Standard-documentation -
Meta information
(Definitions, comments, methods, quality)
on
Foreign trade statistics

This documentation is valid for reference period:

**Reporting period 2016**

**Status:** 20.11.2017
# List of contents

1 General Information ........................................................................................................... 7
  1.1 Object and purpose, history ......................................................................................... 7
  1.2 Client .......................................................................................................................... 8
  1.3 User ............................................................................................................................ 8
  1.4 Legal basis .................................................................................................................. 9

2 Concept and data processing ............................................................................................ 11
  2.1 Statistical concepts and methodology ......................................................................... 11
    2.1.1 Subject of statistics .............................................................................................. 11
    2.1.2 Observation unit/survey unit/display unit ............................................................ 13
    2.1.3 Data sources, coverage ......................................................................................... 14
    2.1.4 Reporting unit/Economic operators ....................................................................... 15
    2.1.5 Type of survey .................................................................................................. 15
    2.1.6 Sample characteristics .......................................................................................... 16
    2.1.7 Survey technique/Data transmission ..................................................................... 16
    2.1.8 Questionnaire (including explanatory notes) ....................................................... 18
    2.1.9 Participation in the survey .................................................................................... 18
    2.1.10 Characteristics on data collection and publication, measures; including definition ................................................................................................................................. 18
    2.1.11 Applied classifications ....................................................................................... 20
    2.1.12 Regional classification of the results .................................................................... 22

2.2 Statistical production, data processing, quality management ........................................... 23
    2.2.1 Data collection ..................................................................................................... 25
    2.2.2 Signature (Coding) ............................................................................................... 26
    2.2.3 Plausibility check, verification of data sources ....................................................... 26
    2.2.4 Imputation (for non-response respectively item non-response) .......................... 29
    2.2.5 Estimation (weighting) .......................................................................................... 31
    2.2.6 Statistical production of data, (further) applied mathematical methods, statistical estimation methods ................................................................................................................................. 31
    2.2.7 Other quality assurance measures ......................................................................... 34

2.3 Publication (accessibility) ............................................................................................... 34
    2.3.1 Preliminary results ............................................................................................... 34
    2.3.2 Final results ......................................................................................................... 35
    2.3.3 Revisions ............................................................................................................. 35
    2.3.4 Publication media .................................................................................................. 36
    2.3.5 Treatment of confidential data ............................................................................... 43

3 Quality .............................................................................................................................. 45
  3.1 Relevance ...................................................................................................................... 45

3.2 Accuracy .......................................................................................................................... 46
    3.2.1 Sampling effects, representativeness ..................................................................... 46
    3.2.2 Non-sample-caused-effects .................................................................................. 47
      3.2.2.1 Quality of used data sources .......................................................................... 49
      3.2.2.2 Coverage (Misclassification, Under-/Over collection) ..................................... 49
      3.2.2.3 Non-response (Unit non-response, Item non-response) ..................................... 50
      3.2.2.4 Measurement error (Error detection) ................................................................. 50
      3.2.2.5 Data processing error ...................................................................................... 51
      3.2.2.6 Model related effects ...................................................................................... 51

3.3 Up-to-dateness and timeliness ........................................................................................ 51

3.4 Comparability ................................................................................................................ 51
    3.4.1 Comparability over time ...................................................................................... 51
    3.4.2 International and regional comparability ................................................................. 52

3.5 Coherence ....................................................................................................................... 54

4 Outlook ............................................................................................................................. 56

List of Abbreviations ............................................................................................................ 57

Annex .................................................................................................................................... 59
Executive Summary

Monthly international trade in goods statistics (ITGS) covers imports and exports including electricity. Therefore, it constitutes essential economic base information on cross-border movement of commodities between the national statistical territory and foreign countries and is a key indicator for the assessment of the economic situation and economic development. The statistical territory for imports and exports conforms the customs area of application in accordance with paragraph 3 of the Customs implementation law, Federal Law Gazette (BGBl.) No. 659/1994. The Austrian foreign trade volume in 2016 amounted import-sided to 36.3% and export-sided to 36.5% in relation to the GDP (gross domestic product), and showed once again, that foreign trade is a major economic factor in the context of the Austrian economy (cf. Statistische Nachrichten 8/2017).

European legislation in the field of foreign trade statistics warrants the statistics to be based on precise legal texts directly applicable in the Member States as well as highly harmonised definitions and procedures. Austrian foreign trade statistics are legally regulated on two levels, the EU (European Union) level and the national level, which essentially refers to EU laws and simultaneously consider national specific situation (see: Legal basis).

Foreign trade statistics are based on the data collection systems INTRASTAT (cross-border movement of commodities within the EU) and EXTRASTAT (cross-border movement of commodities with third countries). The realisation of the internal market on 1 January 1993 disestablishing customs formalities, led to the introduction of the data collection system INTRASTAT as a basis for the statistics of intra-community trade. After Austria accessed the European Community on 1 January 1995, the INTRASTAT system entered into force in Austria. It is based on a close connection to the monthly VAT return system for the internal market. Trade in goods is collected according to the system of special trade (see: Subject of statistics). According to the primary statistical survey system INTRASTAT data on trade with EU Member States are collected directly from approx. 12,200 providers of statistical information (PSIs), which covers about 93% of all imports and 97% of all exports for reporting year 2016.

In principle, all kind of services are not subject of foreign trade statistics, except processing transactions in context with cross-border movements of goods. These are recorded and included in foreign trade statistics.

Data on trade with third countries (EXTRASTAT) are gathered completely from customs authorities based on customs declarations and are transmitted directly to Statistics Austria.

The collection of data from both survey sources are checked for validity and credibility. Mostly INTRASTAT and EXTRASTAT are validated in the same way. The monitoring of the content of the information is divided into a formal plausibility test (validity of variables), in a logical plausibility check (combined control) and in a quantity control (quantity-value ratio control). For testing the INTRASTAT records’ completeness further checks are relevant. Statistical offices of the Member States in accordance with EU legislation obtain information from other secondary data sources, such as from the monthly VAT return data (national monthly Value Added Tax returns, European VAT collection in intra-community-trade – VIES (VAT Information Exchange System)) respectively the aircraft or vessels register.

To ensure the quality of the data, numerous quality management actions in the framework of processing of the survey data are performed (such as electronic reporting tools, plausibility checks, personal economic operator care by competent officials in charge, completeness checks, on-going training of employees, use of automation-assisted checking programs). Non-response due to the application of a threshold system and due to missing consciousness of reporting in INTRASTAT can be compensated with the help of secondary data (national VAT return), a long term proven estimation system at the most detailed level and a consistent reminder system. The quality of the survey data in INTRASTAT is therefore also related to the quality of the tax data from the EU-wide VIES data and from the national monthly VAT returns, used for
plausibility purposes as well as for estimation purposes. The survey data from EXTRASTAT is provided almost entirely from customs data survey and broadly depend, in terms of their quality, on the thoroughness and reliability of this secondary source.

Analysis and release of results of Austrian foreign trade statistics by Statistics Austria takes place from the Austrian perspective according to **national concept**. These results cannot be compared directly with the Austrian results published by Eurostat, which are analysed from European perspective according to community concept, although both concepts are based on the principle of special trade. There are two essential differences between **community concept** and **national concept**, in terms of the definition of partner country imports and the statistical treatment of indirect movement of goods.

Figure 1: Foreign trade statistics in Austria shows an overview of the concept of foreign trade statistics in Austria
Figure 1: Foreign trade statistics in Austria

Framework

Cross border trade in goods with EU Member States and third countries
National concept/EU-concept

Data sources

INTRASTAT

Collected directly from economic operators above the assimilation threshold in internal trade
Estimation for trade below threshold

EXTRASTAT

Statistics based on secondary data.
Economic operators with cross-border movement of goods with third countries

Result

Foreign trade statistics...

... is monthly compiled and revised

... is a key indicator for evaluation of the economic situation and development

... is an essential base information for many statistics

Derived

Spatial:
Imports: country of origin/consignment;
Exports: country of destination

Products:
CN (Combined Nomenclature) bottom-up
SITC, CPA

Items:
statistical value, net mass, supplementary unit

... without additional burden for economic operators

Trade by Enterprise Characteristics

Foreign trade by federal states
| **Subject Matter** | Austrian foreign trade statistics describes the cross-border movement of goods of the survey territory with foreign countries. A foreign country in foreign trade statistics means the area outside the survey territory. The statistical territory corresponds to the customs area of application. |
| **Population** | All VAT registered economic operators or customs declarants with cross-border movement of goods. |
| **Type of statistics** | **INTRASTAT:** Primary statistical survey  
**EXTRASTAT:** Secondary statistics |
| **Data sources/Survey techniques** | **INTRASTAT:** Census with variable threshold values with mandatory representation criteria.  
**EXTRASTAT:** Census |
| **Reference period** | 2016 |
| **Periodicity** | Monthly |
| **Survey participation (Primary statistics)** | Mandatory (No INTRASTAT reporting obligation for economic operators below the assimilation threshold for each trade flow) |
| **Main legal acts** | **national:**  
- *Trading Statistics Act*  
  Gazette 173/1995 as amended  
- Regulation on the *characteristics* in the trade statistics application  
  Gazette Nr. 181/1995  
- Regulation on statistical *thresholds* for commercial application  
  Gazette II Nr. 306/2009 as amended  
**EU:**  
- Basic and implementing regulations for trade with *EU Member States*  
  RG (EC) No 638/2004 as amended  
- Basic and implementing regulations for trade with *third countries*  
  RG (EC) No 471/2009 |
| **Most detailed regional breakdown** | Structure by partner countries and groups of countries according to ISO alpha2-digit code and Geonomenclature (GEONOM). |
| **Availability of results** | Preliminary data: t + 70  
Final data: June of the following year |
| **Other** | The Austrian foreign trade statistics are compiled and published according to national concept. Application of passive confidentiality. |
1 General Information

1.1 Object and purpose, history

Object, purpose

The target is to capture all cross-border movements of goods within the EU (INTRASTAT) and with third countries (EXTRASTAT). The compilation of foreign trade statistics is based on a number of basic regulations of the Council and the European Parliament as well as the implementing regulations of the European Commission (see Legal basis). It is the product of joint efforts of Eurostat and responsible authorities for data collection and processing in the Member States.

Foreign trade is one of the most sensitive and mostly watched indicators in assessing the economic situation. Foreign trade statistic is a key indicator of the economic development and an important source for most of the decision-makers in the public and private sector. As such, they must be measured reliably, ensure data comparability, and be accessible to a wide range of users. In 2016 the Austrian foreign trade volume covered import sided 36.3% of GDP and export sided 36.5% of GDP.

In many ways, foreign trade statistics provide important information. Users’ needs refer to total aggregates or deepest product and partner country detail. Users may be interested in the changes in trade values, or alternatively in information regarding quantities.

This - by no means complete - list highlights the heterogeneity of users and needs. Statistics Austria is trying to respond to the various needs, resulting from the demands of a changing environment, such as the globalisation trend of the economy.

History

With Austria’s accession to the European Union, the interconnection between Austria and the Member States’ economies increased within the European Union. Free movement of goods nevertheless did not fully lead to full integration of national economies concerned because of differences in national legislation and national economic policies. In that regard, for Member States and thus also for Austria it is still important to have knowledge of the national foreign trade activities (EU and third country).

The data collection of the movement of goods has undergone several changes in recent years. The introduction of classification in the Combined Nomenclature (CN) in 1988 and the SAD for acquiring the goods (SAD = Single Administrative Document) has led to significant changes for trade statistics with non-EU countries. Also in Austria these data usually were directly forwarded from customs to Statistics Austria in the course of customs clearance (eg. using self-copying SAD paper or collecting goods declaration) before joining the EU.

The realisation of the internal market on 1 January 1993 with the abolition of customs formalities implied – the traditional sources to gather statistical information on trade in goods – the introduction of a new data collection system, INTRASTAT, as basis for statistics of the intra-community trade.

INTRASTAT provides a survey, where these goods’ movements regarding the statistical information are gathered directly from the involved economic operators. Compared to the costumes’ formalities in force before 1995, there is a substantial relief because of the threshold system, the significantly reduced variable catalogue and the offer of electronic reporting tools.

1 Results according to National Accounts (NA), as on June, 19th 2017
2 Companies and other taxable economic operators according to the sixth Directive 77/388/EEC of May 17th, 1977 (See Type of survey).
With the accession of Austria to the EU in 1995, Austria also joined the domestic market. Trade in goods with third countries is still handled by completing the customs formalities.

The introduction of INTRASTAT caused a methodological break compared to previous years, and reduced, at least initially, the quality of the statistics. Constantly efforts have been made to improve quality, but also to streamline the statistical system and to reduce the burden of economic operators while maintaining a satisfactory quality of data.

Cooperation between the Member States and Eurostat has detected expression in the establishment of working groups and management committees. As for the adoption or amendment of regulations of the Council and/or Parliament or the Commission, the procedure for the EU legislation follows generally standardised rules.

The knowledge gained through the INTRASTAT survey provide information today an essential and therefore important contribution to the creation of foreign trade statistics, since the majority of the Austrian foreign trade volume is determined by the exchange of goods with other EU Member States. In 2016, 71.4% of total imports and 69.5% of exports take place within the region, i.e. there were goods worth €96.92 bn from EU Member States imported to Austria respectively goods worth almost €91.17 bn from Austria send to EU Member States.\(^3\)

### 1.2 Client

Ordered according to § 4. (1) Federal Statistic Act 2000 (see Legal basis). The Federal Ministry for Science, Research and Economy, the European Union and the Commission of the European Community are directly responsible.

### 1.3 User

Import and export data on trade in goods are a significant economic base information highly applied by national and international bodies. Below significant users are listed:

**National institutions:**
- Federal Ministries
- Federal Chancellery
- Political institutions (National Assembly, Federal Assembly, Landtag,…)
- Interest groups (e.g. social partner, chambers of commerce, professional organisations,…)
- Austrian National Bank (Oesterreichische Nationalbank)
- Territorial Authorities (Federation, Federal states, municipality)
- Statistics Austria (internal users)
- Austrian Institutions for Economic Research (WIFO)
- Federal Institute for Agricultural Economics (AWI)
- Federal Environmental Agency
- E-Control

**International Institutions:**
- European Commission/Eurostat
- European Central Bank
- Organisation for Economic Co-operation and Development (OECD)
- International Monetary Fund (IMF)
- United Nations (UN) or. sub-organisations
- Non-Profit-organisations

**Further users:**
- Media

---

\(^3\) Statistische Nachrichten 8/2017
Educational institutions
Research institutions
Companies
Non-profit organisations
General public

1.4 Legal basis

The legal framework for foreign trade statistics is set by EU regulations that gain immediate force of law in the Member States after release. EU legislation is intended to standardise the methods and the data collection in the Member States.

Austrian foreign trade statistics is essentially based in particular on the following listed national and EU legal basis.

National legal basis:

Gazette I No. 163/1999

Gazette 173/1995

Gazette No. 181/1995
Regulation on the Minister of Economic Affairs on the characteristics in the trade statistics registration of 10 March 1995

Federal Law Gazette II No. 306/2009
Regulation of the Minister of Economy and Labour of 24 September 2009 on thresholds for registration of the trade statistics (Trade statistics regulation - HStatVO), as last amended by Federal Law Gazette II No. 233/2014

Federal Law Gazette II No 233/2014
Regulation of the Minister of Science, Research and Economy, trade statistics regulation 2009 (HStatVO 2009) is changed.

Gazette No. 659/1994
Federal Law on supplementary regulations for the implementation of the customs legislation of the European Communities (Customs Law Implementation Act – ZollR-DG), as amended by Federal Law Gazette I No. 26/2004

EU legal bases:

RG (EC) No. 638/2004

RG (EC) No. 1982/2004
RG (EC) No. 471/2009

RG (EC) No. 92/2010

RG (EC) No. 113/2010
Regulation of the Commission of 9 February 2010 implementing Regulation (EC) No. 471/2009 of the European Parliament and of the Council on community statistics relating to foreign trade with third countries in terms of trade coverage, definition of the data, compilation of statistics on trade by business characteristics and currency of account and specific goods or movements (OJ 2010 L 37/1) CELEX 32010R0113

RG (EC) No. 1106/2012

RG (EEC) No. 223/2009

RG (EEC) No. 2913/92
Council regulation of 12 October 1992 establishing the community customs code (OJ 1992 L 302/1) CELEX 31992R2913

RG (EC) No. 450/2008

RG (EEC) No. 2658/87
Council regulation of 23 July 1987 on the tariff and statistical nomenclature and on the common customs tariff (OJ 1987 L 256/1) CELEX 31987R2658

Communication No. 915/1998
Commission communication on the Combined Nomenclature of the European Communities (OJ 1998 C 287/1) CELEX 51998XC0915(01)

Communication No. 430/2002
Commission communication on the Integrated Tariff of the European Communities (TARIC 2002) (OJ 2002 C 104/1) CELEX 52002XC0430(02)

Communication No. 103/2003
2 Concept and data processing

2.1 Statistical concepts and methodology

2.1.1 Subject of statistics

Subject of Austrian foreign trade statistics is the cross-border movement of goods of the survey territory with other countries. The statistical territory for imports and exports corresponds the customs territory according to § 3 of the customs laws, implementing act, Federal Law Gazette No. 659/1994. Foreign countries for the purpose of official trade statistics are the area outside the survey territory. These movements must be reported for the purpose of official trade statistics (Trade statistic Act of 9 March 1995, Federal Law Gazette No. 173/1995 in its current version).

Since 1995, there exist two different collection systems. One for intra-community trade within the European Union Member States (INTRASTAT) and the other one for movement of goods across the customs border of the European Union which are entering or leaving the national statistical territory (EXTRASTAT). Since then statistical recording of trade with EU Member States takes place by primary data collection system INTRASTAT, while the trade with third countries (EXTRASTAT) is further based on customs procedure.

An exemption from the principle of the physical border crossing, which is an essential criterion of relevance for foreign trade statistic, is valid for the so-called special movements, which have to be registered statistically according to the above mentioned implementing regulations of the EU. For example, for vessels and aircraft the relevant criterion is not the physical crossing of the border. The relevant criterion is the transfer of economic ownership between a taxable person with residence in Austria or a natural or legal person with residence in Austria and a taxable person with residence in another Member State or a natural or legal person with residence in a third country.

A cartogram illustrates the collection system INTRASTAT and EXTRASTAT.

All types of services are generally not subject to foreign trade statistics. Exceptions are processing transactions related to cross-border movements of goods. These are captured and verified in the foreign trade statistics.

INTRASTAT

The statistics of intra-EU movement of goods captures arrivals (intra-EU-imports) and dispatches (intra-EU-exports) of movable goods between Member States according to rules of the INTRASTAT system. Trade in goods in INTRASTAT in Austria is gathered according to special trade system. Differences between special trade and general trade are discussed below.

- Subjects of arrivals (intra-EU-imports) in or dispatches (intra-EU-exports) from a certain Member State are:
  a) Goods in free movement entering a statistical survey territory of a Member State or leaving the statistical survey territory of a Member State bound for another Member State.
  
b) In the case of arrivals (intra-EU-imports): Goods which have been transferred to another Member State to or after processing\(^4\) resp. have been converted or processed under customs control and attain the statistical survey area of this Member State.

---

\(^4\) Processing covers operations before or after processing (transformation, construction, assembling, enhancement, renovation ...) without transfer of ownership with the aim of producing a new or really improved item. This does not necessarily involve a change in the product classification. Goods before or after processing have to be recorded as arrivals (intra-EU-imports) and dispatches (intra-EU-exports). For statistical recording of processing the so-called gross principle is applied. (see the brochure Internal trade statistic – Instructions to submit INTRASTAT declaration)
In the case of dispatches (intra-EU-exports): Goods which have been transferred in this Member State before or after processing resp. have been converted or processed under customs control and have been dispatched (exported) to the statistical survey area of another Member State:

An example of a processing contract: A car is transferred temporarily from Austria to Germany for a car tuning (such as performance, car body modifications). Since the car has “really improved” after the work on it has been done, a goods processing took place which has to be declared as arrival (intra-EU-import) and (re-)dispatch (intra-EU-(re-)export) in INTRASTAT.

c) Some movements of goods are subject to specific rules in the foreign trade statistics. There are specific provisions for e.g. for vessels and aircraft, industrial plants or sea products (see “Specific movements” under Non-sample-caused-effects).

The data does not include goods in transit, i.e. goods just crossing a Member State indifferent to the type of transport, where the goods are not put into storage except for purely transport-related reasons.

EXTRASTAT

Statistics of trade with third countries cover goods imported and exported by the European Union.

- Subjects of imports to or exports from a certain Member State are:

  a) In case of imports: Goods which enter from a third country into the statistical survey territory of a Member State and after storage in customs warehouse:

- are transferred into procedure of free circulation (goods intended for consumption in the importing Member State or for export to another Member State);

- are transferred into procedure of the processing or transformation under customs control (goods processed or converted with a view to further export).

  b) In case of exports: Goods leaving the statistical territory of a certain Member State bound for a third country:

- after being transferred into the procedure of export (final export, export for processing under contract etc.);

- after being transferred into the procedure of processing.

  c) Some movements are subject to specific rules in foreign trade statistics. Particularly there are specific rules for e.g. vessels and aircraft, industrial plants or sea products (see “Special movements” under Non-sample-caused-effects).

For measuring in international trade there are two approaches closely linked to customs procedures: the general trade system and the special trade system.

General and special trade

The general trade is the broader concept, where aggregates include all goods which are entering or leaving the economic territory of a country, simple transit is excluded. In particular, all goods which enter customs warehouses are treated as imports, regardless of their subsequent release into free circulation in the receiving Member State. Similarly, outgoing goods which are stored in customs warehouses are included in the aggregate of general trade at the time of leaving the Member State.

The special trade system underlies a narrower concept. Goods from foreign countries stored in customs warehouses are not included in the aggregates of special trade at the time of import, but only at the time they are released into free circulation (or subject to a subcontracting process) in the host Member State. Therefore, goods designated for export which are sent to customs warehouses, are not recorded as exports. The concept of the special trade therefore ex-
includes transit of goods, goods stored in a customs warehouses or goods declared according the customs procedure for temporary admission.

The major – but not exclusive - difference of these two systems is, that the time of recording of the movement of goods differs. For example, goods from country A brought to a customs warehouse of country B and from there to country C, are represented in the general trade statistics (if country B uses this system), but not in the special trade statistic as far as country B uses this system.

2.1.2 Observation unit/survey unit/display unit

Observation unit: Cross-border movements of goods of economic operators.

INTRASTAT: The INTRASTAT declaration of cross-border transactions in goods takes place at level of the economic operator.

EXTRASTAT: Necessary data for EXTRASTAT are collected through the customs procedure from the customs administration authority, stored, and transmitted via data line to Statistics Austria.

Survey unit: Economic operators with obligation to report (PSI – provider of statistical information) respective declarant in the course of the customs formalities at the customs administration authority.

INTRASTAT: Due to the close connection of the INTRASTAT system to the VAT system, the reporting obligation falls to every taxable person in accordance with Title III of Council Directive 2006/112/EG of 28 November 2006 on system of value added tax, involved in trade between Member States, once the assimilation threshold of the survey is exceeded. The appropriate trade statistics declarations are monthly reported by the PSIs directly to Statistics Austria and processed as primary statistics.

EXTRASTAT: The customs declarant provides the trade statistics through customs formalities, which are further processed by Statistics Austria as statistics based on secondary data.

Most detailed level of presentation: The aggregates are published according to the lowest detailed level of the eight-digit Combined Nomenclature codes for each product and according to the nomenclature of countries and territories published (see Applied classification).

Table 1 gives an overview of the economic operator identification and data collection of Austrian foreign trade in 2016. Movement of goods with EU Member States in the foreign trade statistics publications are generally called arrivals (intra-EU-imports) or dispatches (intra-EU-exports), movement of goods with third countries are named exports (extra-EU-exports) or imports (extra-EU-imports). Valid terms for both data collection systems are imports or exports.
Table 1: General information about economic operators’ identification and data collection 2016

<table>
<thead>
<tr>
<th></th>
<th>INTRASTAT 2016</th>
<th>EXTRAVERSEAST 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intra-EU-import</td>
<td>Intra-EU-export</td>
</tr>
<tr>
<td>Number of identified economic operators</td>
<td>159 639</td>
<td>40 604</td>
</tr>
<tr>
<td>Number of economic operators obliged to report</td>
<td>10 544</td>
<td>6 329</td>
</tr>
<tr>
<td>Number of data lines (in billion)</td>
<td>34.3</td>
<td>23.8</td>
</tr>
<tr>
<td>Number of electronically received data lines (in %)(^{6})</td>
<td>99.9</td>
<td>99.9</td>
</tr>
<tr>
<td>Value of electronically received data lines (in %)(^{4})</td>
<td>99.1</td>
<td>99.2</td>
</tr>
</tbody>
</table>

\(^{*}\)final results

2.1.3 Data sources, coverage

Data sources:

Trade with EU Member States – INTRASTAT ► Primary statistical survey by Statistics Austria directly from economic operators.

The information on intra-EU trade in goods is compiled with help of tools offered to PSIs. Data can be transmitted to Statistics Austria by the free software IDEP (INTRASTAT Data Entry Program)/CN8, by an online web form or by INTRASTAT paper forms for “Dispatches” (intra-EU-exports) and “Arrivals” (intra-EU-imports). The data has to be declared in aggregates and has to be transferred directly to Statistics Austria. The INTRASTAT online portal which is accessed via www.netquest.at (a website of Statistics Austria) under “Foreign trade INTRASTAT” provides basic information about the offered software solutions as well as downloads, ordering paper forms and login information as well as the reporting deadlines.

Trade with third countries – EXTRASTAT ► customs declarations.

Data on trade within third countries are recorded by the statistical copy of the customs declaration (e-customs) and transmitted to Statistics Austria by the customs authorities. There are simplified collection procedures (e.g. e-filling) in most Member States which have no impact on the content of the information transmitted to Eurostat.

Within the EXTRASTAT data collection, almost entirely affected by customs authorities since the fourth quarter of 1999, the movement of goods did not have to be declared if the value amounted less than €1 000 (see “Thresholds” in item Non-sample-caused-effects). Since reporting year 2010 orally declared transactions below the statistical threshold are amongst the EU regulation’s list of goods excluded from statistics and don’t have to be further compiled.

\(^{5}\) Economic operators with individual VAT number. The number of economic operators without a VAT number (i.e. private persons, flat rate taxed farmers etc.) is not identifiable. On 1 January 2007 the ministry of finance changed from the TIN (Trader Identification Number) based e-customs system to a VAT number based system.

\(^{6}\) The Member States are trying to increase the number of electronic messages. In general, data received is more accurate if the declarations are linked to the PSIs’ EDP system. This can also reduce the economic operators’ burden and the costs incurred by the Member States in collecting data.

\(^{7}\) Since EXTRASTAT data is collected by customs authority and electronically submitted to Statistics Austria, the number of declarations originally transmitted in electronic way is not identifiable.
Austrian administrative data ► Monthly VAT return/VIES.

Since 2010 tax information of the monthly VAT return and the recapitulative statement for the VIES system respectively, the VAT control system of European Union, have to be transmitted by taxable persons in Austria to the tax authorities not later than the 15th of the second following month and the last day of following month respectively. Information on monthly VAT returns is forwarded electronically on monthly basis by the Ministry of Finance to Statistics Austria.

**Coverage**

The thresholds below which parties are exempted from providing any INTRASTAT information shall be set at a level that ensures coverage of at least 93% of total arrivals (intra-EU-imports) and at least 97% of total dispatches (intra-EU-exports) performed by all taxable persons of a Member States. The assimilation threshold was increased by changing the Trade Statistics Regulation with reporting year 2015 to €750 000.

2.1.4 Reporting unit/Economic operators

**INTRASTAT:** Statistics based on primary data.

Reporting units are economic operators in intra-EU-trade with a trade value per trade direction which surpasses the assimilation threshold of €750 000. This affects about 12 200 economic operators in Austria in 2016. In order to determine a reporting obligation of not yet registered market participants for foreign trade statistic, the inter alia information about intra-EU movements of goods is used from VAT data.

**EXTRASTAT:** Statistics based on secondary data.

Statistics Austria receives the data (customs declarations of economic operators) from Austrian customs.

**Monthly VAT return/VIES:** Statistics based on secondary data.

Statistics Austria receives the data directly from federal datacentre. Reporting units, according to monthly VAT return are intra-EU market participants with tax number and trade value per trading direction. More information is offered on the website of the Ministry of Finance and the Austrian Economic Chambers.

2.1.5 Type of survey

**INTRASTAT:** Census with thresholds.

In order to cover users’ needs for statistical information without burdening market participants excessively, thresholds are set on yearly basis in pursuance of INTRASTAT Basic Regulation (EC) 638/2004 expressed in annual values of intra-EU trade. Below this threshold economic operators are exempt from providing INTRASTAT information or may provide simplified information.

Compared to customs formalities which had to be applied up to 1995, threshold schemes reduced the catalogue of variables, and the availability of electronic reporting tools reduced administrative burden for economic operators in foreign trade.

The amount of the threshold is defined according to the INTRASTAT Basic Regulation, which warrants the coverage of at least 97% of total dispatches (intra-EU-exports) and 95% (since reporting year 2015: 93%) of total arrivals (intra-EU-imports) effected by all taxable persons of the corresponding Member State.

**EXTRASTAT:** Statistics based on secondary data.
2.1.6 Sample characteristics

Foreign trade survey (INTRASTAT) is a „concentration sample“ or census with cut-off limits, including representation criteria. It is not a random sample in the usual sense, because it is not representative for the non-involved “insignificant” elements and therefore does not allow for concrete error estimation (for example, by indication of the sampling error).

2.1.7 Survey technique/Data transmission

Foreign trade statistic distinguishes from survey technique perspective between INTRASTAT and EXTRASTAT.

**INTRASTAT:**

The share of electronic messages in INTRASTAT is around 99.91% of the records (see Figure 3). The use of paper forms became less important with the years. This positive development is due to the fact that electronic messages can be produced by the economic operators more efficient and more user friendly, leading to essential savings of effort to them.

Statistics Austria provides two electronic reporting tools free of charge, the offline IDEP/CN8 software and an online web form:

- **IDEP/CN8** is mainly optimised for medium and large economic operators, because large amounts of data can be processed through various import interfaces quickly and easily. In reporting year 2016 about 5 110 economic operators used IDEP.
- For small and medium sized economic operators, with a volume of less than 2 000 reporting transactions per month, a user-friendly [online web form](#) was developed. Therefore no installation on the personal computer is necessary because the message is interactive via the internet. The usage is also free of charge and performed via a secure connection using a user ID and password. In reporting year 2016 it was used by 8 289 economic operators (see Figure 3).

Information about access to the web questionnaire, instruction for downloading IDEP/CN8, requirement of access codes and other information on both reporting products can be found at department “Foreign Trade (INTRASTAT)” on [www.netquest.at](http://www.netquest.at).

A **help-desk** has been set up; it is responsible for data transmission, on-going user support and reporting tools advertising. In addition, it counsels providers of similar reporting products and economic operators with own tailor-made solutions in order to avoid serial mistakes and to ensure smoothest possible data reporting and transmission. The help-desk is available for economic operators on weekdays from 7:30 am to 4:00 pm under (+43) 1 71128/8009 or by e-mail to [helpdesk@statistik.gv.at](mailto:helpdesk@statistik.gv.at).
Table 2: Number of users of electronic reporting tools for INTRASTAT

<table>
<thead>
<tr>
<th>Year</th>
<th>Web form</th>
<th>IDEP etc.</th>
<th>Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>n.a.</td>
<td>5 370</td>
<td>10 256</td>
</tr>
<tr>
<td>2000</td>
<td>n.a.</td>
<td>6 300</td>
<td>10 174</td>
</tr>
<tr>
<td>2001</td>
<td>n.a.</td>
<td>10 300</td>
<td>7 289</td>
</tr>
<tr>
<td>2002</td>
<td>n.a.</td>
<td>9 798</td>
<td>5 426</td>
</tr>
<tr>
<td>2003</td>
<td>2 501</td>
<td>9 197</td>
<td>4 460</td>
</tr>
<tr>
<td>2004</td>
<td>4 542</td>
<td>8 871</td>
<td>2 383</td>
</tr>
<tr>
<td>2005</td>
<td>5 764</td>
<td>8 519</td>
<td>2 290</td>
</tr>
<tr>
<td>2006</td>
<td>6 837</td>
<td>8 109</td>
<td>1 920</td>
</tr>
<tr>
<td>2007</td>
<td>7 544</td>
<td>7 853</td>
<td>2 152</td>
</tr>
<tr>
<td>2008</td>
<td>8 136</td>
<td>7 568</td>
<td>1 609</td>
</tr>
<tr>
<td>2009</td>
<td>8 914</td>
<td>7 241</td>
<td>1 325</td>
</tr>
<tr>
<td>2010</td>
<td>9 105</td>
<td>6 655</td>
<td>963</td>
</tr>
<tr>
<td>2011</td>
<td>7 763</td>
<td>5 846</td>
<td>701</td>
</tr>
<tr>
<td>2012</td>
<td>8 525</td>
<td>5 752</td>
<td>553</td>
</tr>
<tr>
<td>2013</td>
<td>8 942</td>
<td>5 679</td>
<td>375</td>
</tr>
<tr>
<td>2014</td>
<td>9 006</td>
<td>5 480</td>
<td>283</td>
</tr>
<tr>
<td>2015</td>
<td>8 905</td>
<td>5 336</td>
<td>256</td>
</tr>
<tr>
<td>2016</td>
<td>8 289</td>
<td>5 110</td>
<td>174</td>
</tr>
</tbody>
</table>

Figure 2: Number of users of electronic reporting tools for INTRASTAT

EXTRASTAT:

The collection of EXTRASTAT data takes place through the customs declaration at the customs administration. Since 2006, the Federal Ministry of Finance provides an electronic customs clearance called “e-customs”. Electronic customs declarations are transmitted daily to Statistics Austria. The e-customs System gathers about 97.8% of all cross-border transactions of goods with third countries. Approx. 2.2% of goods transactions are transmitted directly to Statistics

---

8 The usage of several reporting media during a reporting period can lead to multiple counting of economic operators.
Austria (see Figure 4). In addition, there are some subsequent data reports and revisions by SAD paper and accumulative reports on paper respective by electronic record.

Overall, there is an electronic, value-based coverage in EXTRASTAT of 99.99% (see Figure 4).

2.1.8 Questionnaire (including explanatory notes)

The questionnaire which is used in context of INTRASTAT can be found on the website of Statistics Austria.

The brochure INTRA EU Trade Statistics is a very detailed guide to submit INTRASTAT declarations in the current version, it for example contains fill-in instructions and comments on several reporting variables on INTRASTAT forms.

2.1.9 Participation in the survey

There is obligation to report. All economic operators performing intra-EU trade which are registered for VAT and exceed the assimilation threshold of €750 000 have to provide statistical information.

2.1.10 Characteristics on data collection and publication, measures; including definition

The most important characteristics on data collection for publication in connection with the physical movement of goods include:

- **Trade flow**
  In the broadest sense, trade flows from a Member State to a non-Member State are usually referred to as „exports“. Trade flows from one Member State to another are called “dispatches” (intra-EU-exports). Incoming flows from non-Member States to Member States are denoted as “imports”. On the other hand trade flows from other Member States are declared as “arrivals” (intra-EU-imports).

- **Partner country**
  Country nomenclature for foreign trade statistics correspond to the list of countries and territories for foreign trade statistics of the community and statistics of trade between Member States (EU-legal bases) and includes approximately 240 countries and territories. The list of countries is used for statistical purposes only. From these country names no confirmation or acknowledgement of the political status of a country or the boundary of its territory can be derived. Following functional types of partner countries are distinguished in the data processing and publication of foreign trade:

    **Country of origin**
    The country of origin with regard to imports is that country in which the goods have been produced or extracted or where the last essential and economic production or processing has taken place. In case of mixing the goods with products of other countries, the country of origin is the country from which most of the mixed or processed goods are derived. For re-imported goods for processing, this country has to be indicated, in which the corresponding export of the goods has been declared as country of destination.

    In all standard evaluations of Austrian foreign trade statistics the partner country for imports is in general the country of origin. But also special customised evaluations according to country of consignment are possible.

    **Country of consignment**
    The country from where the goods were dispatched (intra-EU-exports) into the investigation area without any transformational or legal delay in transit countries other than those caused by the transport itself.
Country of destination
The country, in which goods are used, consumed or processed. If the country of destination
is not known, the economic operation has to report the last known destination, to which the
goods have been sent. The country of destination is the partner country for exports in all
standard evaluations of the Austrian foreign trade statistics.

- **Product classification**
  See [Applied classification](#) or [Publication media](#)

- **Nature of transaction**
The nature of transaction concerns specific stipulations of the business contract, e.g. trans-
actions with transfer of ownership, return of goods, operations with a view to processing un-
der contracts, operations following processing under contract, hire. There is more information
in the brochure [INTRA-EU Trade Statistics](#).

- **Statistical procedure**
The statistical procedure describes the use of a commodity in a statistical sense and thus
serves to determine the individual import and export types. Three categories of goods trans-
fers are compiled under statistical procedure.
  - Final dispatch (intra-EU-exports)/arrival (intra-EU-imports)
  - Temporary dispatch (intra-EU-exports)/arrival (intra-EU-imports) before processing
  - Re-dispatch (intra-EU-(re)-exports)/re-arrival (intra-EU-(re-)imports) after processing

- **Mode of transport**
The mode of transport refers to the suspected active means of transport whereby the goods
leave or en-
er the statistical territory of Austria resp. the EU. According to EU legislation, the following
modes of transport can be distinguished: rail transport, road transport, air transport, postal
consignment, fixed transport installations, inland waterway transport and own propulsion.

**Quantitative characteristics**

**Statistical value:**
In nearly most publications of foreign trade statistics values are given in euro, whereby the val-
ue specified for trading transaction is the so-called statistical value. This basically refers to the
value of goods at the time of crossing the border (statistical value = CIF( cost, insurance,
freight) value of commodity at border). Import duties, freight and other costs from border of the
statistical territory to the destination of the statistical territory are therefore not included in import
(CIF value). Export duties, freight and other costs from the destination to the border of the sta-
tistical territory are included in export (FOB (free on board) value). The CIF-presentation of im-
ports as well as the FOB-presentation of exports shows the value of goods plus the arising
costs of transportation and insurance at the Austrian border.

The statistical value results from the invoiced amount of the commodity. Depending on terms of
delivery (e.g. free border, free delivered, ex works) freight and other costs has to be added or
deducted from the invoiced amount. In case of free delivery and processing under contract the
goods delivered are valued as if they were subject of a transaction with transfer of ownership at
crossing the border.

Some Member States collect the statistical value from PSIs; others estimate the statistical value
on the basis of the invoiced amount. Own calculation of PSIs and different methods of the
Member States could lead to deviations in the released results.

Information about the threshold for collection of statistical value see “Thresholds” in [Non-
sampling effects](#).
Net mass and supplementary unit:
The most common quantity measuring unit in data collection of foreign trade is the „net mass“. Net mass is the weight of the goods in whole kilogram (kg) without any packaging.

For some products there is also a “supplementary unit" defined in the Combined Nomenclature. They are product-specific required (depending on the kind of good e.g. in piece, litre, square meter, carat etc.) and get published only on deepest detailed level of the eight-digits Combined Nomenclature. An aggregation is due to the differences in unit structure not appropriate.

See individual survey characteristics in the brochure INTRA EU Trade Statistics.

2.1.11 Applied classifications

The basic nomenclature for goods statistics is defined in EU law. Its use is mandatory in all Member States. Details for product classification of the Combined Nomenclature, International product classification for foreign trade as well as the nomenclature of countries and territories are as follows.

Product classifications:

- **Combined Nomenclature (CN)**

  The eight-digit Combined Nomenclature, the customs tariff manual and statistical Nomenclature of the EU which is based on the products classification of the Harmonised System (HS) is the general base for both trade data collection systems as well as for the presentation of the results. The CN uses six-digit of the HS, thus all positions and counter positions of the HS. The CN consists of the six-digit HS counter positions and two other positions with union specific divisions. Extensive information can be found on the website of the World Customs Organization.

  The CN comprises a large number of the most detailed units in form of the eight-digit counter positions. The approximately 9 400 individual positions of the CN provide the most detailed results which are published in 98 chapters.

  The CN is strongly focused on the nature or composition of the commodity. Changes on the CN happen once a year through the EU legislation among others to ensure keeping pace with technological developments. These changes result in an inevitable conflict of interest between users who seek even higher detail knowledge in general and the PSIs interested in possibly low information burden.

  As a base document for a good specific allocation to CN the Austrian customs administration produced a Customs Tariff Manual that can be requested by telephone +43 (01) 50 233 740 between 6 am and 10 pm or by e-mail to zollinfo@bmf.gv.at. Statistics Austria provides a list of goods (online, paper, e-mail) on the Website (Fragebögen>Unternehmen>Außenhandel (INTRASTAT)>Download). It is necessary to mention the chapter of the CN8 or the particular good you want to declare. For telephone information concerning the commodity code you may call +43 (01) 71128 7078, 8006, 8091, 8041, 8049, 8043, 8044, 7580 or 7679. More information can be found in the brochure „INTRA EU Trade Statistics – Instructions to submit INTRASTAT declaration“ in annex 8.

  The allocation of goods to the appropriate CN code is not always clear for the PSI (see "International and regional spatial comparability” under Comparability over time).

- **International product classification for foreign trade; Standard International Trade Classification (SITC)**

  In addition to the representation in different hierarchical levels of HS or CN, Austrian foreign trade statistic is presented in another classification due to conversion by correspondence tables. Foreign trade results are also published in accordance with the international commodity index for foreign trade, SITC Rev.4 (Standard International Trade Classification). Aggregated foreign trade data are often represented as one- and two-digit SITC categories. The deepest detailed level of this commodity index is the level of the five-digit SITC.
SITC is a classification which is maintained by the United Nations, the highest classification level covers 10 sections (one-digit category).

Table 3: Overview one-digit SITC

<table>
<thead>
<tr>
<th>SITC 1-digit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Food and live animals</td>
</tr>
<tr>
<td>1</td>
<td>Beverages and tobacco</td>
</tr>
<tr>
<td>2</td>
<td>Crude materials, inedible, except fuels</td>
</tr>
<tr>
<td>3</td>
<td>Mineral fuels, lubricants and related materials</td>
</tr>
<tr>
<td>4</td>
<td>Animal and vegetable oils, fats and waxes</td>
</tr>
<tr>
<td>5</td>
<td>Chemicals and related products, not elsewhere specified (n.e.s.)</td>
</tr>
<tr>
<td>6</td>
<td>Manufactured goods classified chiefly by material</td>
</tr>
<tr>
<td>7</td>
<td>Machinery and transport equipment</td>
</tr>
<tr>
<td>8</td>
<td>Miscellaneous manufactured articles</td>
</tr>
<tr>
<td>9</td>
<td>Commodities and transactions not classified elsewhere in the SITC</td>
</tr>
</tbody>
</table>

While the CN is particularly subdivided according to the nature or material of the products, the SITC summarises commodities into wider groups and categorises them mainly within groups by the degree of processing and the production-related coherence.

With the change to the HS 1988 respectively HS 2007 also revisions of the SITC became necessary. These versions (Revision; Rev. 3 respectively Rev. 4) adopt the structure of the HS, so that the most detailed levels of the SITC are defined by sub-headings of the HS.

Table 4 provides an overview of the HS, the CN and the SITC structure.

Table 4: Structure of the nomenclature

<table>
<thead>
<tr>
<th>Nomenclature</th>
<th>Structure level</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmonised System</td>
<td>Section</td>
<td>One-digit</td>
</tr>
<tr>
<td></td>
<td>Chapter</td>
<td>Two-digit</td>
</tr>
<tr>
<td></td>
<td>Heading</td>
<td>Four-digit</td>
</tr>
<tr>
<td></td>
<td>Sub-heading</td>
<td>Six-digit</td>
</tr>
<tr>
<td></td>
<td>Sub-heading</td>
<td>Eight-digit</td>
</tr>
<tr>
<td>Combined Nomenclature (CN)</td>
<td>Section</td>
<td>One-digit</td>
</tr>
<tr>
<td></td>
<td>Division</td>
<td>Two-digit</td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>Three-digit</td>
</tr>
<tr>
<td></td>
<td>Sub-group</td>
<td>Four-digit</td>
</tr>
<tr>
<td></td>
<td>Item</td>
<td>Five-digit</td>
</tr>
<tr>
<td>SITC, Rev. 4</td>
<td>Section</td>
<td>One-digit</td>
</tr>
<tr>
<td></td>
<td>Division</td>
<td>Two-digit</td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>Three-digit</td>
</tr>
<tr>
<td></td>
<td>Sub-group</td>
<td>Four-digit</td>
</tr>
<tr>
<td></td>
<td>Item</td>
<td>Five-digit</td>
</tr>
</tbody>
</table>
As an example of the classification of a product in the Combined Nomenclature:
Chapter 10 of the HS: cereals
Heading 10 06 of the HS: rice
Sub-heading 10 06 20 of the HS: husked [brown] rice
Sub-heading 10 06 20 11 of the CN: Round grain husked [brown] rice, parboiled


The CPA includes both transposable and non-transposable material goods as well as services. The CPA follows the structure of the classification of the economic activities, i.e. the individual goods are directly sorted by their economic origin. The deepest detailed level of the CPA Version 2.1 has six digits and differentiates 3 218 positions (so called subcategories).

The definition of individual material goods is based on the Harmonised System (HS) or on the Combined Nomenclature (CN) which is based on the HS and specially adapted to EU customs classification and foreign trade statistics’ needs.

Nomenclature of countries and territories:

- **ISO-alpha2-classification**
  It is important to have a precise definition of countries and territories, which appear as partner countries in the foreign trade statistics. As a consequence, the European Commission has determined and administrated the Nomenclature of countries and territories to use for INTRASTAT and EXTRASTAT. Since 1 January 1999, the Nomenclature of countries officially bases on the ISO-alpha2-classification according to the country index for foreign trade statistics and the customs tariff manual. This classification assigns every country to a two-digit alphabetical code. The ISO-alpha2-code “DE” for example stands for Germany and “OECD” for the country group of the Organisation for Economic Co-operation and Development”.

- **GEO-code**
  Furthermore, countries are similarly coded by the geo-code of the countries and territories, which are also created and administrated by the European Commission. The GEO-code consists of a numeric code composed of three digits. For example Germany has the code “004” and the United States “400”.

  Special attention has to be paid on the use of aggregates, if the definition of the zone has changed (for example the enlargement of the EU from 27 to 28 Member States). Statistics Austria guarantees, that data series are produced in accordance to the definitions up to date respectively following the definition valid at the time of the reporting year.

  See “GEONOM, Nomenclature of Countries and Territories for the Foreign Trade Statistics of the Community and Statistics of Trade between Member States” of Eurostat.

### 2.1.12 Regional classification of the results

The Austrian foreign trade results are classified by partner countries and territories (i.e. EU-28, OECD) in accordance to the two-digit ISO-alpha2-code and the Geonomenclature. At the website of Statistics Austria, monthly updated foreign trade results, amongst others by partner countries and territories, are published under “Foreign Trade”.

Starting with reporting year 2010, Statistics Austria compiles on behalf of the Austrian Chamber of Commerce (WKO) and the nine Austrian federal states regionalised foreign trade data by federal states. In order to calculate statistically reliable regional foreign trade data which are in compliance with the principles of the national official statistical institution, individual records are matched and reassigned by resorting to already existing data sources.

A brief description of the method can be found in the Annex.
2.2 Statistical production, data processing, quality management

Figure 3: The way of an INTRASTAT declaration in the year 2016

Notes to Figure 3: The way of an INTRASTAT declaration in the year 2016:

- **EDIFACT format**: After Austria's accession to the EU a uniform interface for data exchange was developed for the creation of an electronic reporting facility. Statistics Austria decided not to develop its own set of data structure, but to adopt the international EDIFACT standards of the United Nations and use the INSTATMessage as carrier of foreign trade statistical information. More information can be found in the EDI instruction (see: EDI- A Guide for the Austrian version of INSTAT_SUBSET of CUSDEC D.97B)
Transmission by customs via e-customs system (electronic customs declaration with daily data transmission) approx. 97.8% of EXTRASTAT data volume

Direct transmission by the economic operators
Approx. 2.2% of the EXTRASTAT data volume

SASP-procedure
SAD forms
Collective declaration of goods
Collection via EDP and direct recording via application respectively

EXTRASTAT database (processing application)
8.7 million data lines (99.99% via electronic media) in 2016

PLAUSIBILITY CHECK OF THE HEADER
DETAILED PLAUSIBILITY CHECK
QUALITY CONTROL

FOREIGN TRADE DATABASE

ASSESSMENT and PUBLICATION

Notes to Figure 4: The way of an EXTRASTAT declaration in the year 2016:

- **E-customs system**: In 2006, a new customs notification procedure was introduced which allows economic operators to submit customs declarations electronically to the customs authority. Because of the quick electronic transmission and elimination of manual acquisition of paper forms through the customs authority itself, the transmission to Statistics Austria has also been accelerated significantly.

- **SASP-procedure**: Single Authorisation for Simplified Procedures (former SEA) allows the economic operator to fulfil customs formalities in the Member State of her or his establishment regardless of where its imports or exports take place. Thus the Member State in which the declaration is made can vary from the state in which the goods are imported or exported. Economic operators who are allowed to use this method have to send a separate message to the Federal Institute because of the lack of statistical information in the simplified customs declaration for mapping traffic goods correctly.

- **SAD forms**: Single Administrative Document (SAD) is a written declaration for placing goods under a customs procedure.

- **Collective commodities-forms of commodities**: Economic operators who make SAD forms in paper forms have to transmit collective goods-forms to Statistics Austria. The collective

---

9 Contrary to the national concept, foreign trade values for EU purposes (community concept) have to be attributed to the Member State in which the customs declaration was made.
commodities-forms image all relevant characteristics for foreign trade of the SAD forms in simplified form.

2.2.1 Data collection

Reporting tools

While creating foreign trade statistics one has to distinguish between the collection system EXTRA-STAT and INTRASTAT. EXTRA-STAT is fed by data which is obtained directly in electronic form via customs authorities. INTRASTAT provides a range of reporting options (see Survey technique/Data transmission) for reporters. As a consequence Statistics Austria has to merge the received declarations in one common database for all foreign trade data. In the first years after Austria's accession to the EU most INTRASTAT reports were declared on paper forms, which required a time-consuming manual data collection. Today, this situation has changed significantly, as electronic reporting tools are provided and utilized for several years.

Already for several years, the share of electronic reports is at a very high level of approximately 99.91%, the number of paper forms for INTRASTAT reports have lost its importance (see Figure 3). This positive development is due to the fact that electronic reporting tools are considerably more economically and user-friendly and therefore significantly reduce the PSIs’ burden. The advantages of electronic reporting tools for Statistics Austria are substantial performance acceleration of data input and exclusion of read-in errors and thus quality improvement.

Foreign trade register

After Statistics Austria received the data through customs authority and through direct reporting by the economic operators, the data are fed into the foreign trade register. The foreign trade register represents a specifically adapted data directory for the needs of foreign trade statistics which is closely linked to the business register of Statistics Austria. The foreign trade register contains only those economic operators which are or recently were active either in the EU trade, in third countries trade or in both. It is therefore known as INTRASTAT/EXTRASTAT register.

The foreign trade register was set up in 1995, in line with the accession of Austria to the EU. In 2003, the foreign trade register was linked with the business register. In reporting year 2016, it comprises about 409 000 economic operator. Approximately 163 500 of them are currently active in the EU trade and about 46 500 economic operators are active in third countries trade. The high number of register units is explained by the effect that units once recorded remain registered in the following years, even if no trading took place. The registered unit will only be deleted after a company closing of an economic operator according to the commercial register and if no trading activity has been recorded for several years (see also Table 2 in section Observation unit/survey unit/display unit).

In addition to basic information on the economic operator, such as legal form, address or contact person, the foreign trade register contains information which is essential for the reprocessing and analyses of the data. This includes the economic operator’s status, such as being subject to bankruptcy, founding or merging, as well as being part of a VAT group.

Special case VAT group

VAT groups hold a special position in relation to the registration in the foreign trade register. In line with the Value Added Tax Act, a VAT group is considered as one unit also in the INTRASTAT survey. Nevertheless, members of a VAT group are allowed to transmit their INTRASTAT declarations separately whereupon Statistics Austria merges these declarations to one aggregate. A stricter handling is done for the tax collection where just the controlling company of the VAT group has to report one collective monthly VAT return. When comparing the INTRASTAT value with the monthly VAT return value of members of a VAT group, differences may appear. These differences have to be aligned according to the INTRASTAT information.
When compiling foreign trade statistics tax data must be consulted as secondary source for the purposes of data control and data completion, according to the provisions of EU legislation. Therefore additional data of the intra-Community trade by economic operators from national monthly VAT returns and the VIES (VAT Information Exchange System) is stored in the foreign trade register.

The foreign trade register is linked to the data processing application for plausibility checks. Various functions which are needed to verify the data of a certain economic operator have also been installed in the register. These functions include for example a history of the monthly received declarations, information about obligation to declare and a comparison of the monthly total reporting volume from EXTRASTAT, INTRASTAT, VAT return and VIES. Since the information in the foreign trade register is maintained systematically and continuously it is always up to date.

**Figure 5: The foreign trade register**

---

### 2.2.2 Signature (Coding)

The compilation of foreign trade statistics does not follow any signature (= encoding) in the classical sense. The declaration of data by PSIs take place according to the INTRASTAT survey in already encoded form for all variables. This also applies to the customs declaration, which is the basis for EXTRASTAT (see [Applied classifications](#)).

### 2.2.3 Plausibility check, verification of data sources

Once foreign trade data is loaded into the foreign trade register and into the data processing application, the assessment of the data takes place in several steps:

1. Plausibility check of the header
2. Detailed plausibility check
3. Completeness check (only INTRASTAT)
4. Quality control
Data processing for INTRASTAT and EXTRASTAT has mainly the same structure, although the check for INTRASTAT data is more extensive than the check for EXTRASTAT data, as the customs authority already performed basic checks for EXTRASTAT data before the transmission to Statistics Austria.

**Figure 6: The statistical processing of an INTRASTAT declaration up to its publication**

**INTRASTAT:**

- **Plausibility check of the header:** First a control of the header (VAT ID numbers, reporting month, reporting year and trade flow) takes place for the reminder mechanism (registration of the reports). The plausibility check of the header was automated as far as possible and further processing was simplified through automatic marking on the basis of error codes.

- **Detailed plausibility check:** During the detailed plausibility check all incoming reports are screened in form and content. One plausibility step can include several checks. Formal plausibility checks of raw data are essentially limited to the filling of characteristics requested and to the formal validity of the data. Missing data and other errors, like incorrect product codes (misclassification), invalid partner country, etc. are detected.

- **Quality control (final control):** This is the control of all CN 8-digits of the Austrian customs tariff performed on publication level, in which the correctness of the quantity-value relations, the nature of transaction, processing, country combinations and commodity codes are checked. Subsequent to this control, the sum of all detailed data on lowest CN 8-digit level (on macro level) are examined and corrected by a monthly comparison in terms of quantity-value-relations on the one hand and noticeable volatility in terms of their temporal development on the other hand.

- **Completeness check:** Controls using „secondary“ information/sources

Member states control their data with help of the monthly VAT return data. In addition, other sources can be used. The utilisation of these sources is legally fixed on national and on EU-level.

Secondary sources should provide additional information for transmitted trade data. This secondary information can help to check the plausibility of the data and confirm the PSIs` reports.

The submission of monthly VAT return is legally bound in Austria just since 2003, therefore completeness controls for INTRASTAT until reporting year 2003 could only be performed with help of VIES information from the European Union`s VAT control system. These were regularly carried out in combination of time series on economic operators` level, which are
used to verify noticeable turnover variation. As of 2004, the monthly VAT return data was taken as an additional data source. However, the value of trade can only be broken down on INTRASTAT base but not on partner country level. Compared to the VIES data, the monthly VAT return information is available on monthly basis and at an earlier date for both trade flows and is therefore preferred to VIES data.

Due to the various reporting systems of the tax collection and of INTRASTAT, differences occur in the treatment of triangular trade, processing and mail order trade (see INTRA EU Trade Statistics).

Table 5: Comparison of reporting systems INTRASTAT, VIES and Monthly VAT return

<table>
<thead>
<tr>
<th>Vergleich</th>
<th>INTRASTAT</th>
<th>VIES</th>
<th>Monthly VAT return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodicity</td>
<td>Monthly</td>
<td>Monthly or quarterly</td>
<td>Monthly or quarterly</td>
</tr>
<tr>
<td>Characteristics</td>
<td>VAT ID number, Country of consignment, Country of origin, Country of destination, Nature of transaction (incl. processing), Mode of transport, Net mass, Supplementary unit</td>
<td>VAT ID number, Partner VAT ID number, Country of consignment, Country of destination (Triangular trade)</td>
<td></td>
</tr>
<tr>
<td>Assessment of the goods</td>
<td>Statistical value, Invoice value excl. VAT</td>
<td>Tax base = invoice value excluding VAT</td>
<td>Tax base = invoice value excluding VAT</td>
</tr>
<tr>
<td>Reporting threshold</td>
<td>Assimilation threshold: Since 2015: €750 000</td>
<td>Turnover: &gt; €30 000: quarterly transmission &gt; €100 000: monthly transmission</td>
<td>Turnover: &gt; €30 000: quarterly transmission &gt; €100 000: monthly transmission</td>
</tr>
<tr>
<td>Deadline</td>
<td>Reporting month + 10 working days</td>
<td>Last day of month following reporting month</td>
<td>Day 15 of second month following reporting month</td>
</tr>
</tbody>
</table>

EXTRASTAT:

- **Plausibility check of the header:** All transmitted data of the EXTRASTAT system provided by customs authority are merged to a valid or registered company key with help of the foreign trade register. The plausibility check of the header for EXTRASTAT is fully automated.

- **Detailed plausibility check:** During the detailed plausibility check all incoming reports are monitored in form and content. One plausibility step can include several checks. Formal plausibility checks of raw data are essentially limited to the filling of the characteristics reported and to the formal validity of the data. Missing data and other errors, like wrong product codes (misclassification), invalid partner country etc., are detected.

- **Quality control:** This is the control of all CN 8-digits of the Austrian customs tariff performed on publication level, in which the correctness of the quantity-value relations, the nature of transaction, processing, country combinations and combination of commodity codes are checked. Subsequent to this control, the sum of all detailed data on lowest CN 8-digit level (macro level) are examined and corrected by a monthly comparison in terms of quantity-
value-relations on the one hand and noticeable volatility in terms of their temporal development on the other hand.

2.2.4 Imputation (for non-response respectively item non-response)

EXTRASTAT is a secondary data source which is already checked for completeness of declaration by the customs authority before transmitting the data sets to the statistical authority. Hence, concerning EXTRASTAT, incomplete data sets do not occur and only plausibility check has to be done.

Since implementing electronic data collecting tools in the frame of INTRASTAT, the number of incomplete data sets have been minimised notably. By now, 99.91% of overall data volume is received electronically (see Figure 3). In this connection, the electronic data collecting tools not only ex ante call the economic operators’ attention to possible incorrect declarations, but also avert transmitting incomplete data sets.

Item non-response therefore only occurs in connection with paper declarations. If so, missing data has to be inserted manually based on experienced data by the person in charge, respectively the economic operator has to be contacted.

Due to the INTRASTAT threshold system, numerous economic operators are allowed to transmit simplified declarations. It concerns those economic operators which basically are responsible for providing statistical data because their trading of goods within the EU exceeds the assimilation threshold. But as they are below the simplification threshold, companies can be exempted from declaring certain items. Concerning transfer of ownership against compensation (=nature of transaction code “1”), they do not have to calculate the statistical value as well as they do not have to give any information about the mode of transport and the statistical procedure (see Representativeness). These missing items in general can be supplemented automatically by the logical combination of values of other variables. A specific situation occurs in connection with the calculation of the statistical value (see Non-sample-caused-effects).
Table 6: Estimation share 2016 for chapter of the Combined Nomenclature in per cent (%)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Import</th>
<th>Export</th>
<th>Chapter</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>8.7</td>
<td>10.8</td>
<td>30</td>
<td>1.2</td>
<td>0.6</td>
</tr>
<tr>
<td>02</td>
<td>8.7</td>
<td>1.9</td>
<td>50</td>
<td>25.8</td>
<td>25.9</td>
</tr>
<tr>
<td>03</td>
<td>8.9</td>
<td>4.8</td>
<td>51</td>
<td>13.4</td>
<td>0.5</td>
</tr>
<tr>
<td>04</td>
<td>4.4</td>
<td>1.5</td>
<td>52</td>
<td>8.2</td>
<td>0.7</td>
</tr>
<tr>
<td>05</td>
<td>9.6</td>
<td>3.6</td>
<td>53</td>
<td>33.0</td>
<td>3.4</td>
</tr>
<tr>
<td>06</td>
<td>16.0</td>
<td>31.8</td>
<td>54</td>
<td>8.5</td>
<td>4.1</td>
</tr>
<tr>
<td>07</td>
<td>6.4</td>
<td>8.6</td>
<td>55</td>
<td>5.8</td>
<td>0.3</td>
</tr>
<tr>
<td>08</td>
<td>2.8</td>
<td>5.8</td>
<td>56</td>
<td>3.2</td>
<td>1.1</td>
</tr>
<tr>
<td>09</td>
<td>9.1</td>
<td>10.0</td>
<td>57</td>
<td>17.1</td>
<td>4.0</td>
</tr>
<tr>
<td>10</td>
<td>4.8</td>
<td>3.4</td>
<td>58</td>
<td>24.2</td>
<td>9.4</td>
</tr>
<tr>
<td>11</td>
<td>7.1</td>
<td>1.6</td>
<td>59</td>
<td>9.8</td>
<td>1.0</td>
</tr>
<tr>
<td>12</td>
<td>5.0</td>
<td>6.3</td>
<td>60</td>
<td>6.6</td>
<td>1.2</td>
</tr>
<tr>
<td>13</td>
<td>4.8</td>
<td>37.0</td>
<td>61</td>
<td>8.2</td>
<td>5.5</td>
</tr>
<tr>
<td>14</td>
<td>5.9</td>
<td>12.1</td>
<td>62</td>
<td>7.8</td>
<td>5.1</td>
</tr>
<tr>
<td>15</td>
<td>2.9</td>
<td>7.3</td>
<td>63</td>
<td>10.2</td>
<td>5.0</td>
</tr>
<tr>
<td>16</td>
<td>4.9</td>
<td>2.4</td>
<td>64</td>
<td>6.9</td>
<td>3.4</td>
</tr>
<tr>
<td>17</td>
<td>2.9</td>
<td>0.6</td>
<td>65</td>
<td>9.4</td>
<td>9.7</td>
</tr>
<tr>
<td>18</td>
<td>4.0</td>
<td>1.9</td>
<td>66</td>
<td>6.7</td>
<td>1.3</td>
</tr>
<tr>
<td>19</td>
<td>6.0</td>
<td>1.9</td>
<td>67</td>
<td>10.0</td>
<td>2.3</td>
</tr>
<tr>
<td>20</td>
<td>2.8</td>
<td>2.2</td>
<td>68</td>
<td>10.9</td>
<td>2.3</td>
</tr>
<tr>
<td>21</td>
<td>10.3</td>
<td>5.3</td>
<td>69</td>
<td>16.5</td>
<td>2.5</td>
</tr>
<tr>
<td>22</td>
<td>7.6</td>
<td>1.9</td>
<td>70</td>
<td>6.5</td>
<td>1.4</td>
</tr>
<tr>
<td>23</td>
<td>3.8</td>
<td>2.2</td>
<td>71</td>
<td>3.3</td>
<td>1.7</td>
</tr>
<tr>
<td>24</td>
<td>0.3</td>
<td>0.0</td>
<td>72</td>
<td>2.7</td>
<td>0.8</td>
</tr>
<tr>
<td>25</td>
<td>6.5</td>
<td>3.5</td>
<td>73</td>
<td>7.5</td>
<td>2.5</td>
</tr>
<tr>
<td>26</td>
<td>0.2</td>
<td>4.1</td>
<td>74</td>
<td>2.5</td>
<td>0.9</td>
</tr>
<tr>
<td>27</td>
<td>0.9</td>
<td>1.3</td>
<td>75</td>
<td>2.3</td>
<td>0.9</td>
</tr>
<tr>
<td>28</td>
<td>1.9</td>
<td>1.4</td>
<td>76</td>
<td>6.8</td>
<td>1.1</td>
</tr>
<tr>
<td>29</td>
<td>0.5</td>
<td>0.8</td>
<td>77</td>
<td>2.4</td>
<td>0.1</td>
</tr>
<tr>
<td>30</td>
<td>1.2</td>
<td>0.6</td>
<td>78</td>
<td>2.5</td>
<td>1.2</td>
</tr>
<tr>
<td>31</td>
<td>2.9</td>
<td>1.8</td>
<td>79</td>
<td>2.4</td>
<td>1.2</td>
</tr>
<tr>
<td>32</td>
<td>4.7</td>
<td>2.1</td>
<td>80</td>
<td>0.9</td>
<td>1.1</td>
</tr>
<tr>
<td>33</td>
<td>6.1</td>
<td>5.1</td>
<td>81</td>
<td>7.9</td>
<td>3.4</td>
</tr>
<tr>
<td>34</td>
<td>4.7</td>
<td>4.2</td>
<td>82</td>
<td>5.7</td>
<td>1.2</td>
</tr>
<tr>
<td>35</td>
<td>3.8</td>
<td>1.6</td>
<td>83</td>
<td>4.8</td>
<td>1.7</td>
</tr>
<tr>
<td>36</td>
<td>26.7</td>
<td>3.5</td>
<td>84</td>
<td>4.5</td>
<td>1.7</td>
</tr>
<tr>
<td>37</td>
<td>14.1</td>
<td>4.9</td>
<td>85</td>
<td>7.7</td>
<td>1.3</td>
</tr>
<tr>
<td>38</td>
<td>4.7</td>
<td>1.6</td>
<td>86</td>
<td>3.2</td>
<td>1.5</td>
</tr>
<tr>
<td>39</td>
<td>5.6</td>
<td>2.2</td>
<td>87</td>
<td>6.3</td>
<td>0.2</td>
</tr>
<tr>
<td>40</td>
<td>6.1</td>
<td>4.6</td>
<td>88</td>
<td>3.6</td>
<td>1.2</td>
</tr>
<tr>
<td>41</td>
<td>2.9</td>
<td>1.8</td>
<td>89</td>
<td>7.8</td>
<td>2.5</td>
</tr>
<tr>
<td>42</td>
<td>12.4</td>
<td>5.6</td>
<td>90</td>
<td>6.6</td>
<td>2.4</td>
</tr>
<tr>
<td>43</td>
<td>15.1</td>
<td>7.5</td>
<td>91</td>
<td>33.6</td>
<td>6.3</td>
</tr>
<tr>
<td>44</td>
<td>7.1</td>
<td>2.6</td>
<td>92</td>
<td>8.5</td>
<td>0.7</td>
</tr>
<tr>
<td>45</td>
<td>12.3</td>
<td>11.5</td>
<td>93</td>
<td>13.6</td>
<td>3.3</td>
</tr>
<tr>
<td>46</td>
<td>4.3</td>
<td>8.1</td>
<td>94</td>
<td>9.5</td>
<td>3.1</td>
</tr>
<tr>
<td>47</td>
<td>6.2</td>
<td>1.9</td>
<td>95</td>
<td>7.2</td>
<td>4.5</td>
</tr>
<tr>
<td>48</td>
<td>5.6</td>
<td>0.6</td>
<td>96</td>
<td>5.5</td>
<td>3.5</td>
</tr>
<tr>
<td>49</td>
<td>15.2</td>
<td>9.9</td>
<td>97</td>
<td>98</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>98</td>
<td>19.0</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>5.1</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 7: Rate of estimation in 2016 by countries in per cent (%)

<table>
<thead>
<tr>
<th>Country</th>
<th>Arrival (Intra-EU-import)</th>
<th>Dispatch (Intra-EU-Export)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE</td>
<td>4.7</td>
<td>1.7</td>
</tr>
<tr>
<td>BG</td>
<td>6.0</td>
<td>3.4</td>
</tr>
<tr>
<td>CY</td>
<td>2.9</td>
<td>2.7</td>
</tr>
<tr>
<td>CZ</td>
<td>3.6</td>
<td>2.7</td>
</tr>
<tr>
<td>DE</td>
<td>6.8</td>
<td>2.7</td>
</tr>
<tr>
<td>DK</td>
<td>8.2</td>
<td>2.3</td>
</tr>
<tr>
<td>EE</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
<td>ES</td>
<td>3.6</td>
<td>1.0</td>
</tr>
<tr>
<td>FI</td>
<td>4.1</td>
<td>1.8</td>
</tr>
<tr>
<td>FR</td>
<td>4.1</td>
<td>1.1</td>
</tr>
<tr>
<td>GB</td>
<td>5.2</td>
<td>1.3</td>
</tr>
<tr>
<td>GR</td>
<td>5.9</td>
<td>2.5</td>
</tr>
<tr>
<td>HR</td>
<td>11.4</td>
<td>3.0</td>
</tr>
<tr>
<td>HU</td>
<td>4.3</td>
<td>3.6</td>
</tr>
<tr>
<td>IE</td>
<td>2.3</td>
<td>1.6</td>
</tr>
<tr>
<td>IT</td>
<td>8.4</td>
<td>2.5</td>
</tr>
<tr>
<td>LT</td>
<td>4.9</td>
<td>3.1</td>
</tr>
<tr>
<td>LU</td>
<td>0.7</td>
<td>3.1</td>
</tr>
<tr>
<td>LV</td>
<td>3.5</td>
<td>4.4</td>
</tr>
<tr>
<td>MT</td>
<td>3.7</td>
<td>4.1</td>
</tr>
<tr>
<td>NL</td>
<td>5.4</td>
<td>2.3</td>
</tr>
<tr>
<td>PL</td>
<td>6.9</td>
<td>1.9</td>
</tr>
<tr>
<td>PT</td>
<td>2.1</td>
<td>1.9</td>
</tr>
<tr>
<td>RO</td>
<td>2.1</td>
<td>3.6</td>
</tr>
<tr>
<td>SE</td>
<td>6.1</td>
<td>1.5</td>
</tr>
<tr>
<td>SI</td>
<td>8.6</td>
<td>4.1</td>
</tr>
<tr>
<td>SK</td>
<td>4.8</td>
<td>3.1</td>
</tr>
<tr>
<td>EU-28</td>
<td>6.2</td>
<td>2.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5.1</td>
<td>1.9</td>
</tr>
</tbody>
</table>

2.2.5 Estimation (weighting)

In case of Austrian foreign trade statistics, no estimation is made, because Statistics Austria conducts a full sample data collection with exemption thresholds. Instead, estimations are made for declarations below the threshold and for unit-non-responses. More information about the statistical estimation methods provides the chapter on estimation of detailed INTRASTAT results.

2.2.6 Statistical production of data, (further) applied mathematical methods, statistical estimation methods

**INTRASTAT:**

- **Forecast of the aggregated intra-EU trade – macro indicators:**

  According to the INTRASTAT Regulation (Basis regulation (EC) No. 638/2004 and implementing Regulation (EC) No. 1982/2004) the transmission of the macro indicators, i.e. the main aggregates of trade with EU countries, within 40 days has been defined beginning with reporting month January 2005.

  Until then, an estimation of the missing data has been made in Austria (see following chapter referring to the estimation of detailed INTRASTAT results). The preparations of the foreign
trade statistics are therefore not only depending on data reports of corresponding economic operators but also on the VAT data collected by the fiscal authority through monthly VAT reports, which are used as data substitutes and control values. Because the monthly VAT return is due on 15th of the second month following the reporting month and thus beyond the 40-day period, the new transmission date for the foreign trade data was not met by the conventional way.

To satisfy the international requirements, it was necessary to forecast the future development of foreign trade data. This forecast supplemented the previously used estimation method which was only focused on completing the missing messages.

The development of foreign trade data is updated with help of a time series model. These time series are created for all product groups or countries for arrivals (intra-EU-imports) and dispatches (intra-EU-exports). An ARIMA model is adapted for each series and with these models a predicted value is generated. The fit of the model, the estimation of the parameters and the update is done by X12-ARIMA. With due regard to described standards the aggregates are extrapolated according to the 26 EU partner countries and according to the 10 SITC-groups since 2007. To adjust the SITC total sum on those of the groups of countries, a “country x SITC” matrix is created after the scheme of a contingency table which assigns an estimated market value broken down on SITC one-digit for each country.

The reporting month July 2004 was the first month which was transmitted to Eurostat according to the new method. These were macro indicators on aggregated level for the internal trade of the EU. The early availability of aggregated results does not have any effect on the quality and the completeness of the foreign trade results.

Results of macro indicators estimation are not nationally published because the data is prepared according to EU concept in line with EU requirements which is not consistent with the national publication.

- **Estimation of detailed INTRASTAT results:**

*Estimations for „late response“*

Regardless of legal requirements some PSIs (providers of statistical information) submit their declarations too late or not at all. Therefore an estimation of their trade becomes necessary.

Statistics Austria distinguishes between reporting units with delayed data transmission, the “late response” and those without any transmission, the “hard non-response”. In case of “late response” missing data reports can be substituted by former data reports. This substitution considers the average change rates in terms of trade sector, turnover size class and trade flow of similar economic operators having reported in time. Due to the seasonality of the product structure the use of a declaration from the same reporting period of the previous year is more preferred than an earlier reporting period of the same year. The estimation of the “hard response”, i.e. the PSIs’ trade value which neither made a declaration for the current reporting period nor for the past, is analogous to the estimation of the values of economic operators below the assimilation threshold of the survey.

An exceptional situation occurred with the EU enlargement in 2004. An estimation of trade with these countries before joining the EU was not necessary; the survey has been made through the customs system. After the EU enlargement the countries had to use the INTRAS- TAT system, whereas previous declarations had to be derived from EXTRASTAT; the connection from INTRASTAT and EXTRASTAT in 2000 on economic operator level was an essential advantage.

The estimated non-response value made up 0.5% of the final arrivals (intra-EU-imports) of reporting year 2016 and 0.3% of the final dispatches (intra-EU-exports).

- **Estimations for trade below the threshold and for „hard non-response“**

After determining the annual threshold the trade below this threshold is estimated. The volume of intra-EU trade of Austrian economic operators below the threshold is estimated by
Statistics Austria on basis of the monthly VAT return. Tax data of the monthly VAT return has to be submitted to the tax authority no later than the 15th of the second month following the reporting month.

The estimation method based on the monthly VAT return data started with 2004 because this kind of VAT declaration is mandatory in Austria since 2003. Prior estimations were made with data of the VIES dataset received from the tax administration. To convert VAT data for the purpose of estimation, some adaptions of this secondary source are necessary.

**Business association:** The economic operator’s population in Austria is subject to continuous changes. Start-ups, closures, merger, acquisition etc. represent a challenge for a functioning estimation model on economic operator level. Monthly reconciliations of business interconnections with help of information from the foreign trade register allow a correct assignment of the economic operators.

**Nil return:** Economic operators, liable for reporting, have to deliver a monthly INTRASTAT declaration even for those months in which no EU trade was affected. In this case the economic operator has to transmit a nil return. A nil return must not be estimated and is therefore not marked as missing report in order to avoid an erroneous substitution by the monthly VAT return or the report of the preceding year.

The monthly VAT return information on intra-EU trade is limited on arrivals (intra-EU-imports) and dispatches (intra-EU-exports) of economic operators within one reporting month without product or country segmentation. Every economic operator is assigned to a stratum according to the NACE, its turnover value and the trade flow. The estimation of trade below the threshold of economic operators and “hard non-response cases” is adjusted according to the information about the available declaration of this stratum and the VAT values of their monthly VAT returns.

This strata method focussing on VAT value and trade sector allows for estimations being performed on lowest level, which means on product level. VAT data on intra-EU trade flows of economic operators without reporting obligation are used as volume basis. The reported INTRASTAT information is structured according to strata and trading flow and serves as structural basis for each variable and its values.

In reporting year 2016 trade below the threshold of the INTRASTAT survey amounted to 5.7% of total arrivals (imports) from the EU and to 2.2% of total dispatches (exports) into the EU.

Considering the previously mentioned estimations of values below the threshold, total quota of estimations amounts to 6.1% for arrivals (imports) and to 2.5% for dispatches (exports) referring to intra-EU trade. The quotas are higher for the released preliminary results because of delayed messages.

- **Preparation of foreign trade with electricity (CN 2716 00 00 – Electricity)**

  The liberalisation of the electricity market according to the single European market directives as of October 1st 2001, led to the dissolution of monopolistic structures in these markets, resulted to an intensification of competition and caused an increase of the number of participating economic actors. The growing importance of virtual trading points in previous years accelerated this development which also has a feedback effect on data quality of foreign trade data collection of electricity (CN 2716 00 00).

  Due to its physical properties, the general market structure and the increasing number of actors, the adequate representation of cross-border flows of electricity can no longer be guaranteed by simply using declared data from economic operators. Therefore, since 2013 alternative data sources are used for the representation of cross-border movement of goods, which fully correspond to the conceptual requirements of foreign trade statistics.

---

10 See: [*Statistische Nachrichten 7/2013*](http://link-to-statistische-nachrichten)
In order to reproduce the quantity dimensions physical imports and exports measured by the network operators and provided by the Austrian regulator E-Control are used and slightly methodically adjusted (separation of transit and grid losses). To reflect a methodically adequate value dimensions, import prices\textsuperscript{11} are applied for arrivals (intra-EU-imports) and producer prices\textsuperscript{12} are used for dispatches (intra-EU-exports) considering necessary confidentiality requirements.

EXTRASTAT:

Due to the amendment of the \textit{EU-Regulation 113/2010}, beginning with the reporting year 2010, transaction below the statistical threshold are mentioned on the list of \textit{trade flows exempted} from transmitting to the EU. Therefore these transactions are not relevant for foreign trade statistics. Beginning in the reporting year 2010 the EXTRASTAT estimation became redundant.

2.2.7 Other quality assurance measures

- Item Completeness check
- Data completeness check
- Training of employees
- Support of economic operators
- Use of electronic reporting tools IDEP/CN8.NET and \textit{web form net-Quest} with input checks
- Quality reports
- Contacts to experts
- International mirror comparisons
- \textit{Quality commitment} of Statistics Austria
- Foreign trade statistics by enterprise characteristics (see \textit{Annex})

2.3 Publication (accessibility)

Due to large number of collected variables and the enormous detailed level of individual characteristics the results of the results of Austrian foreign trade statistics represent a potentially very extensive table program that - due to monthly periodicity - has a not to be underestimated temporal dimension. The easy availability for users of these statistics has a high priority for Statistics Austria and shall be ensured by different publication ways which are given below.

All publications include a general part which provides information on legal bases, methods, content and definitions. In addition, detailed questions on this topic can be sent to \texttt{walter.seiniger@statistik.gv.at}.

2.3.1 Preliminary results

Preliminary results are published for each reporting month and reporting year. The first publication is done in form of a press release and afterwards in other publication ways (see \textit{Publication media}).

Statistics Austria revises and publishes data of Austrian foreign trade statistics on deepest detailed level for all months of the current year when releasing preliminary results of a reporting month. When preliminary annual results are released, preliminary data of all previous reporting months of the reported year are revised (see \textit{Revisions}). First detailed results are published monthly about 9 weeks after the end of a reporting month. First preliminary annual results are released in general in March of the following year. For reporting year 2016 the date of publication was March 10\textsuperscript{th}, 2017. The national publication follows the transmission deadline for detailed data to the European Commission which is set by the EU and defined as t+70. The exact publication deadline can be found in the \textit{release calendar} on the Statistics Austria homepage.

\textsuperscript{11} From the \textit{Import price index survey}.
\textsuperscript{12} From the \textit{Producer price index of material goods} (foreign market) survey.
2.3.2 Final results

Final annual results are published in general in June of the following year. For reporting year 2016 the publication date was June 30th, 2017. The exact publication deadline can be found in the release calendar on the Statistics Austria homepage. When final annual results are released, preliminary data of all 12 reporting months of the current year are revised for the last time. Every report which is received after the finalisation of preliminary annual results passes the usual plausibility process. Additional quality controls are made for all reporting months and CN 8 aggregates. After publication of final results no more revisions are planned. Nevertheless, each report which arrives after this date is stored in the INTRASTAT database.

2.3.3 Revisions

Revisions are made to improve the quality, especially to replace estimated values by reports received in the meantime (“real reports”) and thereby increase the degree of coverage.

The revision practice in foreign trade statistics differs from other statistics. Austrian revision cycle in foreign trade statistics provides for revision of each reporting month of the current year on lowest detailed level whenever the preliminary monthly or annual results are released. Therefore the number of revisions for each reporting month differs. The reporting month January is more often revised than for example the reporting month February. Table 8 gives an illustration of this topic.

Table 8: Illustrative example of the Austrian revision cycle

<table>
<thead>
<tr>
<th>Reporting month</th>
<th>First publication preliminary results</th>
<th>Revised in following months</th>
<th>Publication final results</th>
<th>Number of revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>April</td>
<td>May, June, July, August, September, October, November, December, January*, February*, March*</td>
<td>June*</td>
<td>12</td>
</tr>
<tr>
<td>February</td>
<td>May</td>
<td>June, July, August, September, October, November, December, January*, February*, March*</td>
<td>June*</td>
<td>11</td>
</tr>
<tr>
<td>June</td>
<td>September</td>
<td>October, November, December, January*, February*, March*</td>
<td>June*</td>
<td>7</td>
</tr>
<tr>
<td>September</td>
<td>December</td>
<td>January*, February*, March*</td>
<td>June*</td>
<td>4</td>
</tr>
<tr>
<td>December</td>
<td>March*</td>
<td>-</td>
<td>June*</td>
<td>1</td>
</tr>
</tbody>
</table>

*of the following year

The value of difference for final annual results compared to preliminary annual results amounted to +0.05% for imports and to -0.07% for exports in reporting year 2016. This outcome is conditioned on the reduction of the estimates for late response in INTRASTAT and on the incorporation of amendments and corrections of the customs authorities in EXTRASAT.
Table 9: Value-based difference between preliminary and final results of reporting year 2016 on monthly basis in per cent (%)

<table>
<thead>
<tr>
<th>Reporting month</th>
<th>Import, value-based difference</th>
<th>Export, value-based difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>-0.15</td>
<td>-0.03</td>
</tr>
<tr>
<td>February</td>
<td>-0.22</td>
<td>0.03</td>
</tr>
<tr>
<td>March</td>
<td>-0.17</td>
<td>-0.04</td>
</tr>
<tr>
<td>April</td>
<td>-0.30</td>
<td>0.01</td>
</tr>
<tr>
<td>May</td>
<td>-0.06</td>
<td>-0.93</td>
</tr>
<tr>
<td>June</td>
<td>0.08</td>
<td>0.00</td>
</tr>
<tr>
<td>July</td>
<td>0.12</td>
<td>-0.43</td>
</tr>
<tr>
<td>August</td>
<td>-0.16</td>
<td>0.01</td>
</tr>
<tr>
<td>September</td>
<td>0.69</td>
<td>0.38</td>
</tr>
<tr>
<td>October</td>
<td>0.02</td>
<td>-0.08</td>
</tr>
<tr>
<td>November</td>
<td>0.55</td>
<td>0.14</td>
</tr>
<tr>
<td>December</td>
<td>0.18</td>
<td>0.02</td>
</tr>
<tr>
<td>Total</td>
<td>0.05</td>
<td>-0.07</td>
</tr>
</tbody>
</table>

2.3.4 Publication media

Table 10 gives an overview of various publications in the area of foreign trade divided into national and into EU publications of Eurostat. Table 10 responds to the individual publications in detail. National publications are released from Austrian’s point of view according to national concept and EU publications from European’s point of view according to community concept (see definitions under Comparability).

Table 10: Foreign trade publications

<table>
<thead>
<tr>
<th>National publications</th>
<th>Publications in the web</th>
<th>Publication cycle</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press release</td>
<td></td>
<td>monthly</td>
<td>free of charge</td>
</tr>
<tr>
<td>Rapid report</td>
<td></td>
<td>monthly</td>
<td>free of charge</td>
</tr>
<tr>
<td>Absolute data (tables for Rapid report)</td>
<td></td>
<td>monthly</td>
<td>free of charge</td>
</tr>
<tr>
<td>Foreign trade with high technology goods (HTG)</td>
<td></td>
<td>monthly</td>
<td>free of charge</td>
</tr>
<tr>
<td>Foreign trade with working day adjustment</td>
<td></td>
<td>monthly</td>
<td>free of charge</td>
</tr>
<tr>
<td>ITGS-Atlas</td>
<td></td>
<td>twice a year</td>
<td>free of charge</td>
</tr>
<tr>
<td>Regional data by federal states (main results)</td>
<td></td>
<td>semi-annual</td>
<td>free of charge</td>
</tr>
<tr>
<td>Foreign trade indices</td>
<td></td>
<td>Quarterly</td>
<td>free of charge</td>
</tr>
<tr>
<td>Austrian Economic Atlas</td>
<td></td>
<td>twice a year</td>
<td>free of charge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Print publications</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistisches Jahrbuch</td>
<td></td>
<td>annual</td>
<td>liable for costs</td>
</tr>
<tr>
<td>Article in the “Statistische Nachrichten”</td>
<td>quarterly and annual</td>
<td>liable for costs</td>
<td></td>
</tr>
<tr>
<td>Statistical Overviews</td>
<td>quarterly</td>
<td>liable for costs</td>
<td></td>
</tr>
</tbody>
</table>

**Electronic publications**

**STATcube, statististical database**

**Total foreign trade**

| STATcube: Foreign trade as of 2007 | monthly | global data free of charge; detailed results liable for costs |
| STATcube: Foreign trade 1995–2006 | completed reporting period | global data free of charge; detailed results liable for costs |
| STATcube: Foreign trade by country groups and 1digit SITC, 2digits CN | monthly | free of charge |

**Foreign Trade by federal provinces**

| STATcube: Regional data by federal provinces and 2digits CN | semi-annual | global data free of charge; detailed results liable for costs |
| STATcube: Regional data by federal provinces and countries | semi-annual | global data free of charge; detailed results liable for costs |
| STATcube: Regional data by federal provinces and country groups | semi-annual | global data free of charge; detailed results liable for costs |

**Foreign Trade Statistics by Enterprise Characteristics (TEC)**

<p>| STATcube: Trade by Enterprise Characteristics; Trade by type of trader and activity sector (NACE) | annual | global data free of charge; detailed results liable for costs |
| STATcube: Trade by Enterprise Characteristics; Trade by enterprise size class and activity sector (NACE) | annual | global data free of charge; detailed results liable for costs |
| STATcube: Trade by Enterprise Characteristics; Concentration of trade by activity sector (NACE) | annual | global data free of charge; detailed results liable for costs |
| STATcube: Trade by Enterprise Characteristics; Trade by partner countries and activity sector (NACE) | annual | global data free of charge; detailed results liable for costs |
| STATcube: Trade by Enterprise Characteristics; Trade by number of partner countries and activity sector (NACE) | annual | global data free of charge; detailed results liable for costs |
| STATcube: Trade by Enterprise Characteristics | annual | global data free of charge; detailed results liable for costs |</p>
<table>
<thead>
<tr>
<th>Characteristics: Trade by commodity (CPA) and activity sector (NACE)</th>
<th>detailed results liable for costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATcube: Trade by Enterprise Characteristics: Trade by type of ownership and activity sector (NACE)</td>
<td>annual</td>
</tr>
<tr>
<td>STATcube: Trade by Enterprise Characteristics: Trade by exports intensity and activity sector (NACE)</td>
<td>annual</td>
</tr>
<tr>
<td>STATcube: Trade by Enterprise Characteristics: Trade by activity sector (NACE)</td>
<td>annual</td>
</tr>
<tr>
<td>STATcube: Trade by Enterprise Characteristics: Trade by partner countries and enterprise size class</td>
<td>annual</td>
</tr>
</tbody>
</table>

**Wirtschaftsatlas**

**Austrian Economic Atlas**

twice a year free of charge

**Further Publications**

**DVD „Austrian foreign trade“**

monthly and annual liable for costs

Customised data subscriptions

monthly to annual liable for costs

Customised evaluations

as required liable for costs

**EU-Publications**

**Eurostat-Database COMEXT**

among others monthly free of charge

---

**National publications**

**Web publications**

**Press release**

Statistics Austria issues as first information a monthly press release showing global results of the Austrian foreign trade statistics. It can be accessed at the website of Statistics Austria and includes absolute data as well as recent developments with EU-28 and third countries. The press release is available in German and English and free of charge.

**Rapid report „Austrian foreign trade“**

The monthly publication “Rapid report on Austrian foreign trade” offers quick access to current results and overview tables. The content is focused on main results in tabular form. Since 2007 the quick report can be downloaded free of charge from the homepage of Statistics Austria.

**Absolute data**

Latest information on foreign trade data by country groups, continents and trading partners can be found on the above-mentioned website of Statistics Austria. Important country groups are available at two-digit SITC Rev. 4. The data can additionally be looked up by Main Groups (National Austrian rough classification) or commodity section of the Harmonised System. The results „Absolute data (tables for Rapid report)” are monthly revised and refer to the
current period starting with January of the current year; they are free of charge. The additional tables and thematic maps are available annually.

**Foreign trade with high technology goods (HTG)**
The presentation of the Austrian foreign trade with high technology goods takes place monthly on a basis of product approach. Therefore a classification list was drawn up by the OECD together with Eurostat which is used. Nine product groups are distinguished: 1 Aerospace, 2 Computers office machines, 3 Electronics telecommunications, 4 Pharmacy, 5 Scientific instruments, 6 Electrical machinery, 7 Chemistry, 8 Non-electrical machinery, Armament. The tables are available free of charge on the Statistic Austria website. (see Annex).

**Foreign trade with working day adjustment**
Two tables on working day adjusted foreign trade data are published monthly. The working day adjustment in foreign trade takes place according to X-13 ARIMA-SEATS (US Bureau of the Census). Both tables are available free of charge on the Statistics Austria website. (see Annex).

**ITGS-Atlas**
The ITGS-Atlas offers to the users of the Austrian ITGS a service following the rules of cartography which visualizes the imports and exports of physical goods.

In general, the spatial dimension is a determining element for the trade in goods and thus also for the International Trade in Goods Statistics (ITGS). As the import and export transaction of a country (e.g. Austria) with other countries (e.g. Germany, China, …) is represented.

For structural findings in ITGS usually a matrix comprising indicators like period of time, imports, exports, partner country and product is used. The ITGS-Atlas makes these indicators experienced cartographically. The basic setting entering the ITGS-Atlas shows the export of last current reporting year. Database updates will be done twice a year with preliminary and final full year results. It is possible to select different indicators with absolute value:

- import, export, trade balance, change to preceding year – cartographical: figures (circles),
as well as indicators with relative value:

- percentage share of several partner countries in Austrian foreign trade, relative change to preceding year – cartographical: area signature (associative colouring from blue (-) to red (+)).

Each click will offer a total new visual image.

The Country Search allows a rapid and efficient locating of several partner countries (e.g. Mauritius, Palau or Djibouti). Label country names, city names or background map and water bodies can be added for an easier spatial orientation. Through the selection of a partner country (e.g. Germany) a window will pop up which offers detailed information, data tables and rapid graph. The export of data using .csv-datafile completes the combined package and thereby users already have the possibility of further analysis of their previously selected partner country information.

Due to Responsive Web Design the ITGS Atlas can be extended both to desktop computers as well as to mobile devices like smartphones or tablet PCs in a very user friendly way.

**Regional data by federal states**
Starting with reporting year 2010, Statistics Austria compiles on behalf of the Austrian Chamber of Commerce (WKO) and the nine Austrian federal states regionalized foreign trade data by federal states. Tables and thematic maps are used to visualise the data. Main results can be downloaded free of charge – detailed results are liable for costs. They are available as a customised evaluation or by means of a fee-based STATcube subscription. (see Annex).

**Trade by enterprise characteristics (TEC)**
This statistics is based on the obligatory Eurostat data linkage “Trade by Enterprise Characteristics”. It is compiled according to the community concept and is produced annually by all
28 EU member states. In order to describe the structure and characteristics of trading enterprises, the Austrian international trade in goods statistics (ITGS) is linked on microdata level with the register of statistical units (business register) and the Foreign Affiliates Statistics (FATS). This statistical product makes it possible to obtain additional information about foreign trade companies. The publication takes place on an annual basis. Further information can be found in the annex.

**Foreign trade indices**

The unit value index and the volume index of Austrian foreign trade statistics are calculated as a Fisher chain index with current base of 2010 = 100. More detailed explanations can be found on the German website under “Außenhandel”, “Außenhandelsindizes” (left navigation bar) relating to their values, changes to previous years and the distribution on product groups. Additionally the results are presented in tables on one-digit and three-digit level of the SITC Rev. 4 and always refer to final annual data. The results are published quarterly. Detailed information of the methodology can be found in the Annex).

**Austrian Economic Atlas**

Statistics Austria provides the Austrian Economic Atlas, an online application, since July 2007. The business location Austria and its development since the EU accession in 1995 are presented by a specific data selection. “Eckdaten Außenhandel” is a thematic block in the German version of the Austrian Economic Atlas and it's based on annual data by main partner countries, country and product groups (SITC Rev. 4). Tables, graphs and thematic maps are used to visualise the data.

Additionally, a link to the database STATcube is offered which provides the sum of annual imports and exports with the most important partner countries and partner zones as well as the most important product groups (classified by SITC Rev. 4). All data of the Austrian Economic Atlas are available free of charge and are updated twice a year.

**Print publications**

The print publication „Der Außenhandel Österreichs“ (Series 1 and 2) was terminated with the publication of the final reporting year 2012 in August 2013. Printouts up to reporting year 2012 can still be ordered - they are liable for costs.

Series 1 of the print publication “Der Außenhandel Österreichs” contained foreign trade data by products according to the Combined Nomenclature (CN8) and countries as well as general overviews. Series 2 contains foreign trade results by products according to the SITC Rev. 4 and countries as well as volume and unit value indices..

**Statistisches Jahrbuch**

This annual publication contains, amongst other statistics, foreign trade statistics broken down by important country groups and partner countries as well as Main Groups (national Austrian rough classification). Data is presented according to SITC Rev. 4, on two-digit level by main country groups and on three-digit level for totals. Additionally the “Statistisches Jahrbuch” contains volume- and unit-value-indices on SITC three-digit level calculated as Fisher chain index. This publication is liable for costs.

**Articles in the „Statistische Nachrichten“**

The monthly published “Statistische Nachrichten” present current results of all areas of Statistics Austria and provide important basic information on the economy and society of Austria. In quarterly and annual periodicity articles on current developments of Austria’s foreign trade are published in the “Statistische Nachrichten”, also containing tables by partner countries and two-digit SITC codes (SITC Rev. 4).

As a supplement to Statistische Nachrichten, the quarterly bulletin ("Statistische Über-sichten/Statistical Overviews") is published. The quarterly bulletin contains foreign trade data broken down by country groups, important partner countries and some sections and divisions according to SITC Rev. 4 on a monthly basis.
Electronic publications

Database STATcube\textsuperscript{13}: foreign trade as of 2007

Foreign trade results starting with reporting year 2007 are presented as monthly time series for different product nomenclatures (CN, SITC Rev.4, Main Groups) and by partner countries. Beside the standard publication of imports by country of origin, imports are also available by country of consignment. General methodological and short segment-related information complete this information offer for data user.

Database STATcube: Foreign trade 1995-2006

The structure is basically the same as for data cube “Foreign trade as of 2007”. Since the product classification of SITC Rev. 3 was valid until 2006, the data cube ends with reporting year 2006. The product classification of SITC Rev. 4 is valid since 2007 and can be found in data cube “Foreign trade as of 2007”.

Database STATcube: Foreign trade by country groups, 1digit SITC, 2digits CN

Foreign trade results since 1995 are presented in monthly time series by selected country groups and also by product nomenclatures SITC (one-digit) and CN (two-digit). The trade balance provides additional information (the trade balance of Austrian foreign trade statistics describes the comparison of imports and exports of goods. A trade balance surplus\textsuperscript{14} denotes higher exports than imports. A trade balance deficit describes higher imports than exports). General methodological and short segment-related information complete this information offer for data user.

Database STATcube: Regional data by federal provinces and 2digits CN

Regional foreign trade data are available from 2010 onwards in form of semi-annual as well as annual total results (preliminary and final). Publication of foreign trade data by federal states and product classification on CN2-digit level. General methodical and segment-related information for the data user are provided.

Database STATcube: Regional data by federal provinces and countries

Regional foreign trade data are available from 2010 onwards in form of semi-annual as well as annual total results (preliminary and final). Publication of foreign trade data by federal states and partner countries (country of origin and country of destination). General methodical and segment-related information for the data user are provided.

Database STATcube: Regional data by federal provinces and country groups

Regional foreign trade data are available from 2010 onwards in form of semi-annual as well as annual total results (preliminary and final). Publication of foreign trade data by federal states, product classification on CN2-digit level and selected partner countries/country groups. General methodical and segment-related information for the data user are provided.

Database STATcube: Trade by Enterprise Characteristics; Trade by type of trader and activity sector (NACE)

The STATCube database shows foreign trade by type of trader and activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2008 and will be updated 23 months after the end of each reporting year.

Database STATcube: Trade by Enterprise Characteristics; Trade by enterprise size class and activity sector (NACE)

The STATCube database shows foreign trade by enterprise size class (size class of enterprises by number of employees) and activity sector (NACE) of economic operators involved

\textsuperscript{13} STATcube, the statistical data base system of Statistics Austria is the follow-on product of data base ISIS and enables the creation of online data analysis according to individual user needs. The data is arranged as element of a multidimensional cube. Foreign trade results on global level are provided free of charge (GUEST access), detailed data can be obtained in form of charged STATcube subscriptions. Details are available on the website and in a separate German STATcube folder.

\textsuperscript{14} Common wordings are trade surplus or trade deficit or also import surplus and export surplus.
in foreign trade. Data is available since reporting year 2008 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** STATcube: Trade by Enterprise Characteristics; Concentration of trade by activity sector (NACE)

The STATCube database shows foreign trade by concentration (largest enterprises in export or import (Top 5, Top 10, etc)) of trade by activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2008 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** Trade by Enterprise Characteristics; Trade by partner countries and activity sector (NACE)

The STATCube database shows foreign trade by partner countries and activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2008 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** Trade by Enterprise Characteristics; Trade by number of partner countries and activity sector (NACE)

The STATCube database shows foreign trade by number of partner countries (number of partner countries of importing or exporting enterprises) and activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2008 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** Trade by Enterprise Characteristics; Trade by commodity (CPA) and activity sector (NACE)

The STATCube database shows foreign trade by commodity (CPA) and activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2008 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** Trade by Enterprise Characteristics; Trade by type of ownership and activity sector (NACE)

The STATCube database shows foreign trade by type of ownership (ownership of the enterprises; based on foreign affiliates statistics (FATS)) and activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2011 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** Trade by Enterprise Characteristics; Trade by exports intensity and activity sector (NACE)

The STATCube database shows foreign trade by exports intensity (share of exports in the enterprise’s turnover) and activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2012 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** Trade by Enterprise Characteristics; Trade by activity sector (NACE)

The STATCube database shows foreign trade by activity sector (NACE) of economic operators involved in foreign trade. Data is available since reporting year 2012 and will be updated 23 months after the end of each reporting year.

**Database STATcube:** Trade by Enterprise Characteristics; Trade by partner countries and enterprise size class

The STATCube database shows foreign trade by partner countries and enterprise size class (size class of enterprises by number of employees) of economic operators involved in foreign trade. Data is available since reporting year 2012 and will be updated 23 months after the end of each reporting year.

**Austrian Economic Atlas**

The Austrian Economic Atlas presents data of the business location Austria in a compact and clear form – also foreign trade data is represented. To be able to work with current available annual data, the database will be updated twice a year.
DVD „Austrian foreign trade“

The following listed DVDs include an English version. The DVDs are liable for costs and can be sent either as a classic physical data medium (transmission type: mail) or as a “AH-DVD data package” (transmission type: sFTP transfer).

Monthly: This DVD contains, on a user-friendly database basis, Austrian foreign trade statistics in moving time series by partner countries, country of origin, country of destination and by products. The classification by products is represented by different economic nomenclatures (CN, SITC Rev. 4, CPA). The DVD contains a monthly time series of the last final reporting year and preliminary reporting months of the next following reporting year. This gives users convenient access to information and the ability of individual reports and analyses. The export format in form of Character Separated Value (.csv) allows further data processing within external files.

Annual: In addition to the monthly edition, there is an annual edition available that contains aggregates of final yearly results as current time series of the last six years. The preparation of foreign trade data corresponds to that of the monthly DVDs.

Customised data subscriptions

Together with standard publications, users may, for an appropriate fee, subscribe to data evaluations adapted to their individual requirements with regard to the scope of data and nomenclatures. These data may be requested in electronic form on a CD-ROM or per e-mail as well as on paper.

Customised evaluations

Evaluations due to ad hoc requests (via e-mail or fax) are adapted to individual requirements. Customised evaluations are liable for costs.

- EU publications

Foreign trade data according to community concept (definition see Comparability) can be requested from the Eurostat data base for foreign trade data, Easy Comext, free of charge. Easy Comext provides an access to current and historical data of EU Member States. Additionally a press release is published on the homepage of Eurostat.

2.3.5 Treatment of confidential data

According to article 3 of the EU Regulation RG (EC) No. 223/2009 the term “Confidential data” declares data which allows a direct or indirect identification of statistical units and therefore discloses individual information. To decide on whether a statistical unit is identifiable, all possibilities which can be used by a third party, to identify the statistical unit have to be considered. “Direct identification” means identification of a statistical unit by a name, an address or by a public accessible identification number. “Indirect identification” means identification of a statistical unit by other ways than the direct identification. The assignment of statistics is to avoid any type of identification.

According to the Austrian Federal Statistics Act 2000, § 17, paragraph 2, the institutions of the Federal Statistics may communicate personal data to third parties only if legal acts according to § 4 paragraph 1 Z 1 or federal statutory provisions schedule such transfer or if concerned persons have expressly and unequivocally consented to this transfer. I.e. individual data is not allowed to be passed on in general. Exceptions are regulated by law in two cases:

- Individual information can be transmitted to other national authorities or departments if it is necessary for initiating or conducting a criminal proceeding (HStG 1995, Gazette I No. 173/1995 §3) or if significant differences are found between the trade statistical declarations of economic operators and the transmitted finance data from the tax administration authorities, which shall be cleared up in cooperation with these authorities
- The introduction of an enabling clause (new article 9a in the INTRASTAT basic regulation RG (EC) No 638/2004) for the exchange of confidential data between national authorities that are responsible in their respective Member State for producing INTRA EU trade statistics, allows the exchange of confidential statistical data between data producer of several Member States.

- **Publication of foreign trade statistics: Passive confidentiality**

Austrian foreign trade statistic data is generally published in aggregated form according to legal provisions, i.e. there is no individual data published.

Foreign trade statistics is the only statistic which applies the principle of “passive confidentiality” corresponding to worldwide convention. The so called “active confidentiality” is used in Austrian business statistics.

According to Article 11 of the EU-Regulation RG (EC) No. 638/2004, “only on request of the party responsible for providing statistical information the national authorities decide if the statistical results, which allows the indirect identification of this party, can be distributed or if the statistical results have to be amended in such a way that their dissemination does not prejudice statistical confidentiality.”

Parties obliged to declare can apply for confidentiality of their data at the foreign trade department of Statistics Austria, if they expect to be identified indirectly in published results and want to avoid this situation because of e.g. competition policy reasons. The confidentiality is only granted for the duration of one reporting year and must be renewed after a year. Although the application can be done informally, the economic operator has to transmit the requested commodity codes, the trade flow (imports or exports), a detailed justification for the application as well as the VAT number and tax number. The decision if the request will be granted is based on the application letter for confidentiality and the presented trade values of the economic operator.

Regardless of whether data are partially or completely suppressed, the data of confidential commodity codes are included in higher aggregated levels (e.g. two-digit CN, 3-digit SITC Rev. 4).

Depending on the situation there are **different ways of confidentiality**:

- **Suppression of partner country information**
  In the case that a product is to be excluded on partner country level, only total amounts for imports and exports for the corresponding product are published while the country breakdown remain unpublished. (Country code 977/QX/no country classification). The country code 977/QX/no country classification contains the sum of all partner country information of a commodity code with country suppression (i.e. for practical implementation: total sums will be published – country breakdowns will be omitted).

- **Suppression of product code**
  If product confidentiality should be ensured in full, details of the corresponding values and quantities are disclosed on higher level (e.g. chapter sums of CN). The same suppression method (suppression of partner country information and of CN8-code information) is also used for SITC data. This procedure is intended to avoid affecting the completeness of global information when keeping detailed results confidential. In case of a total suppression, the publication is omitted entirely at the level of the effected commodity code (i.e. for practical implementation: the publication takes place at a higher aggregation).

The share of confidential data for the reference year 2016 has been 0.2% of total imports and 3.1% of total exports. The number of product codes within the CN8 affected by confidentiality for reporting year 2016 has been 36 product codes for imports, 121 product codes for exports and 16 product codes for imports and exports.
### 3 Quality

#### 3.1 Relevance

Data of import and export of goods represent substantial economic basic information which receives numerous national and international applications. They lay the foundations for economic policy decisions as well as for calculations in this area for the national users and international institutions.

The foreign trade advisory body (*Außenhandelsfachbeirat*) serves as an interface to the group of users and is composed by a restricted circle of members which shall be convened once a year. The main users and uses of Austrian foreign trade statistics are listed under Object, purpose and User.

The foreign trade in goods data are an important input for National Accounts and for Balance of Payments. They are used for example for the goods balance compilation. The applied concepts are largely, but not entirely consistent. The implementation of the ESA 2010 and the Balance of Payments Manual (BPM 6) led to changes in the use of foreign trade in goods statistics for the national accounts and balance of payment (see “Statistische Nachrichten 2/2015”). Until reporting year 2013 payments of goods movements referring to processing or repair were recorded as four goods flows into the goods account. These four trade flows include export values of goods sent for outward processing or repair, the import value of the goods following outward processing or repair, the import value of goods for inward processing or repair and the export value of goods following inward processing or repair. Due to the fact that the European system of National Accounts of 2010, the ESVG (Europäisches System Volkswirtschaftlicher Gesamtrechnung) 2010, invariably records cross-border trade flows where an economic transfer of ownership has taken place, commodity flows underlying processing or repair are not further included in the goods account. Instead of these four trade flows, only the work proceeds are recorded as exports and the paid fees as imports are declared as services. They are collected directly from economic operators in the survey of cross-border services. Note also that in most parts of the national accounts goods are rated by FOB-FOB\(^{15}\) which differs from the foreign trade statistics where the principle of CIF\(^ {16}\)-FOB rating is used. Therefore imports of foreign trade in goods are converted by a volume-freight-rates based model from their CIF-validation to a FOB rating for National Accounts purposes. Different concepts applicable for these two domains have to be considered. In foreign trade in goods statistics the physical and permanent transfer of goods indicates a transaction, but in National Accounts and the Balance of Payments the transfer of ownership of residents respective non-residents is considered as an essential condition (see “Statistische Nachrichten 2/2015”). For example, permanent loans in connection with cross-border exchange of goods are irrelevant for national accounts purposes.

The publication of foreign trade in goods results on EU level is based on a different concept than the publication on national level. The different definition of partner country and the treatment of indirect goods traffic have to be considered. Further information on this subject can be found under Comparability.

---

\(^{15}\) In accordance to INCOTERMS for „Free On Bord“ (= invoice amount including costs for transport and insurance within the survey area)

\(^{16}\) In accordance to INCOTERMS for „Cost Insurance Freight“ (= invoice amount including costs for transport and insurance within the survey area)
3.2 Accuracy

3.2.1 Sampling effects, representativeness

Sampling effects

As foreign trade statistics do not use a random sample but a census with variable thresholds which consider binding representation criteria, specification of a classic sampling error is not possible. As a measure of quality, different factors such as the degree of coverage - with reporting year 2015: 93% of all imports and 97% of all exports - have to be calculated. The degree of coverage by concentration data, measured on total results, was calculated for the main characteristics import and export. The higher the coverage rate, the less influence has the estimation models.

Representativeness

Thresholds in foreign trade statistics

In order to minimise the burden of economic operators in respect of their obligation to provide information on the one hand and to have a satisfying quality of statistical information on the other hand, a system of statistical thresholds for INTRASTAT and EXTRASTAT has been created, below which no or just little information is collected.

1.) INTRASTAT

Thresholds are set by Member States, in order to gather statistics that meet the coverage criteria required by INTRASTAT regulation. Each Member State sets these thresholds for both trade flows, the arrivals (intra-EU-imports) and the dispatches (intra-EU-exports), in October before beginning of the reporting year. The thresholds serve to reduce the reporting burden of the economic operators. Within the framework of INTRASTAT, there are three types of thresholds in Austria:

- **Threshold for small transactions (simplification threshold)**
  
The threshold for small transactions of €200 per transaction allows the economic operators to waive the classification of their goods and to send an INTRASTAT report with a simplified commodity code 99500000. If the total value from the simplified process reported transaction exceeds 10% of the foreign trade volume of the PSI within the intra-community trade flow per month, this case requires an affirmation of Statistics Austria (werner.kern@statistik.gv.at). The transmission in a simplified procedure is restricted to the Member State of consignment in imports and to the Member State of destination in exports.

- **Assimilation threshold (threshold for determining the reporting obligation)**
  
The assimilation threshold determines if an economic operator has the obligation to report in INTRASTAT or not. Economic operators mean fiscal entities for tax purposes in this context.

  Once the trade flow (imports or exports) reaches or exceeds the threshold the intra-EU movement of goods in the previous or in the current year, the economic operator has to send declarations. If the trade value falls below the threshold, the economic operator is exempted from the obligation to report. If the threshold is exceeded in the course of the current year, the statistical declaration has to be filed in starting with this month.

  The threshold between the reporting years 1995 to 1998 amounted ATS 1 500 000. From 1998 to 2001 the threshold was ATS 2 000 000, from 2002 to 2003 the threshold amounted €200 000. In the course of amendment of the trade statistics regulation (HStatVO) the threshold increased to €250 000 in 2004 to 2006, to €300 000 in 2007 to 2009 to restrict the growth of number of PSIs according to the EU enlargement. The threshold amounted to €500 000 from reporting year 2010 to 2012, to €550 000 from 2013 to 2014 and is set to €750 000 with reporting year 2015.
Assimilation thresholds are determined by a minimum coverage rate of total trade for each trade flow with the EU. With the help of the monthly VAT return data which is taken for picturing the total intra-EU trade (Note: VAT collection is a census), a turnover limit referring to economic operators in EU trade could be determined. This limit ensured a maximum EU total trade loss of 7% for arrivals (intra-EU-imports) or 3% for dispatches (intra-EU-exports) with exclusion of trade underlying economic operators below this threshold. Adjustments of the assimilation threshold are not only caused by changes of the degree of coverage but are necessary because of international economic developments in general, such as economic growth and changes of the structure of export or import activity of economic operators in Austria. The European Commission lowered the minimum degree of coverage for arrivals (intra-EU-imports) with reporting year 2015 from 95% to 93% (RG (EC) Nr. 1093/2013) to achieve administrative simplification and to relieve the PSIs. This aim was sought by the EU and on national level. By this simplification, the burden of reporting economic operators, especially for small and medium sized economic operators, can be limited.

- **Simplification threshold for individual survey characteristics**
  
  There is an additional simplification threshold below which economic operators are exempted from reporting of certain variables (statistical value, mode of transport, statistical procedure). This threshold amounted to €12 000 000 since reporting year 2014.

2.) **EXTRASTAT**

The statistics of extra-EU trade comprise all merchandise traded between the Member States and third countries.

Because of the change in the regulation for EXTRASTAT, from year 2010 orally reported transactions below the statistical threshold of €1 000 are recorded in the list for transmission on the EU List of goods which are exempted by the EC. They no longer belong to relevant data for the foreign trade statistics.

3.2.2 **Non-sample-caused-effects**

Undocumented trade flow

Certain trade flows are excluded from the official foreign trade statistics, for example transactions without commercial character. Commission RG (EC) No 113/2010 and No. 1982/2004 (last amended by Commission RG (EC) 1093/2013) contain a list of movements of goods which are not collected in the statistics ("exemption list", see Annex). These positions largely correspond to each other in both surveys. These include for example legal currency, securities and
from the internet downloaded software. The physical cross-border movement of goods with legal currency is not part of the foreign trade statistics (see “exemption list”). Following a recommendation of Eurostat, beginning with reporting year 2013 the trade flow with CN 7118 90 00 is recorded in foreign trade if such coins are traded above their denomination, because in these cases the aspect of value conservation is more prevalent than the currency character.

**Specific goods or specific movement of goods**

According to the definition of the Community Legislation specific goods or specific movement of goods are goods with particular interpretation of their treatment. These may be associated with their movement as such, with the nature of the goods, with the transaction laying down the movement of goods or with the exporter or importer. Often there are goods categories for which the general guidelines do not fully explain how they should be included or excluded in the trade statistics. This could also be a goods movement category enclosing particular difficulties in terms of data collection.

According to the Community Legislation a “specific movement” is defined as transaction with following goods:

- Complete industrial plant
- Staggered consignments
- Vessels and aircraft
- Parts of motor vehicles and aircraft
- Goods delivered to vessels and aircraft (on-board stocks)
- Offshore installations
- Sea products
- Spacecraft
- Electricity
- Military goods

Special rules are in general applied for the collection or the processing of these movements of goods data. The regulations include largely harmonised rules for INTRASTAT and EXTRASTAT. If harmonised statistical rules at Community level are missing, specific provisions, perhaps available on national level, have to be applied.

**Estimation of the statistical value**

The foreign trade results publish the "statistical values" (see Collection and presentation features, metrics; including definition).

Since reporting year 2013 statistical values above the specific threshold of €12 000 000 per year and flow are collected directly from the PSIs in Austria. Economic operators with imports or exports below this threshold are exempted from self-calculation of the statistical value. An exception to this is trade flow in the course of processing according to the EU regulation. In this case the statistical value has to be reported as the corresponding good’s gross value (see under Subject of statistics). As part of a MEETS project a method was developed which calculates the statistical value from the invoice value with help of factors for those economic operators who are exempted from the calculation of the statistical value or do not report the statistical value voluntarily. These factors for calculation of the statistical value are generated from available declarations data. This method is applied from reporting year 2012.

Economic operators below the threshold are additionally exempted from reporting the mode of transport and the statistical procedure since January 1st, 2002. In preparation of the EU enlargement the threshold was adjusted in 2004 until 2006 from €4 000 000 to €5 000 000, in 2007 to €6 500 000 and in 2010 to €10 000 000. Since reporting year 2013 this threshold is set to €12 000 000.

---

17 Coins, including valid legal currency (excluding medals, jewellery made from coins, collector’s coins of numismatic value, waste and scrap)
18 Modernisation of European Enterprise and Trade Statistics
3.2.2.1 Quality of used data sources
See Plausibility check, verification of data sources.

In order to improve the quality of the data sources and to maintain a high level of accuracy and completeness, ex ante and ex post safeguards are used.

Table 11: Quality assurance measures

<table>
<thead>
<tr>
<th>INTRASTAT</th>
<th>Ex ante</th>
<th>Ex post</th>
</tr>
</thead>
<tbody>
<tr>
<td>With the use of the electronic reporting media, plausibility functions in IDEP and in the Web form are active and inform PSIs about errors in their declaration before sending the message.</td>
<td>After receiving the data at Statistics Austria, a quality assurance of the data takes place, supplementing the plausibility process, through the use of administrative data for comparison purposes. Tax data are based on a census with strict legal regulations and high penalties for misstatements. Their quality can therefore be rated very high.</td>
<td></td>
</tr>
<tr>
<td>The INTRASTAT survey is liable to EU wide and national legislation which is regulated in detail and provides sanctions in case of violation by the economic operators. This ensures data completeness and quality.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXTRASTAT</th>
<th>Like the collection of tax data, the EXTRASTAT data sources of a data collection according to rules of the customs codex are liable to strict regulations and sanctions.</th>
</tr>
</thead>
</table>

3.2.2.2 Coverage (Misclassification, Under-/Over collection)

Misclassification
When allocating the correct CN8 codes, occasionally classification imprecision may occur. This is due to the fact that the Combined Nomenclature contains around 9 400 different codes. The individual codes contain partly only minimal differences in content which can be overlooked by advisors of the reporting economic operator. In addition, the exporting economic operator, who produced the goods in many cases, a product-specific expertise can be expected, while the recipient of the goods may not be informed about the product details. Therefore especially for imports false CN8 coding can occur. One problem resulting from different CN8 coding between exporter and importer of the products is the asymmetry between exports of a certain product from a country and the corresponding imports of the receiving country (see Comparability over time). To provide support for the correct assignment of CN8 codes, economic operators can contact agents for foreign trade statistics in the Statistics Austria by phone, further information on the correct CN assignment can be found in the brochure “INTRA EU Trade Statistics”. Serious errors in CN8 assignments can also be found and corrected after receiving the declaration in the context of the plausibility process.

Survey or publication of the foreign trade statistics at a higher level than the 8-digit CN in order to avoid classification imprecision, would not be in the interest of data users whose queries almost exclusively refer to the lowest level of the degree of details (8-digit level of the CN).

Under-/Over-collection
Complete coverage according to legal definition.

Basic errors are directly related to the up-to-dateness and quality of the foreign trade register. The management of a foreign trade register is mandatory in the EU legislation which is layed down in the national trade statistic law. The quality of the foreign trade register depends on the
data quality from administrative sources such as tax data, data of the business register and the regular technical alignment between the business register and the foreign trade register.

To achieve a high degree of completeness or up-to-dateness in the foreign trade register, Statistics Austria continually performs alignments with extern administrative registers, for example tax data, commercial register and information of the economic operators from the tax declarations. Especially information from economic statistical surveys contributes significantly to updating the register. Because of these alignments and the implementation of the information from foreign trade register, a high degree of completeness can be assumed.

The experiences of various alignments with administrative sources show the following main problem:

- Usage of different reporting rules,
- Different definitions in the systems,
- Statistical variables, such as goods coding by CN, are partly more detailed than administrative data,
- Secondary information from administrative sources underlies another update cycle.

**3.2.2.3 Non-response (Unit non-response, Item non-response)**

The most important aims from Statistics Austria to improve the accuracy are the reduction of non-response and the proportional increase of the electronically transmitted messages.

To increase the degree of completeness of the INTRASTAT survey the control procedures in the INTRASTAT register have largely been automated. Therefore economic operators, who are new in the survey because of their increased or restarted foreign trade activity, can be informed about their existing reporting obligation and the urging of missing messages can be carried out quickly.

In addition, the deadline of t+70 for the transmission of foreign trade data to the European Commission having been defined by EU is largely exhausted in order to capture also the slightly delayed INTRASTAT declarations for foreign trade statistics compilation.

If the obligation of reporting is violated, the relevant economic operators get a reminder according to the national legislation. If Statistics Austria does not receive the outstanding declaration within a month a registered warning (“RSB” warning) with a firm reference to the penal provisions and a deadline follows. If the economic operator does not react to the registered warning, Statistics Austria initiates an administrative penalty proceeding by the responsible authorities. The effectiveness of these actions reflects in a constantly increasing degree of completeness of the survey.

**3.2.2.4 Measurement error (Error detection)**

The deviation between a measured value and the true value of the measurand is called measurement deviation or measurement error. Measurement error on the part of the economic operators can occur for example if the statistical definition and distinction cannot be precisely derived from their records of the economic operator or if they make incorrect declarations. The more economic operators are encouraged to use electronic reporting tools, the less measurement errors will occur, because special plausibility checks will help economic operators to identify the most essential and most applicable measurement errors. Efficient plausibility programs help to detect data collection errors (product specific deviation limits, definition of minimum maximum values, logical relationship between the variables). The agents’ expertise and product understanding have a particular role in detection of measurement errors. Special measurement errors or deviations depend on the particular variable acquired (whether being taken directly from the operating records, or from detailed documents of the economic operator or being estimated). As an example, the correct assignment of traded goods to the detailed positions of the Combined Nomenclature has to be mentioned. Normally the correct assignment is not obvious from the invoice. Further “measurement errors” arise in case of products whose completion takes more than one reporting period, for example the so called staggered consignments according to the special movements. Another error in data recording can occur on the part of economic operators in context of a triangular trade. More information on this topic can be found in the brochure [INTRA EU Trade Statistics](#).
3.2.2.5 Data processing error

Regarding data processing errors see chapter Plausibility check, verification of data sources. Implausible and erroneous data detected by the automatic plausibility check before and after receiving the data, by the error coding and by the data processing application can be corrected. Data processing errors are minimised by an appropriate design of the data validation programs.

3.2.2.6 Model related effects

See Estimation.

3.3 Up-to-dateness and timeliness

Economic operators are obliged to transmit their monthly declarations to Statistics Austria by the 10th working day after the end of the reporting month. When creating the first results for a particular reporting month, the non-responses sum up to approximately 6% of the reporting value. Due to the reminder system these non-responses can be almost eliminated within the next two to three months. Detailed results of foreign trade statistics are available monthly about 9 weeks after expiration of the reporting month. Simultaneously with the first publication of the current month, the also currently revised monthly data of the same reporting year are published (see Publication and Revisions). National publication is based upon the submission deadlines for detailed results to the European Commission which are set by the EU and defined as \( t + 70 \).

3.4 Comparability

3.4.1 Comparability over time

Comparability over time is another important aspect of quality. Amongst others, changes in definitions, coverage or methods have an impact on data comparability at different points in time.

After the significant structural change in 1988, when the product nomenclature was changed with the introduction of the Harmonised System, the Austrian accession to the EU in 1995 and the resulting change in the collection system and its division into INTRASTAT and EXTRASTAT brought about the probably most important change in Austria’s foreign trade statistics.

The changes of definition brought about by this changeover led not only to a structural break in detailed results, caused by changes in the nomenclature (two-character alphanumeric country codes in place of the former numerical coding, codes in accordance with the Combined Nomenclature), changes in characteristics and its values as well as port effects on the analyses of import data by country of origin, but also to a structural break in global results. This change at global level is characterised on the one hand by exempting private individuals from the responsibility for providing INTRASTAT declarations (the exemption of taxable persons below the assimilation threshold is compensated by corresponding estimates for these values) and on the other by shifting the bias by the implementation of INTRASTAT (shifting from the trend of greater exhaustiveness and increased validity of import data in foreign trade statistics connected with customs records towards greater exhaustiveness and increased validity of export data using a collection system closely linked to the VAT system, such as INTRASTAT).

Similar effects occurred in the course of the EU enlargement after Austria’s accession to the EU in the years 2004, 2007 and 2013 referring to trade with the accessed countries. Relating to publications of Austria’s foreign trade data according to community concept (see item International and regional comparability), time series have been affected even more intensely considering changes in partner country definitions (before EU accession “country of origin”, after accession “country of consignment”) and indirect trade of goods. Latter has considerably declined after EU accession of Austria’s neighbours States Czech Republic, Slovakia, Slovenia and Hungary, by a shift to the new external frontiers of the community.

Repairs had been part of foreign trade statistics until a few years ago. The objective of repair is simply to maintain the goods in working order; this may involve some rebuilding, replacement or enhancements but does not change the nature of the goods in any way. Similar to processing transactions, repairs are measured in connection with gross value principle. Declarations have
to refer to total value of the good before and after repair or processing and not only to the added value generated by repair or processing. In the course of clearly differentiate foreign trade in goods statistics from foreign trade of services, the statistical treatment of repairs has been changed. In published EU-data, repairs do not appear in intra-EU trade in goods from 2005 and in trade in goods with third countries from 2006. Repairs were not measured as a separate attribute but measured together with processing transactions. Even though repairs were not relevant in foreign trade statistics for INTRASTAT from 2005, repair of vessels, aircrafts, rail vehicles as well as motor vehicles and trailers were collected separately for the purpose of NA (national accounts) and BoP (balance of payments) until reporting year 2014. In EXTRASTAT repair transactions of all codes were measured or itemized (see Statistische Nachrichten 8/2006) for the same purposes. Contrary to Austria’s national publications, data published from Eurostat do contain repairs of in trade in goods with third countries in the year 2005. For reasons of consistency between INTRASTAT and EXTRASTAT, Austria’s foreign trade statistics categorically did not include any repair activities in 2005.

Other changes, such as the raise of the assimilation threshold for INTRASTAT 1999, 2002, 2004, 2007, 2010 and 2013 which have been compensated by accompanying measures such as estimates for values below the threshold, and also the yearly changes of the Combined Nomenclature, are comparatively insignificant. This yearly changes are traceable through usage of correlation tables.

### 3.4.2 International and regional comparability

The comparability of foreign trade statistics can be affected by different definitions used by the Member States.

The analyses and publication of the results of the foreign trade in goods Statistics for Austrian purposes is done by national concept. Even though special trade system is applied on Austrian national and on EU statistics, these results are not directly comparable as those published by Eurostat refer to community concept. There are two main differences between community concept and national concept, more precisely the allocation of trade by the partner countries and the treatment of goods in transit (see the brochure of INTRA EU Trade Statistic, bulletin „indirect transits in goods “).

For EU purposes, movement of goods between Member States is assessed as intra-trade. Associate imports are declared in connection with the country of consignment. Imports from third countries are declared in connection with the country of origin. This practice avoids double counts. Measuring solely in connection with the country of origin would cause double counts in total EU value if goods with origin outside the EU are imported into the EU and afterwards forwarded to another Member State. Beyond that, several Member States do not collect the country of origin in INTRASTAT. For Austrian purposes it is indeed of importance to analyse movement of goods in connection with the country of origin. For this reason, imports are recorded by country of origin at Statistics Austria. However special analyses and several data base segments also contain results in connection with the country of consignment.

Using national concept in connection with country of origin, a precise inference to the underlying data source (INTRASTAT or EXTRASTAT) by dividing EU-origin and third country-origin is not possible. For example, goods from the United States are shipped to the Netherlands and afterwards forwarded to Austria: In this case, customs clearance is done in the Netherlands and consequently goods enter the internal market. In Austria, goods are assigned to INTRASTAT as they have already entered the internal market. In this context, the Netherlands are quoted as country of consignment and the United States as country of origin. In the data evaluation according to country of origin, these goods are referring to a third country even though data is sourced from the intra-EU data collection system INTRASTAT.

**Indirect imports** denote imports from third countries to Austria, which are not destined to Austria but to any other Member State. **Indirect exports** implicate exports to third countries from Austria, if country of consignment is not Austria but any other Member State. According to national concept, both kinds of movement are perceived as transit trade and therefore are excluded from Austrian foreign trade statistics. However, for EU purposes these movements are han-
dled as imports and exports of the community. For this reason, these transactions are transmitted to Eurostat and are included in Eurostat Statistics.

But also within harmonised data at EU-level, bilateral comparison reveals differences between the reported dispatches (intra-EU-exports) in one country and the corresponding arrivals (intra-EU-imports) of the partner country. Analyses at EU level show, that total EU arrivals (intra-EU-imports) are about five percent beneath total dispatches (intra-EU-exports). Differences in lower level of detail in most cases are considerably higher. To resolve and to remove these asymmetries, a task group has been installed at EU level.

In the early stages, Austrian experience with mirror studies was restricted to those with (former) third countries. Hence, such analyses were done concerning foreign trade with Hungary, Poland and Slovenia. In doing so, an increasing degree of differentiation was detected in connection with increasing geographical distance and deeper level of detail. Since 2009, a yearly, voluntary analyses of asymmetries in INTRASTAT, also called Reconciliation Exercise, is done by Eurostat. This EU-wide exercise is about to improve data quality with the ambition to detect and remove the major intra-EU asymmetries at CN8-level between the Member States while maintaining legal restrictions (such as confidentiality or exchange of detailed data) and to generate learning effects. As reason for data differences mainly incorrect product classifications, incorrect declaration of the partner country and methodological causes (i.e. reports of specific goods or movements, such as industrial plants) has been detected. Figure 8 shows that asymmetries in Austrian foreign trade in goods with partner countries of the European Union were reduced gradually on global level, although the differences on deeper level may be higher. Austrians relative asymmetry level with the European Member States was -1.8% in imports and -1.7% in exports for reporting year 2016.

Figure 8: Yearly relative asymmetry level of Austria with the EU

One reason for asymmetry problems is different value determination for arrivals (intra-EU-imports) and dispatches (intra-EU-exports). The statistical value used for trade data is the value measured at national borders. In case of exports FOB-values are measured, in case of imports CIF-values are used. Regarding to exports and dispatches (intra-EU-exports) FOB-value includes only such additional charges (freight, insurance), occurring within the exporting Member State’s territory. Regarding to imports/arrivals (intra-EU-imports), CIF-value refers to charges occurring outside of the receiving Member State territory. Trading partners with no directly adjoining borders therefore evaluate transactions with different additional costs.

19 Calculation according to the Community concept; source: Easy Comext
3.5 Coherence

Coherence defines how far data from foreign trade statistics can be reliably combined in different ways and for various purposes in other economic sectors.

Information on foreign trade in following fields has to refer to each other:

- National Accounts (NA)
- Balance of payments (BoP)
- Economic Statistics

The collection of data and the compilation of the above mentioned statistics follow recommendations (sources and methods) of different international organisations such as Eurostat, International Monetary Fund (IMF), Organisation for Economic Cooperation and Development (OECD), United Nations (UN), World Trade Organisation (WTO), etc.

For the balance of payments statistics, which is produced by the OeNB (National Bank of Austria), the in foreign trade in goods statistics according to special trade is used as starting material and is adapted according to international principles for compilation of balance of payments statistics. In addition, a FOB-assessment of imports is done. In general, the reported statistical value in foreign trade statistics is CIF (= invoice value including costs of transports and insurance outside the statistical territory) for imports and FOB (= invoice value including costs of transports and insurance within the statistical territory) for exports. The different valuation of imports is justified by the different objectives of both disciplines. Foreign trade statistics represent information about values and the additional costs of the purchased goods in order to estimate an appropriate domestic trade value. Differently, the net value of the goods is important for the position “balance of commodities” of the BoP, because costs of transport and insurance are assigned to another position “services”. The adapted value for trade with goods in the balance of payments is furthermore used for the compilation of the external account in the framework of the NA.

A linkage of foreign trade in goods statistics to production statistics can sometimes lead to problems. In foreign trade statistics there is no difference between trade with in Austria produced goods and trade with so called re-exported imports. Re-exported imports are goods which are imported and afterwards exported. Secondly, detailed data on production according ÖPRODCOM, a national version of PRODCOM list, are available. Foreign trade results are registered according to the Combined Nomenclature. Since the two classifications are not directly matchable, a linkage on an aggregated level according the CPA remains as only alternative. Despite such difficulties a unique linkage to the PRODCOM list is feasible in most of the cases.

The cross-border movement of services is not subject of the foreign trade statistics. Since the first quarter of 2006, the statistics for foreign trade with services is compiled on behalf of the OeNB Austria. This is a quarterly statistics which is - similarly to the foreign trade statistics - collected directly from economic operators that exceed the predefined legal thresholds of imported or exported services. The cross-border physical movement of goods is relevant for the foreign trade statistics in goods, whereas the cross-border movement of non-physical goods is relevant for foreign trade statistics of services. Transactions according to processing and repairs, formerly they were identified from foreign trade in goods statistics and were provided for national accounts and balance of payments purposes. According to the accounting rules of the BPM6 and ESA 2010, the total value of the goods is no longer recorded as a service export or import in the balance of payments, instead only the respective service component (related expenses or revenues for repairs and contract processing) is booked as a service export or import in the balance of payments. It should be noted that repairs from foreign trade in goods statistics were used until reporting year 2013 where they were limited to vessels, aircraft and railway vehicles, motor vehicles, trailers. All other repairs were or are collected through the survey of international trade with services. Except for the different periodicity, significant differences between these two surveys are: (1) The underlying classification which is product orientated according to CN in international trade in goods and specified according to service type in international trade with services. (2) The inclusion of transit trade (see “Statistische Nachrichten 2/2015”) (3) Date of recording the cross-border trade with services. In foreign trade in goods also for processing the physical border crossing is crucial.
For compilation of the supply balance which is used for representation of supply and usage of agricultural production (food and feed), the foreign trade in goods statistic is an essential secondary data source. Therefore about 3,000 agricultural products from CN chapter 1 to 24 and 35 are used. For calculating supply the production and the imports of foreign trade in goods are used. For calculating the usage, the domestic use, the changes in storage and the exports from foreign trade in goods statistics are relevant. For a variety of products the volume of the import/export is converted in balance relevant amounts using technical coefficients.

For example:

- Calculating the sugar content of sugar-containing products
- Calculating manufactured products of the second stage of manufacture into the respective basic product (equivalent)
- Calculation of boneless meat into meat defined according to carcass weight (including bones)
- Calculation of milk products into milk equivalent
4 Outlook

- **Assimilation threshold of €750 000 since reporting year 2015**

  Statistics Austria always tries to keep the burden on PSIs of statistical surveys as low as possible and restrains the required amount of national and international liabilities. The European Commission lowered the minimum coverage degree from 95% to 93% for intra-EU-imports, while the degree for intra-EU-exports remains at 97% with the Regulation (EU) 1093/2013. The creation of this potential relief is a rapid response to the aims of ECOFIN (Economic and Financial Affairs Council), which has taken place in November 2011, to achieve a further burden reduction within INTRASTAT. As a result, EU-wide relief potential was created, which could be achieved in the short term, while a long-term simplification option of a “Single Flow System” within SIMSTAT (Single Market Statistics) was not excluded.

  To pass this burden reduction potential to the Austrian PSIs, Statistics Austria raised the threshold significantly by €200 000 to €750 000. The increase of the threshold was implemented by amending the Trade Statistics Regulation (Federal Law Gazette II, No. 223/2014) of the Federal Minister for Economy entered into force on January 1st 2015. This means that according to evaluations of Statistics Austria, the number of PSIs decreased by 1 800 to 11 600 to reporting year 2015. The threshold increase has small effects on the reported total values, because the trade values of disburdened PSIs amount only to 1-2% of the reported total trade. The share of trade below the threshold, estimated on the basis of the collected data, increases by the same amount as the reported values decrease. Therefore a sufficient quality of the foreign trade statistics is preserved.

- **FRIBS/SIMSTAT/Qualified Single Flow System**

  The efforts by Eurostat respective the Member States for simplification of INTRASTAT mainly concentrating on decreasing the coverage rate or on using of IT-tools in the last years, have been supplemented by discussions on long-term simplification such as a Single Flow approach or the improved use of administrative data. The Single Flow compilation of intra-community movement of goods in their simplest form provides the transition from the previous data collection of both trade flows in all EU Member States to the data collection of only one trade flow (exports) with substitution of the other trade flow (imports) by mirror-image aggregated results of the partner Member States. Already in 2006 Austria developed a relevant working paper on the concept of a “Qualified Single Flow System” (QSFS, see Statistische Nachrichten 3/2007). This concept characterises a collection of partner operator on intra-EU export side and the collection of the country of origin in this trade flow, as well as the increased use of estimation and modelling methods to minimise the significant qualitative problems of a Single Flow System.

  As part of FRIBS – the discussion about a fundamental change in the structure of business statistics with the aim of creating a common framework regulation (Framework Regulation Integrating Business Statistics) for business statistics (which is currently based on a variety of sectorial legislation) – the fundamental concept of a QSFS gained importance, especially because of the SIMSTAT program (Single Market Statistics).
List of Abbreviations

ARIMA  Time series model
BGBI.  Federal Law Gazette (Bundesgesetzblatt)
BoP   Balance of payments
CIF   Cost, insurance, freight
CN    Combined Nomenclature
CPA   Classification of Products by Activity
EC    European Community
ECOFIN Economic and Financial Affairs Council
EDIFACT Electronic Data Interchange For Administration, Commerce and Transport
EEC   European Economic Community
EGR   Euro Group Register
EO    Economic operator
ESVG  European System of National Accounts (Europäisches System Volkswirtschaftlicher Gesamtrechnung)
EU    European Union
FCI   Fisher Chain index
FOB   Free on board
FRIBS Framework Regulation Integrating Business Statistics
FTP   File Transfer Protokoll
GDP   Gross Domestic Product
GEONOM Nomenclature of Countries and Territories for the Foreign Trade Statistics of the Community and Statistics of Trade between Member States
HS    Harmonised System
HSStatVO Trade statistics regulation (Handelsstatistikverordnung)
HSIG  Trade statistics law (Handelsstatistikgesetz)
IDEP  INTRASTAT Data Entry Programm
IMF   Internation Monetary Fund
ISIS  Integradet Statistical Information System (Integriertes Statistisches Informations-System)
ITGS  International trade in goods statistics
NACE  Statistical classifications of economic activities (Nomenclature statistique des activités économiques dans la Communauté européenne)
n.e.s. not elsewhere specified
OECD  Organisation for Economic Co-operation and Development
OeNB  Austrian National Bank (Österreichische Nationalbank)
PSI   Provider of statistical information
QSFS  Qualified Single Flow System
Rev.  Revision
R&D   Research and Development
RG    Regulation
SAD   Single Administrative Document
SBS   Structural Business Statistics
SEA   Single European Authorisation
SIMSTAT Single Market Statistics
SITC  Standard International Trade Classification
STS   Structural Business Statistics Survey
TARIC Integrated Community Tariff of the European Union
TEC   Trade by Enterprise Characteristics
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIN</td>
<td>Trader Identification Number</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>VAT</td>
<td>Value Added Tax</td>
</tr>
<tr>
<td>VIES</td>
<td>VAT Information Exchange System</td>
</tr>
<tr>
<td>VO</td>
<td>Regulation (Verordnung)</td>
</tr>
<tr>
<td>WIFO</td>
<td>Austrian Institute of Economic Research (Wirtschaftsforschungsinstitut)</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
<tr>
<td>ZollR-DG</td>
<td>Customs Law Implementing Act (Zollrechts-Durchführungsgesetz)</td>
</tr>
</tbody>
</table>
List of goods which are exempt from the information to be transmitted to the European Commission Statistics
(valid from reporting year 2010)

- monetary gold;
- means of payment which are legal tender and securities, including means which are payments for services such as postage, taxes, user fees;
- Goods for or following temporary use (e.g. hire, loan, operational leasing) provided all the following conditions are met:
  - no processing is or was planned or carried out,
  - the expected duration of the temporary use was or is not intended to be longer than 24 months,
  - the dispatch (intra-EU-export)/arrival (intra-EU-import) has not be declared as a supply/acquisition for VAT purposes;
- Goods moving between:
  - a Member State and its territorial enclaves in other Member States (INTRASTAT) or third countries (EXTRASTAT) and
  - a Member State and its territorial enclaves of other Member States (INTRASTAT) or third countries (EXTRASTAT) or international organisations.
  - The territorial enclaves include embassies and national armed forces stationed outside the territory of the mother country;
- goods used as carries of customised information, including software;
- software downloaded from the internet;
- goods supplied free of charge which are themselves not the subject of a commercial transaction, provided that the movement is with the sole intention of preparing or supporting an intended subsequent trade transaction by demonstrating the characteristics of goods or services such as:
  - advertising material,
  - commercial samples;
- goods for or after repair and replacement parts that are incorporated in the framework of the repair and replaced defective parts;
- means of transport travelling in the course of their work, including spacecraft launchers at the time of launching.

In addition, only for EXTRASTAT:

- Goods declared orally at customs authorities and either have a commercial nature – if the goods are not exceed the statistical threshold of €1 000 or 1 000 kg – or have a non-commercial nature;
- After the customs procedure of the inward processing relief or converting processing into the release for free circulation transferred goods.
Introduction

There is a great public interest on statistics on high technology, especially data on trade with high technology goods. Export of high technology goods is seen as an indicator of the economic and technological development of a country and its international competitiveness. Exports of high technology goods include not only exports of goods but also investments abroad for research and production, the granting of licenses to foreign companies or the establishment of company in foreign countries.20,21

Methodology

A distinction of high technology goods (to other goods) was presented in a working paper 1997 from Hatzichronoglou.22 First, a summary of all industrial sectors – based on the investigations in ten OECD countries – was divided into four groups (high, medium-high, medium-low, low technology)) according to the technological intensity level. Expenditure on research and development in relation to the output (turnover) was used as allocation criteria for the summary.21,22,23

A product-specific distinction (product approach) of high technology sector was implemented in order to supplement this sector approach. The product approach is based on the SITC Rev. 3 – on the five digit level as lowest structure.20,24 The following presentation of Austrian foreign trade with high technology goods is based on the product approach. To verify harmonisation to Eurostat and also the revision of SITC (Rev.4), a list of classification based on the above mentioned working papers was used. This list was drawn up by the OECD together with Eurostat.24,25

The product approach suits to model trade with high technology goods. There are differences between product approach and sector approach. The product approach shows limits of validity, which are briefly outlined here in order to anticipate misinterpretations.20,26

The differences between both approaches are:

- High technology goods are defined equally for all countries, no matter in which sector these were produced. Therefore a sector in a country can be very high in one country and less technology intensive in another one.26
- In the product approach high technology goods are filtered from all sectors, also if goods are for example produced in a medium technology sector. Simultaneously goods of a high technology sector which are not defined as high technology products are excluded.20,26
- The product approach delimits only high technology products but not for example medium-high/low products.26

---

For interpretation of the numbers it should be noted that high-technology goods can be contained in products which do not correspond to high-technology - this problem is by definition hardly solvable. One example is motor vehicles that are not included in high technology goods although they may contain high technology components.

It should also be noted, that the property „high technology good“ is derived from the end product, no matter how technology-intensive the production of the good is (e.g. raw materials by genetic engineering).\textsuperscript{20}

For interpretation has finally to note that high technology goods – like all foreign trade goods – may be subject of pure foreign trade activities,\textsuperscript{21} which means that exports may include re-exported imports.\textsuperscript{24}

High technology goods according to the product approach distinguish nine product groups: (1) Aerospace, (2) Computers office machines, (3) Electronics telecommunications, (4) Pharmacy, (5) Scientific instruments, (6) Electrical machinery, (7) Chemistry, (8) Non-electrical machinery, Armament.\textsuperscript{21,25}

Statistics on high technology can also be produced via the so-called patent approach (e.g. patent applications).\textsuperscript{24}

**Results and their publication**

Statistics Austria publishes foreign trade data with high technology goods on total level (only available on the German website).

The final results are available in tables on an annual basis in the internet, the preliminary results of the current reporting year on basis of the period from reporting year 2015 on\textsuperscript{27}:

- Foreign trade with high technology goods (HTG), January-December 2015 (final results)
- Foreign trade with high technology goods (HTG), January-December 2016 (final results)
- Foreign trade with high technology goods (HTG), Period 2017 (preliminary results)

\textsuperscript{27} www.statistik.at > Statistiken > Außenhandel > Hauptdaten > Tabellen.
Introduction

Values of time-related data (such as imports and exports in foreign trade) depend, among other things, on the number of working days or on the weekday structure of the observation period. If the trading activity stays the same, the import value or export value is in average higher in months with 31 days than in months with 30 days. On the other hand, shifts in the number of working days and/or weekend days may occur in same-named months (e.g. March 2015 and March 2016).

Calendar effects, which result from different length of consecutive months (quarters), are included in the seasonal component of the underlying time series model because these calendar effects do not change from year to year. Whereas effects which result from a different working day constellation of same-named months assigned to the working day component. For example, January has always between 8 and 10 weekend days. If you consider the two holidays (January 1st and 6th), between 19 and 22 working days add up, assuming a five-day working week. Since months have a fixed length an additional working day in a month means one weekend day or one holiday less. The net working day effect of a month is therefore the difference between the weights of the relevant working days and weekend days of a month. It is different in a leap year where a “real” working day more exists.

Methodology

The working day adjustment of foreign trade data in Statistics Austria takes place via X13-Arima-Seats. This program was developed by the United States Census Bureau and is available worldwide.

An approach with six regressors was chosen for the adjustment. The assumption is that each day has a specific influence on foreign trade values (number of Mondays minus number of Sundays, number of Tuesdays minus number of Sundays, …, number of Saturdays minus number of Sundays). The lowest weights (regression parameter) were found for Saturday and Sunday. A leap year effect was considered in addition to the working days.

Foreign trade values of the country group EU and third countries are adjusted using the direct method. Adjusted import and export values for total foreign trade are generated indirectly from sub-aggregates of the EU and third countries, which provides additivity for the total level.

The Model and regressors are fixed once a year, but all parameters are re-estimated every time they are adjusted. If a new value is added to the time series, the historic values of the working day adjusted time series change. January 2017 was picked for the starting month of the adjustment.

Guidelines and recommendation of Eurostat

The ESS-Guidelines for Seasonal Adjustment of Eurostat provide recommendations for seasonal adjustment of time series.

---

28 X13-Arima-Seats assumes a time series consisting of the following components: a) trend component \(T_t\), b) seasonal component \(S_t\), c) irregular component \(I_t\) as well as d) working day component \(TD_t\). The additive form of the following model is therefore: \(Y_t = T_t + S_t + TD_t + I_t\).

29 If e.g. Friday has a weight of 5% and in this example one Friday less than in the same month the year before would occur, but instead there exists one Saturday more, which would have a weight of 2%, then the adjusted range would change in this case by -3%. (Stand: 22.6.2017).

30 https://www.census.gov/srd/www/x13as/.

31 In X13-Arima-Seats a so-called RegArima-modell is estimated before the actual seasonal adjustment takes place. Here \(y\) denotes the input-series, \(x_t\) are the regressors, \(\beta_i\) are the regression parameters and \(\varepsilon_t\) is the error term, which can be estimated by a stochastic time series model (ARIMA-Modell). For working days, the differences (number of Mondays minus number of Sundays, number of Tuesdays minus number of Sundays, …, number of Saturdays minus number of Sundays) enter the RegArima model as regressors.

32 European Statistical System.
A regression approach for a working day adjustment, where country-specific holiday are considered, is recommended. Information corresponding the adjustment should be available for the public (used software, used method, regression model, leap year effect (yes/no), used calendar, etc.). For an adjustment with X13-ARIMA-SEATS the ESS-Guidelines for seasonal adjustment recommend a time series of seven years on monthly basis to avoid instability problems. Statistics Austria applies the ESS-Guidelines.

**Results and their publication**

Statistics Austria publishes working day adjusted foreign trade data since January 2017 for total, EU and third countries (only available on the German website).

The results are available in two tables on monthly basis in the internet:

- Foreign trade with working day adjustment since 01/2015 (overview): absolute values and change to the same month of the previous year gliding
- Foreign trade with working day adjustment since 01/2007 absolute values; long time series starting with January 2007

---

34 [www.statistik.at > Statistiken > Außenhandel > Hauptdaten > Tabellen.](http://www.statistik.at)
Background and aims:
The Austrian foreign trade statistics is performed as a collection on federal level. Information on foreign trade of certain Austrian regions (federal states) is not directly available for Statistics Austria. In order to reduce the burden on economic operators, this information is neither requested in the INTRASTAT survey nor in the customs declarations which is the basis of EXTRASTAT.

Simple special evaluations which „assign“ foreign trade results to federal states merely by using the respective tax residence of the economic operator are problematic for the interpretation and do not comply with the quality requirements of official statistics. With this method some of the data cannot be regionalised (especially economic operators with tax residence outside Austria, estimations for economic operators without the obligation to report in the INTRASTAT survey, individuals in the customs declaration (EXTRASTAT) and farmers with a tax fixed rate). In addition a simple allocation by tax residence causes transfer or aggregation effects of enterprises in certain regions.

To satisfy the user’s demand for regionalised foreign trade data and nevertheless comply with quality requirements of official statistics, Statistics Austria started a project, requested and financed by the nine federal states and the Austrian Chamber of Commerce (WKO), which aimed at developing a method for regionalisation of foreign trade statistics’ aggregates which satisfy the criteria of official statistics while using additional statistics, more appropriate register information and statistical procedures. The methodological background of this project is briefly described below.

Different compilation steps in the regionalisation
Since the availability of secondary data and the specific characteristics of above mentioned problematic issues are different, a distinction of the corresponding subprojects and sub-steps is important. The following steps and sub-projects have been tackled:

Shifting from tax residence to the company’s headquarter: This general measure was introduced; instead of the tax residence according to the foreign trade register the headquarter according to the enterprise register - to which the foreign trade register has access - was assigned.

Regionalisation of the largest foreign economic operators with no residence in Austria: This was accomplished by analysing individual cases using the Euro Groups Register (EGR); in case connections to Austrian enterprises could be identified this information was used accordingly. For important entities where connections to Austrian economic operators could not be identified through the EGR, the (main) trade relations were researched by either directly contacting the respective enterprise or by utilizing secondary sources. Examples include the imports of tobacco where information on smoking habits were included or in case of vehicles and parts of vehicles the car registration statistics was used. This way 80% of the values of foreign companies could be directly assigned, the remaining part was assigned to the residual mass.

Fiscal unit: An analysis of companies being part of a taxable entity indicated that they send centralized messages for the entire fiscal unit almost exclusively for tax purposes and in most cases send individual INTRASTAT declarations for each member of the fiscal unit; the application of the relevant regionalisation model would affect at maximum 0.009% of the entire foreign trade volume (reporting year 2012). Therefore the decision was made that the application will only be used if the threshold of 0.5% is exceeded.

Economic operators with locations in several federal states: The procedure differentiates depending on the economic sector because of the different situation of secondary data. Units in industry and production are separated by production values from the Short Term Statistics Survey (STS), where the technical production for imports and production sold for exports was used.
The distribution of economic operators from trade and service sectors was made by the annual Structural Business Statistics (SBS) at local unit and business establishment level.

Estimated data for trade below the assimilation threshold: The allocation was carried out by using a model calculation by supplementing missing information of the company’s headquarter from the monthly VAT reports of the economic operators for intra-community movements below the INTRASTAT threshold.

Rest mass: Additionally, the reduced rest mass was divided on the basis of a model calculation procedure by using foreign trade values on CN chapter level which have already been allocated to federal states, as distribution basis for the trade volume of the rest mass.

Statistical confidentiality: The system of passive confidentiality is applied for foreign trade statistics. However, the new preparation method for the foreign trade statistics by federal states creates an autonomous statistical product, where foreign trade data are linked with results of other statistics (STS, SBS). For the latter the rule of active confidentiality applies (all statistical results which have less than three observations have to be kept confidential). Therefore, additionally to the passive confidentiality of foreign trade data, active confidentiality has to be applied on results of the new statistical product “foreign trade by federal states”. This includes corresponding secondary confidentiality measures (“Counter deletion”) preventing disclosure of confidential data by subtraction.

Figure 9: Sequential program flow for the regionalisation of foreign trade data
The idea to compile Foreign Trade Statistics by enterprise characteristics for the purpose of quality improvement was initiated several years ago as part of the design process for a change and renewal of the EU legislation. Information about trading volume and number of enterprises by economic activity (NACE), enterprise size class and trade flow should be compiled in one statistical product. The first linking between Foreign Trade data and the Business Register was created for reporting year 2002. At the beginning these analyses were named “Standardisation Exercise” and were performed on a voluntary basis by the Member States. With the amendment of the INTRASTAT basic regulation No. 222/2009 in the year 2009 as well as with the new EXTRASTAT basic regulation No. 471/2009 in the year 2010, the compilation of “Foreign Trade Statistics by enterprise characteristics” became mandatory.

Three fundamental populations are relevant for the evaluations:

1. Economic operators who are required to report for INTRASTAT.
2. Economic operators below the INTRASTAT threshold who are active in intra-community trade. These economic operators must be calculated on the basis of VAT reports.
3. Economic operators who are active in EXTRASTAT trade.

Requirement for all three groups is the linkability of its members to the Business Register.

The main methodological requirements are shown below:

- Compilation according to the Community concept (see Comparability).
- Trade flow, partner Member States, statistical value according to the standard practice of foreign trade statistics.
- The activity of the economic operator on section-level or two-digit level of the statistical classification of economic activities (NACE) \(^{35}\).
- In case a company is composed of several legal entities treated as independent economic operators in INTRASTAT, the INTRASTAT trade values of these entities are aggregated to the level of the enterprise in the business register. As a consequence, there is a \(N \geq 1\) relationship between the Business Register and the Foreign Trade Register.
- Product classification according to CPA.
- Size class, measured by number of employees.
- Application of general confidentiality provisions which prevent the identification of the underlying economic operators.

The following tables have to be compiled:

- Matching rate between foreign trade register and business register
- Trade by activity sector and enterprise size class
- Share of the largest enterprise according to trade value and economic sector
- Trade by partner Member State and activity sector
- Trade by number of partner Member States and by activity sector
- Trade by commodity and activity sector

\(^{35}\) When evaluating the foreign trade statistics by economic activity sector a direct product allocation to an economic sector is not possible. The NACE is a sector-oriented classification while the CN of the foreign trade statistics is product-oriented. The assignment of an economic operator to an economic activity sector is done by its main activities or by its main trade activities. The trade of this economic operator with products of a different sector is automatically allocated to the respective economic activity sector.
Table 12: Connection between Foreign Trade Register and Business Register

<table>
<thead>
<tr>
<th>Register</th>
<th>Unit</th>
<th>Code</th>
<th>Characteristics</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Register</td>
<td>Enterprises (identification by legal unit)</td>
<td>Identification number of the enterprise register</td>
<td>Activity sector, Employees, ...</td>
<td>1</td>
</tr>
<tr>
<td>Foreign Trade Register</td>
<td>Economic operator (Identification by reporting unit)</td>
<td>VAT-number (INTRASTAT) or National ID for customs purposes (EXTRASTAT)</td>
<td>Trade values</td>
<td>N : 1</td>
</tr>
</tbody>
</table>

Table 13: Coverage of the Foreign Trade Register by the Business Register

**INTRASTAT**

<table>
<thead>
<tr>
<th>Reporting year</th>
<th>Arrivals (Intra-EU-imports)</th>
<th>Dispatches (Intra-EU-exports)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Economic operators</td>
<td>Statistical value</td>
</tr>
<tr>
<td>2008</td>
<td>97.62%</td>
<td>98.85%</td>
</tr>
<tr>
<td>2009</td>
<td>97.58%</td>
<td>99.26%</td>
</tr>
<tr>
<td>2010</td>
<td>99.48%</td>
<td>99.98%</td>
</tr>
<tr>
<td>2011</td>
<td>99.49%</td>
<td>99.98%</td>
</tr>
<tr>
<td>2012</td>
<td>97.19%</td>
<td>99.96%</td>
</tr>
<tr>
<td>2013</td>
<td>97.44%</td>
<td>99.95%</td>
</tr>
<tr>
<td>2014</td>
<td>96.12%</td>
<td>99.93%</td>
</tr>
<tr>
<td>2015</td>
<td>95.32%</td>
<td>99.98%</td>
</tr>
</tbody>
</table>

**EXTRASTAT**

<table>
<thead>
<tr>
<th>Reporting year</th>
<th>Imports</th>
<th>Statistical value</th>
<th>Exports</th>
<th>Statistical value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Economic operators</td>
<td>Statistical value</td>
<td>Economic operators</td>
<td>Statistical value</td>
</tr>
<tr>
<td>2008</td>
<td>98.55%</td>
<td>99.29%</td>
<td>98.72%</td>
<td>96.07%</td>
</tr>
<tr>
<td>2009</td>
<td>98.80%</td>
<td>96.01%</td>
<td>98.82%</td>
<td>94.67%</td>
</tr>
<tr>
<td>2010</td>
<td>99.72%</td>
<td>99.99%</td>
<td>99.83%</td>
<td>100.00%</td>
</tr>
<tr>
<td>2011</td>
<td>99.75%</td>
<td>99.99%</td>
<td>99.85%</td>
<td>100.00%</td>
</tr>
<tr>
<td>2012</td>
<td>99.77%</td>
<td>99.98%</td>
<td>99.87%</td>
<td>99.98%</td>
</tr>
<tr>
<td>2013</td>
<td>99.75%</td>
<td>99.94%</td>
<td>99.81%</td>
<td>99.99%</td>
</tr>
<tr>
<td>2014</td>
<td>98.83%</td>
<td>99.95%</td>
<td>99.55%</td>
<td>99.97%</td>
</tr>
<tr>
<td>2015</td>
<td>98.04%</td>
<td>99.17%</td>
<td>99.22%</td>
<td>99.93%</td>
</tr>
</tbody>
</table>

Results are provided in a summarising document on the website of the European Commission as well as on the free „easy COMEXT“ database.

In addition to the mandatory compilation of foreign trade statistics by enterprise characteristics according to the Community concept, also results according to the national concept are available from reporting year 2008 onwards. (see Statistische Nachrichten 07/2011).
Need and usage of a foreign trade index

Most publications by Statistics Austria on Austrian foreign trade statistics inform about (nominal) trade results with other countries and groups of countries or with goods and groups of goods in absolute form. This also applies to publication of volumes and weights. The absolute values are declared in Euro and the quantity by net mass or other special units. Analyses on market, industry and competition between the economic operators in a particular period and analyses for representation of economic operators may be done with such statistical information. They are therefore useful and necessary for snapshots and short-term studies of economic development.

In addition to the production of foreign trade statistics on basis of their absolute values, foreign trade indices are calculated. Because indices represent relative developments starting from a predefined base, they are mainly used for long-term analyses and for presentation of macroeconomic trends.

The most important data users are institutional users such as the OECD or the OeNB; but the indices are also used in the national accounts. Usually, indices are released in the annual edition of “The Austrian Foreign Trade – Series 2 or Series 1”, in the “Statistisches Jahrbuch” of the Republic of Austria and on the website of Statistics Austria.

Compilation of foreign trade indices – description of the method

Foreign trade indices are calculated in a quarterly period according to the available relevant data. The final results of the indices are scheduled in July of the year following the reporting year. The calculation of the indices starts immediately after the yearly data of absolute trade results are finalised for INSTRASTAT and EXTRASTAT.

Table 14: Criteria for calculation the indices

<table>
<thead>
<tr>
<th>Period</th>
<th>Flow</th>
<th>Countries group</th>
<th>Valuation</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter Year</td>
<td>Import</td>
<td>Total</td>
<td>Unit value index</td>
<td>Fisher</td>
</tr>
<tr>
<td></td>
<td>Export</td>
<td></td>
<td>Value index</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Volume index</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>+ Chain indices</td>
<td></td>
</tr>
</tbody>
</table>

Unit value indices, volume indices and value indices are compiled as part of the foreign trade statistics. The current base year is 2015 and the index on that date is interlinked for each year. The basis is updated every 5 years. Therefore the basis of the index for reporting year 2016 to 2020 will be changed to 2015.

The calculation of the indices in the context of foreign trade requires the definition of relevant transactions. It is generally assumed that all goods traded on the Austrian import and export market are included in the index calculation. In order to avoid erratic index fluctuations due to atypical one-time transactions, a model was developed with the involvement of the advisory board for foreign trade statistics (Fachbeirat für die Außenhandelsstatistik) limiting the incoming data base for index calculation to homogenous and average development of foreign trade representing business. Specifically, it involves the following selection model:
An average value for trading price per transaction is determined. An aggregation per trade flow, economic operator and CN-position is made. A homogeneity test using the variation coefficient is performed. The coefficient limit is 40%. If the coefficient varies more than 40% of the group mean value (Variance > 0.4), the goods’ prices on single record level with highest deviation (up to 60% of the original group total value) are excluded. If the homogeneity criterion is still not achieved, the group is excluded from the index calculation. The homogeneity verification is not only executed with regard to the average values. In the next step the homogeneity is checked with regard to the deviation changes of the average values. If the average price is ten times higher than the value of the previous year or amounts less than one tenth the value of the previous year, the CN group is excluded from the calculation. Generally, if products are excluded according to the homogeneity tests, this exclusion effects only the unit value calculation. The weight of the excluded products is kept for the index calculation. After filtering inhomogeneous values approximately 65% of total trade are currently used for the index calculation. The Unit Value Indices calculation is based on the weights of average prices for the SITC and CPA nomenclature on one- to three-digits level. Therefore the general foreign trade results, which already include the below threshold and missing value estimation, are used. The weight is defined for each CN 8-digit commodity code and for the share of the CN 8-digit on total trade volume. The weighting of SITC and CPA one-digit to three-digit product codes equals the sum of weights of the corresponding CN digit product code.

General foreign trade results including estimations serve as basis for the computation of the corresponding Value Indices per SITC- or CPA-code.

\[
\text{Value Index} = \frac{\text{Statistical Value}_{\text{current year}}}{\text{Statistical Value}_{\text{previous year}}}
\]

The Volume Index results from the Unit Value Index and the Value Index:

\[
\text{Volume Index}_{\text{Fisher}} = \frac{\text{Value Index}}{\text{Average Value Index}_{\text{Fisher}}}
\]

The EU recommends the calculation of foreign trade indices by using the chain Fisher index. This method arises from the geometric mean of the Laspeyres and Paasche indices. These indices differ essentially by the formula-based inclusion of basis and period. Prices of individual goods are weighted with the quantities of the base period in the Laspeyres price index. Therefore the Laspeyres price index acts on the assumption that domestic demand for imported goods and foreign demand for exported goods has not changed. The Paasche index weights on the basis of current consumption habits with quantities or prices of the base year. Since 1995 the chain index is calculated as chain index, independent of the used calculation formula.

Chaining example of reporting year 2020:

\[
\text{FCI}^{36}_{2020/2015} = \text{FCI}_{2019/2018} \times \text{FCI}_{2018/2017} \times \text{FCI}_{2017/2016} \times \text{FCI}_{2016/2015}
\]

\[36\,\text{FCI} = \text{Fisher Chain index}\]
Austrian method and Eurostat

The Austrian method of the index calculation is in line with the method of the index calculation of the EU. The total foreign trade data are transmitted monthly from Austria to the EU because the regulations bind the Member States. Such obligation does not exist for the foreign trade indices. The indices are calculated by Eurostat itself by using the transmitted detail data. Austria models the indices on base of trade flow, economic operator and CN-position. Because of lack of availability to individual economic operators, Eurostat uses country information to determine the indices. Therefore differences may occur between the national indices and the indices created by Eurostat. These variations are not only based on methodological differences in the index modelling, but also on the underlying detail data which is used for the compilation and evaluation.

The national model is proven and achieves qualitative results in the framework of foreign trade indices. This model will be used in future for creation of average value indices and volume indices. The next conversion and chaining on a new base year will take place in reporting year 2021.
Foreign trade index compared to import price index and producer price index for export

The foreign trade index is an average value index which calculates average values per measurement unit (kilograms, pieces, litres, etc.) from quantities and values of the collected products. The development of the unit values can be particularly used to interpret price changes for product groups with a homogenous price structure. Therefore only small differences between unit value index and the real price indices occur in these cases. The unit value is not suitable as an indicator of price trends for product groups with a high value-based variation (differences in quality).

The national accounts use the foreign trade index for the deflation of imports and exports in the current calculation of foreign account. The unit value indices need to be adapted for these purposes. For selected product groups on base of CPA 3-digits real rates of capital goods price index and wholesale price index or producer price information of the agricultural statistics are used. The average value index of the foreign trade statistics is revised for implausible acting change rates in detail results. In this case also the total index is revised. The adaptions are mainly performed at the product groups of rubber and plastic goods, metals and semi-finished metal products, machinery, electrical machinery, medial and measuring instruments. A hybrid index of foreign trade results by incorporating the real price information while maintaining the weighting scheme of the foreign trade statistics. This hybrid index of foreign trade has elements of a price index and unit value elements.

For these purposes the import price index, which is also calculated as a price index by Statistics Austria, is used since 2008. For exports, the producer price index, which is a price index since 2005, reflects the average price development of domestically produced goods sold outside the domestic market within an economic sector. The producer price index is not an all-encompassing export price index, because it captures only industrial/commercial products (e.g. excluding agricultural and forestry products) and excludes exports of non-manufacturing business units such as trade. Both price indices are calculated on the basis of the allocated price information of selected economic operators and with help of results from foreign trade statistics and the production statistics, which is used as weighting base for the indices.
Differences between the foreign trade index, the import price index and producer price index export are briefly summarised as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Foreign trade index</th>
<th>Import price index</th>
<th>Producer price index Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Unit value index (=value/quantity), Volume index</td>
<td>Price index (primary survey)</td>
<td>Price index (primary survey)</td>
</tr>
<tr>
<td>Formula</td>
<td>chain Fisher index</td>
<td>Laspeyres chain index</td>
<td>Laspeyres chain index</td>
</tr>
<tr>
<td>Base</td>
<td>Base 2015=100, five-year change</td>
<td>Reference year 2010=100 With May 12th 2016: Reference year 2015=100</td>
<td>Reference year 2010=100, five-year change</td>
</tr>
<tr>
<td>Sector</td>
<td>ÖNACE Section A - Q</td>
<td>CPA Section A - D</td>
<td>ÖNACE Section B - E36</td>
</tr>
<tr>
<td>Price Differentiation</td>
<td>Unit value per product on CN 8-digit level</td>
<td>CIF-import prices of products of selected CN 8-digits</td>
<td>Net price per main customer, Export country</td>
</tr>
<tr>
<td>Weighting</td>
<td>Final or preliminary foreign trade statistics’ values of the previous year</td>
<td>Final or preliminary foreign trade statistics’ values of the previous year</td>
<td>Exports according to foreign trade statistics (t-4 years)</td>
</tr>
<tr>
<td>Product classification</td>
<td>SITC 3-digits, CPA 3-digits (only on request)</td>
<td>CPA 2-digits CPA 3-digits (on request)</td>
<td>CPA 2-digits</td>
</tr>
<tr>
<td>Trade Flow and Valuation</td>
<td>Import (CIF value), Export (FOB value)</td>
<td>Import (CIF value)</td>
<td>Export (FOB value)</td>
</tr>
<tr>
<td>Data base</td>
<td>Cut off Census</td>
<td>Sample</td>
<td>Sample</td>
</tr>
<tr>
<td>Regions</td>
<td>Total</td>
<td>Euro zone, Non-Euro zone</td>
<td>Euro zone, Non-Euro zone</td>
</tr>
<tr>
<td>Publication</td>
<td>Quarterly results: Quarter + 70 Yearly results: Final: July of the following year Regional breakdown (groups of countries) only on request</td>
<td>Quarterly results: Preliminary: 45 days after the end of the reporting period (t + 45) Final: 135 days after the end of the reporting period (t + 135)</td>
<td>Monthly results: Preliminary: t + 30 Final: t + 60</td>
</tr>
</tbody>
</table>