular the results of the 2011 Census, which were used in national accounts especially for employment accounts and for the calculation of the occupation of dwellings (production, value added and household final consumption expenditure).

First results based on ESA 2010 were published on 14 August and 1 September 2014 in combination with the results for the second quarter of 2014.

4.3.3 Revision analyses

An opportunity to evaluate the reliability of national accounts data is to analyze the revision differences. This means to determine the discrepancy between the first estimate and the (final) result released at a later time. Calculating revision differences provides the user with information on the average corrections to be made to former estimates. Typically, a so-called mean revision (MR) measure and mean absolute revision (MAR) measure are determined. Mean revision refers to the arithmetic mean of the discrepancies observed in the past between provisional and final values, while taking account of the algebraic signs. Mean absolute revision, however, refers to the arithmetic mean of the discrepancies observed in the past between provisional and final values, while not taking account of the algebraic signs.

The following table shows these revision measures for the price-adjusted gross domestic product (quarterly values). The period under review starts in 1999. That was the year when the European System of National and Regional Accounts...
(1995 edition) was introduced, which since then has been a binding framework for national accounts in Germany. From September 2014 onwards, the ESA 1995 was replaced by the new ESA 2010.

Table: Revision measures

<table>
<thead>
<tr>
<th></th>
<th>$t_0$ to $t+1Q$</th>
<th>$t_0$ to $t+1J$</th>
<th>$t_0$ to $t+2J$</th>
<th>$t_0$ to $t+3J$</th>
<th>$t_{unrev}$ to $t_{rev}^{2)}$</th>
<th>$t_0$ to $t_{final}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of observations (n)</td>
<td>72</td>
<td>72</td>
<td>68</td>
<td>64</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Mean revision (MR)</td>
<td>+ 0.03</td>
<td>+ 0.10</td>
<td>+ 0.08</td>
<td>+ 0.14</td>
<td>− 0.05</td>
<td>+ 0.18</td>
</tr>
<tr>
<td>Mean absolute revision (MAR)</td>
<td>0.11</td>
<td>0.21</td>
<td>0.31</td>
<td>0.39</td>
<td>0.16</td>
<td>0.48</td>
</tr>
</tbody>
</table>

1) In relation to the relevant rates of change of the quarterly price-adjusted gross domestic product compared with the previous year, on the various dates of calculation.
2) Extent of the revision-related changes caused by the 2014 major revision of national accounts.

Explanation: $t_0$ time of first publication
$t+1Q$ after first quarterly revision
$t+1J$ after first annual revision
$t+2J$ after second annual revision
$t+3J$ after third annual revision
$t_{unrev}$ last publication of unrevised data before 2014 major revision of national accounts
$t_{rev}$ first publication of revised data after 2014 major revision of national accounts
$t_{final}$ after final revision (corresponds to “final” result after fourth annual revision, subject to later major revisions)

$MR = \frac{\sum (x_i - x_0)}{n}$ shows the upward or downward discrepancies (biases) to be expected on average (mean revision)

$MAR = \frac{\sum |x_i - x_0|}{n}$ shows the absolute discrepancies to be expected on average (mean absolute revision), with $x_0$ value at the time of first publication

$xi$ value at the times of subsequent publications

The calculations show both that the regular revisions of the gross domestic product are within a reasonable scope considering the great timeliness and that they stand international comparison. In view of the complexity of the gross domestic product as an indicator of the overall economic performance, an average need for growth rate correction of approximately half a percentage point (mean absolute revision between first estimate and final quarterly result in a year-on-year comparison) is a justifiable uncertainty, as is also shown by international comparisons. See also the OECD comparative study „Revisions of quarterly GDP in selected OECD Countries, OECD Statistics Brief No. 22, July 2015, http://www.oecd.org/std/na/Revisions-quarterly-GDP-selected-OECD-countries-OECDSB22.pdf”. When interpreting the revision measures, it must be taken into account that a rather considerable part of the need for revision established in the context of major revisions of national accounts are due to methodological reasons and thus cannot really be attributed to data quality in the narrow sense.

More detailed information on national accounts revisions are available on the internet at www.destatis.de/EN > Facts & figures > National accounts > Methodology.

5 Timeliness and punctuality

5.1 Timeliness

The quarterly gross domestic product (GDP) is initially published in a GDP first release after about 45 days. This is followed by more detailed results in a press release published about 55 days after the end of the reference quarter (that is, for the first quarter of a year in May, for the second quarter in August, for the third quarter in November and for the fourth quarter in February). On those occasions, the previous results of the last few quarters – in August those of the last four years – are updated, too. The first annual result is published at a press conference in January, about 15 days after the end of the reference year. Although the legally binding European standards ($t+60$) thus are definitely more than met by German national accounts, the revisions caused by that are justifiable. However, there is a trade-off between timeliness and accuracy, that is, lower accuracy in the form of more need for revision is the price of more rapid calculation and earlier publication.

Generally, the last four years including the relevant quarters are revised in August of each year. The results of the earliest of the years become final at that status of calculation and need not be revised regularly any more. For example, the results of reference year 2013 became final in August 2017, subject to future major revisions. Such regular revisions are necessary to include into the national accounting system large-scale annual statistics whose results become available with some time lag from the end of the reference period. The results of these source statistics replace the data at the recent end of the series which was until then obtained partly through indicator-based calculations.

5.2 Punctuality

The release dates to be reported to Eurostat and the IMF are indicated in the annual release calendar of the Federal Statistical Office for major economic indicators one year in advance. In the past, those deadlines were always met.
6 Comparability

6.1 Comparability over space

The definitions of German national accounts are entirely identical to those of the binding European System of National and Regional Accounts, so that data are available that are harmonised and comparable at the European level. Furthermore, the first release of quarterly GDP at about 45 days after the end of the reference quarter is harmonised on the basis of a gentleman’s agreement within the European Union.

At a global level, there is far-reaching comparability of national accounts thanks to the application of the worldwide guidelines on national accounting set out in the United Nations System of National Accounts (SNA). However, the SNA is not legally binding. The structure of the new ESA 2010 is consistent with the SNA 2008. The ESA 2010 is already legally in force and was implemented as from September 2014 throughout Europe; data transmission from Member States to Eurostat have to follow ESA 2010 rules.

6.2 Comparability over time

Quarterly and annual data without breaks are provided for Germany as a whole from the first quarter of 1991. Regarding the former territory of the Federal Republic, time series without breaks are available for the period from 1970 to 1991 (data for 1991 being available both for Germany and for the former territory of the Federal Republic). However, they are also not comparable with the revised data for Germany in methodological terms as they were not adjusted to the new classifications in the context of the 2011 revision of national accounts and will not be revised in the context of the major methodological revision in 2014 either; here the status of calculation is 2005. In addition, (unrevised) annual data are available for the period from 1950 to 1969 and some selected results for the years from 1925 to 1938. However, those time series contain breaks caused by different territorial delimitations, concepts, definitions and price base years; they will not be revised any more.

The quarterly data are consistently linked with the annual results. One of the characteristics of national accounts is the fact that, in the case of fundamental changes to methods or classifications, revisions of long time series are performed going far back into the past, so that an optimum range of data are offered to data users.

The comparability of national accounting results over long periods will be impaired if, in the context of major revisions (cf. section 4.3.1) whose main purpose is the integration of new concepts and/or new classifications, data are calculated backwards only for the “more recent past” rather than for the entire period so far covered by a long time series. In the course of the 2014 major revision, for example, backward calculations were made only for Germany back to the year 1991, while previous years remained unchanged. This was the case in the context of the major revision in 2011, too, whereas data were recalculated back to 1970 in preceding major revisions (in 2005 for the last time). However, as all national accounts aggregates have been revised in full detail for the whole time series back to 1991, methodologically consistent time series are still available for data users.

7 Coherence

Data published within the scope of national accounts often differs from data published within the scope of the relevant specific statistics regarding similar, or seemingly the same, variables. In most cases, this is due to methodological differences and to the nature of an accounting system in which a multitude of different data sources are integrated to calculate results for one variable. For example, the calculation of the output (including goods for resale) in trade is based not only on the monthly statistics of wholesale and retail trade but, among other things, also on the annual surveys in wholesale and retail trade and the turnover tax statistics.

National accounts are also used as a basis for satellite systems such as environmental-economic accounting (UGR), which describes interactions between the economy and the environment, and for the socio-economic reporting system, which examines connections between economic and social developments.

8 Dissemination and communication

8.1 Dissemination channels

At regular intervals, the Federal Statistical Office publishes the results of official national accounts for Germany as a whole through various dissemination channels.

The most important results are issued in press releases on the relevant publication dates, while the first provisional annual results for the preceding year are additionally announced and commented on at a press conference, which is held not later than in mid-January of the following year. First quarterly GDP data are published in the form of a so-called first release about 45 days after the end of the reference quarter, namely in mid-May (for the first quarter), mid-August (for the second quarter), mid-November (for the third quarter) and mid-February (for the fourth quarter). Those first release dates are largely harmonised at the European level. Detailed results are issued in the form of another press release about 10 days later, that is, 55 days after the end of the reference quarter. If required, the results of the previous quarters are revised by those dates, while the results of the four preceding years and the relevant quarters are reviewed in August of each year (so-called regular or current revisions). The exact dates are announced at www.destatis.de/EN > Facts & figures >

In addition, the results of German national accounts are published in Fachserie 18: Volkswirtschaftliche Gesamtrechnungen (National accounts) which contains comprehensive tables:

- Reihe (Series) 1.1 Inlandsproduktberechnung – Erste Jahresergebnisse (item number 2180110); available in English: Domestic product – First annual results
- Reihe (Series) 1.2 Inlandsproduktberechnung – Vierteljahresergebnisse (item number 2180120); available in English: Domestic product – Quarterly results
- Reihe (Series) 1.3 Inlandsproduktberechnung – Saisonbereinigte Vierteljahresergebnisse nach Census X-12-ARIMA und BV4.1 (item number 2180130); available in English: Domestic product – Seasonally adjusted quarterly results using Census X-12-ARIMA and BV4.1
- Reihe (Series) 1.4 Inlandsproduktberechnung – Detaillierte Jahresergebnisse (item number 2180140); Domestic product – Detailed annual results
- Reihe (Series) 1.5 Inlandsproduktberechnung – Lange Reihen ab 1970 (item number 2180150); Domestic product – Long term series since 1970
- Reihe (Series) 2 Input-Output-Rechnung (item number 2180200); Input-output accounts

All electronic versions of the Fachserie 18 and the majority of the national accounts publications (also supplements and methodological reports) are available free of charge via www.destatis.de/EN > Facts & figures > National accounts > Publications. The national accounts page at www.destatis.de additionally provides texts, tables and charts on the quarterly and annual gross domestic product, detailed results of the domestic product calculations, the EU Stability Pact, input-output accounts and national wealth accounts.

The database “GENESIS-Online” (www.destatis.de/EN > Databases) contains time series and tables, too.

Part of the Fachserie 18 and the majority of tables are also available in English language. The national accounts leaflet „German Economy“, issued in German and English, provides a brief overview of the latest key data of national accounting for the relevant release dates.

8.2 Methodological papers/documentation of methodology

Information on and detailed descriptions of the content and structure of the national accounting system are provided in many publications of the Federal Statistical Office whose online versions are available as free downloads:

- Wichtige Zusammenhänge im Überblick: This informational brochure provides interested users with a first brief insight into the complex system of national accounts.
- Statistical Yearbook (chapter on National Accounts)
- Data Report (chapter on Wirtschaft und öffentlicher Sektor, Volkswirtschaftliche Gesamtrechnungen)
- Regular articles in the Wirtschaft und Statistik journal
- Fachserie 18 Volkswirtschaftliche Gesamtrechnungen, Reihe 1.4: Inlandsproduktberechnung – Detaillierte Jahresergebnisse (Domestic product – Detailed annual results)

Information on both the methods and bases of national accounts:

- Fachserie 18, Reihe S.30: Inlandsprodukt und Nationaleinkommen nach ESVG 2010 – Methoden und Grundlagen; available in English: Domestic Product and national income in accordance with ESA 2010 - Methods and Sources
- Fachserie 18, Reihe S.24: Methoden der Preis- und Volumenmessung; available in English as methodological study: Methods of price and volume measurement in the national accounts
- Einkommensrechnungen: Here the methods, definitions and statistical bases of the income approach in Germany are explained.

All methodological papers will be updated on the methods of ESA 2010 successively.

8.3 Rules of dissemination

All publication dates for the results of German national accounting are announced in the Federal Statistical Office’s release calendar in autumn of a year for the whole of the following calendar year. The current release calendar can be accessed on the internet at www.destatis.de/EN > Press & services > Press > Calendar of press publications.
9 Other pertinent information

Contact:
Domestic product calculations: National accounts info team, tel: +49 (0) 611 / 75-2626, e-mail: gdp-info@destatis.de
Input-output accounts: tel: +49 (0) 611 / 75-2270, e-mail: input-output@destatis.de
Internet: www.destatis.de/EN > Facts & figures > National accounts

Regional national accounts
The Länder national accounts working group compiles and publishes regional accounts for the Länder and administrative districts (Kreise) of the Federal Republic of Germany.

Contact:
Land Statistical Office of Baden-Württemberg, Böblingen Str. 68, 70199 Stuttgart,
tel: +49 (0) 711 / 641-2650 and -2471, e-mail: vgr@stala.bwl.de, internet: http://www.vgrdl.de

National accounts at the international level
The section International statistics provides data for more than 180 states all over the world.

Contact:
www.destatis.de/contact
Internet: www.destatis.de/EN > Facts & figures > Europe respectively International statistics