ISSN 2315-0815

eurostat
Manuals and guidelines

Compilers guide on European statistics on international trade in goods by enterprise characteristics (TEC)

2016 edition

eurostat

eurostat
Manuals and guidelines

Compilers guide on European statistics on international trade in goods by enterprise characteristics (TEC)

2016 edition

eurostat

Europe Direct is a service to help you find answers to your questions about the European Union.

Freephone number (*)**:**
00 800 6 7 8 9 10 11

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

More information on the European Union is available on the Internet (http://europa.eu).

Luxembourg: Publications Office of the European Union, 2016

ISBN 978-92-79-57966-0
ISSN 2315-0815
doi: 10.2785/427820
Cat. No: KS-GQ-16-002-EN-N

Contents

Abbreviations used in this Guide

BR	Business Register
CN	Combined Nomenclature
CPA	Classification of Products by Activity
CPC	Central Product Classification
CSV	Comma Separated Values
DSD	Data Structure Definition
ESA	European System of (national and regional) Accounts
ESS	European Statistical System
FATS	Foreign Affiliates Statistics
GDP	Gross Domestic Product
HS	Harmonised (commodity description and coding) System
ID number	Identity number
ITGS	International Trade in Goods Statistics
NACE	Classification of economic activities (‘Nomenclature statistique des activités économiques dans la Communauté Européenne’)
NSA	National Statistical Authority
PRODCOM	Classification of products produced by the industrial sector
SBS	Structural Business Statistics
SDMX	Statistical data and metadata exchange
STS	Short-Term (business) Statistics
TEC	Trade by Enterprise Characteristics

1 Introduction

International trade in goods statistics (ITGS) play a vital role in the assessment of every economy. Combining them with additional information from other sources, particularly business statistics, significantly enriches them, providing a closer view of traders and their characteristics such as size, sector of economic activity or level of concentration. This allows for a deeper analysis of the impact of trade on employment, production and value added, essential in a globalized world where economies are increasingly interconnected.

The main objective of this Compilers Guide is to provide a comprehensive overview of the compilation of indicators on trade by enterprise characteristics (TEC). It aims to serve as a methodological handbook providing the necessary definitions, instructions and methodological guidance for the regular compilation of TEC statistics. Moreover, it addresses problems encountered when matching trade and business registers and provides recommendations for the treatment of confidential data.

The first part gives a general description of international trade in goods statistics, business statistics and business registers and provides a comparison between them. It is followed by a chapter dedicated to statistics on Trade by Enterprise Characteristics (TEC), along with a description of the concepts and definitions used in their compilation.

The fourth chapter refers to the data linking and the construction of populations. It gives a conceptual description of the Business Register and of the Trade Register and describes the relationship between the two. It then provides information on the reference populations needed for linking trade data with business registers. The fifth chapter focuses on specific cases, where linking seems problematic, and suggests solutions for dealing with them.

The sixth chapter is dedicated to the data compilation of statistics on trade by enterprise characteristics. It provides a conceptual description of the steps to be taken for the compilation, followed by a detailed description of the data requirements, the data structure definition and the validation rules of TEC.

The seventh chapter refers to the principles of passive and active confidentiality. It concludes with a description of the rules that should be followed by the Member States to prevent data disclosure with minimum loss of statistical information. It is followed by a chapter on data transmission and dissemination providing a brief account of the TEC data transmission process and describing in depth the procedure followed for the dissemination of statistics on trade by enterprise characteristics.

The last chapter of the Compilers guide briefly looks into the data quality of TEC statistics.

Finally, the annexes at the end of the document, contain detailed transmission and validation rules, as well as references to the relevant regulations, metadata and methodological documents.

2 International trade in goods and Business statistics

This chapter provides a general description of international trade in goods statistics and business statistics, without making detailed references to methodological issues applied for their compilation. The aim is to get an overall picture of the main objectives and to provide the basis to describe the new domain emerging from the linkage of trade data with business registers. Therefore a description of Business registers as the integral part of information for business statistics is provided, as well as a comparison of the two statistical domains and the business registers.

2.1 International trade in goods statistics (ITGS)

ITGS aim to address questions on the products which are imported from or exported to countries. Hence, they describe flows of goods traded between EU Member States as well as between Member States and all non-EU partner countries.

The compilation of ITGS is based, to a large extent, on harmonised concepts and classifications. Any produced indicators are used by a wide range of public and private sector decision makers. ITGS can provide valuable information in order to:

- evaluate the progress of the Single Market and the integration of the European economies;
- develop a common commercial policy framework through bilateral and multilateral negotiations;
- provide valuable information to the balance of payments and national accounts
- assist European companies to evaluate market developments and define their commercial strategy.

ITGS consist of detailed multidimensional data measuring the traded goods between two countries in terms of trade value and quantities (net mass and supplementary unit). On top of the standard dimensions – reporting country, partner country, product code, flow and period - other categorising variables like nature of transaction or mode of transport are collected. Data collection is carried out at the most detailed level of data which allows compiling final statistics with different levels of classifications.

ITGS are split into a) intra-EU trade, which is the trade of goods between Member States in terms of arrivals and dispatches and b) extra-EU trade, which is the trade of goods in terms of imports and exports between a Member State and a non-member country.

2.1.1 Intra-EU trade

Statistics related to the trade of goods between Member States of the European Union are based on the Regulation (EC) No 222/2009 of the European Parliament and of the Council amending Regulation (EC) No 638/2004. They are collected via the Intrastat system which came into operation on 1 January 1993 when it replaced customs declarations as the source of trade statistics within the EU.

The main characteristics of the Intrastat system are:

- to collect information directly from traders: the traders provide a summary monthly declaration of their trade (dispatches and arrivals of goods) to the national statistical authorities;
- to have a close link with the VAT system related to intra-EU trade: the VAT declarations on intra-Community supplies and purchases form the administrative basis which, on the one hand, defines the scope of intra-EU trade statistics, and on the other hand, allows ensuring data completeness and accuracy;
- to reduce the burden on traders, while preserving an acceptable quality of statistical information: a system of thresholds is introduced in which traders under a predefined value provide limited or no information on intra-EU trade. These thresholds are set at a level that ensures that the value of at least 97% of the total dispatches and at least 93% of the total arrivals of the relevant Member State's taxable persons is covered.

Intra-EU trade statistics are compiled on a monthly basis, while the respective information is generally recorded in the calendar month the goods are traded. The reference period is the calendar month during which the chargeable event occurs. In particular, Member States may assign the reference period to a given month on the basis of the date on which VAT becomes chargeable on intra-Community acquisitions.

2.1.2 Extra-EU trade

Statistics related to the trade of goods between EU Member States and non-EU member countries are based on the Regulation (EC) No 471/2009 of the European Parliament and of the Council. They record goods imported and exported by Member States of the European Union.

The customs declaration is the standard data source from which the statistical data are obtained for the compilation of extra-EU trade statistics. When traders fulfil their reporting obligations to the Customs authorities, they provide at the same occasion the necessary statistical data.

Extra-EU trade statistics are thus based on the use of administrative data. This ensures that the basic data collection is complete and based on sound and established administrative procedures. Customs data are also much aligned with the statistical concepts and definitions.

Extra-EU trade statistics are compiled monthly with the reference period being the calendar month in which the goods are imported or exported. In practice however, the information is assigned to the month in which the customs authority accepts the declaration.

2.2 Business Statistics

Business statistics aim to provide harmonised and reliable information on the economic activity, the performance, the international transactions, and research and development of businesses as well as on the structural changes that take place in the world's economy. Business statistics is a general term referring to all statistics describing specific aspects of the business economy. Data in business statistics are derived from business registers, statistical surveys or other administrative sources and cover a wide range of indicators and different user needs. In the following sections, a description of business registers as the integral part of information for business statistics is provided as well as a description of a number of business-related statistics which use business registers as part of the production process.

2.2.1 Business registers

Regulation (EC) No 177/2008 of the European Parliament and of the Council establishes a common framework for Business Registers (BR) for statistical purposes. It replaces the old Regulation (EEC) 2186/93 which set out for the first time a harmonised framework with common definitions, characteristics and scope. Business registers are elementary tools for harmonising the compilation processes of business statistics. The latest revision of the Business Register Regulation responded to new needs, most notably to provide larger coverage of the whole economy and to address needs caused by globalisation.

The standard objectives for business registers for statistical purposes include:

- Coverage: Business registers should cover as much domestic economic activity (in terms of a proportion of gross domestic product (GDP)) as possible.
- Quality: A high quality Business register improves the efficiency of the national statistical system and helps to reduce the burden on enterprises.
- Authority: Business registers should be recognised as an authoritative source for data on business populations and demography. This implies the use of a Business Register as a sampling frame for all business surveys and also in other domains within the national statistical system.

Business registers for statistical purposes are mainly used for:

- The detection and construction of statistical units. The units used for statistical observation or analysis may represent real economic structures but do not always correspond to legal or administrative units. The role of the business registers is to function as a bridge between administrative and statistical units.
- As a tool for the preparation and coordination of surveys and for grossing-up survey results. The most obvious use for business registers is to supply sample and population data necessary for conducting surveys.
- As a source for statistics and analysis of business population and its demography. Despite that business registers cover only few economic variables they cover the whole spectrum of the economy. Thus, some basic data (number of enterprises, employment and turnover) can be drawn from them. They can also be used to obtain data on business demography changes of the enterprises (births, deaths, survival and growth) or to provide a breakdown according to institutional sectors
- As a tool for the mobilisation of administrative data. The use of administrative data in the production of statistics has gained importance as a way to decrease burden on enterprises.

- As an integration and dissemination tool. Business registers serve as a tool to integrate statistical data from different statistical authorities. Depending on the national legislation and practices, they can also be used for disseminating data on the business population as such.

Business registers for statistical purposes shall be compiled of:

a. **statistical units,** which include:
   - all enterprises that carry on economic activities and contribute to the gross domestic product (GDP);
   - the local units dependent on the enterprises;
   - enterprise groups.

b. **administrative units**, which are the legal units of the enterprises (VAT and other tax, company registration etc.).

For each of the above mentioned units, business registers contain information which falls into the following categories (variables):

- identification characteristics (identity number, name, address, value added tax etc.);
- demographic characteristics (date of commencing and cessation of activities);
- economic/stratification characteristics (economic activity, number of employees, number of persons employed, turnover etc.);
- characteristics associated with the control and ownership relations between units (identity number of resident legal unit, country of registration, VAT number of non-register legal unit etc.);
- links with other registers (reference to the register of intra-Community operators, references to the balance of payments register etc.).

The maintenance of business registers is normally based on the effective use of various administrative and statistical data sources. The frequency of updating the business registers depends on the kind of unit, the variable considered, the size of the unit and the source generally used for the update. As a general rule, key characteristics such as economic/stratification variables should be updated annually. Characteristics which are considered to evolve rapidly or are regarded as key units by users should be updated more frequently. Examples include large and complex units and units classified to economic activities which are known to change frequently.

2.2.2 Structural Business Statistics (SBS)

Structural Business Statistics (SBS) describe the structure and evolution of the activities of businesses. SBS can be used to address various questions related to:

- the creation of new jobs within a specific economic activity sector;
- the identification of a structural change, e.g. a shift from industrial to services sector;
- the estimation of the average wage of an employee in a specific activity sector;
- the calculation of the productivity in a specific sector of the economy and the amount it accounts for in total profitability.

Data on SBS are collected through the Business Register, statistical surveys or administrative sources. Based on Council Regulation (EC, EURATOM) No. 58/97, SBS covered the 'business economy' sector including industry, construction and services, while statistics on agriculture, forestry and fishing, public administration and (largely) non-market services such as education and health were not included.

On 11 March 2008, the original regulation was recast by Regulation (EC) No. 295/2008 of the European Parliament and of the Council and the implementing Commission Regulation (EC) No. 250/2009. According to the recast Regulation, Structural Business Statistics move to the new classification NACE Rev. 2 of economic activities covering all market activities in Sections B to N and P to S.

The SBS Regulation consists of a number of modules according to which the following statistics are compiled:

- annual structural statistics (Annex I)
- structural statistics in industry (Annex II)
- structural statistics in trade (Annex III)
- structural statistics in construction (Annex IV)
- structural statistics in insurance (Annex V)
- structural statistics on credit institutions (Annex VI)
- structural statistics on pension funds (Annex VII)
- structural statistics on business services (Annex VIII)
- structural statistics on business demography (Annex IX)

along with a flexible module for the conduct of a specific and limited ad hoc data collection of enterprise characteristics.

Structural Business Statistics are compiled annually for a large number of variables, such as turnover, production value, value added, wages and salaries, total purchases of goods and services, number of employees etc. These statistics are broken down according to economic activity and, in some cases, they are divided into size classes for each group of economic activity.

Statistics on business demography are based on the detailed module (IX) of the SBS Regulation (EC) No 295/2008. According to this module, business demography statistics describe the life cycle of the enterprises, i.e. the birth, survival (for up to five years after birth) and death of enterprises. Data on business demography can be used to analyse the dynamics and innovation of different markets, such as entrepreneurship and contribution of newly-born enterprises to the creation of jobs.

The produced business demography indicators such as birth rates, two-year survival rates and death rates form part of the Structural Indicators which are used to monitor the progress of the Lisbon strategy. Data on business demography are collected directly from the business Register and since the recast of the regulation 295/2008 on Structural Business Statistics their collection is mandatory and part of the regular annual data collection of structural business statistics.

2.2.3 Short-Term Business Statistics (STS)

Short-term business statistics (STS) describe short-term economic trends in relation to the business cycle of the economy. They are based on Council Regulation (EC) No 1165/98 amended, amongst others, by Regulation (EC) No 1158/2005 of the European Parliament of the Council. According to the Council Regulation, STS include many short-term indicators that are provided in the form of indices (production, turnover, number of persons employed, wages and salaries, construction costs etc.).

STS indices cover four major domains: industry, construction, retail trade and other services, which are defined according to the statistical classification of economic activities in the European Community NACE Rev. 2 covering all market activities in Sections B to N. They are used for the analysis of the most recent developments within a particular industry, construction or service, and serve as a tool for formulating and monitoring the economic and monetary policy of the European Union and the euro area.

Data on STS are generally supplied with a monthly or quarterly frequency. They are derived from surveys of businesses, administrative sources, as well as from other sources outside the national statistical systems.

2.2.4 Statistics on Manufactured Goods (Prodcom)

Statistics on the production of manufactured goods are based on Council Regulation (EEC) No 3924/91 on the establishment of a Community Survey of industrial production. Prodcom statistics measure the production sold and the volume of actual production, produced by enterprises whose main or secondary activity lies in manufacturing (NACE Sections B and C). The products are classified according to the PRODCOM nomenclature. Data on Prodcom statistics are mainly derived from surveys of businesses. Prodcom statistics are compiled annually.

The main difference with the SBS is that Prodcom statistics relate to the products rather than to the activities.

Prodcom statistics differ also from the international trade in goods statistics; the latter are considered as event-based statistics where the product is registered as a ‘trade transaction’ each time it crosses the border between the exporting country and the importing country. Another characteristic is that the same product can be exported and imported several times, giving rise to the recording of several trade transactions. This is different to the situation in Prodcom statistics where a product cannot be produced more than once.

2.2.5 Foreign Affiliates Statistics (FATS)

The legal basis for the provision of foreign affiliate’s statistics (FATS) is the European Parliament and Council Regulation (EC) No 716/2007. FATS are split into ‘inward statistics on foreign affiliates’ and ‘outward statistics on foreign affiliates’. The former describe the activity of foreign affiliates resident in the compiling country, while the latter describe the activity of foreign affiliates abroad controlled by the compiling economy.

Inward FATS aim to assess the impact of foreign-controlled enterprises on the European economy and in particular, to measure the impact of foreign control on employment, wages and productivity. Outward FATS measure the commercial presence through affiliates in foreign markets. In particular, outward FATS data measure the turnover, number of persons employed and number of foreign affiliates controlled from EU Member States.

Data on inwards FATS are collected from statistical surveys, the Business Register and administrative sources, while data on outward FATS are collected by surveying resident enterprises.

2.3 Comparison of trade statistics, business statistics and business registers

ITGS aim to describe trade flows between countries. They are monthly statistics with a detailed breakdown by commodity and partner country. They do not provide information on the underlying characteristics of traders such as their economic activity or number of employees. Business statistics, on the other hand, contain a vast amount of data on the structure and evolution of businesses. They provide a large number of variables such as turnover, production value, value added, wages and salaries, total purchases of goods and services, number of employees etc., but they only contain limited information on international trade.

The main conceptual and methodological characteristics of international trade and business statistics as well as business registers are summarised in the following Table 1.

Table 1: Summary of methodological characteristics of trade statistics, business statistics and business registers

Methodological characteristics	Trade statistics	Business statistics	Business Register
Aim / purpose	To describe trade flows of goods between countries.	To describe the structure and evolution of the activities of businesses.	To constitute a sample frame and a source of information for the statistical analysis of the business population and its demography.
Data sources	Intrastat survey (directly from traders) and customs declarations.	• Business registers • Statistical surveys • Administrative sources	Administrative and legal files, statistical surveys.
Coverage	All imports and exports of goods that add to or subtract from the stock of material resources of a country	• SBS: NACE Rev. 2 Sections B to N (Industry, Construction, Trade and Services) and P to S (education to other service activities) • STS: NACE Rev.2 Sections B to N • Prodcom: NACE Rev.2 Sections B and C	All enterprises that carry on economic activities and their legal units, as well as the local units dependent on these enterprises.
Statistical unit	No statistical unit.	The enterprise or local unit (for regional statistics), kind-of-activity unit.	• Local unit • Enterprise • Enterprise group • Kind-of-activity unit
Classifications	• Product or Commodity (CPA, CN8, HS, SITC) • Country (GEONOM)	• Economic activity (NACE) • Employment size-class • Product (Prodcom) • NUTS (for regional statistics)	• Economic activity (NACE) • Employment size-class • NUTS
Reference period	The calendar month of export or of import of the good, the calendar month during which the chargeable event occurs for the goods on which VAT becomes chargeable, or the calendar month during which the declaration is accepted by customs where the customs declaration is used as data source.	The calendar year (fiscal year) for SBS, Prodcom, FATS and the month or quarter of the calendar year for STS.	The calendar year (fiscal year).
Frequency	Monthly	Annually except STS which are compiled monthly or quarterly .	Depends on the kind of unit, the variable considered, the size of the unit and the source generally used for the update.

Source: Eurostat

3 ITGS by Enterprise Characteristics

In order to find out which kind of businesses are behind trade flows, a new domain started to be developed in 2005, namely Trade by Enterprise Characteristics (TEC). It describes the trade of goods between countries from the viewpoint of the enterprises.

3.1 Objectives

The main objective of TEC is to bridge two major statistical domains which have traditionally been compiled and used separately. It aims to complement the traditional ITGS by changing the viewpoint from products to traders and applying the concepts and definitions of business statistics. Specifically, this new domain was created to answer questions such as:

- What kind of businesses are behind the trade flows of goods?
- What is the contribution of a particular activity sector to trade?
- What is the share of small and medium-sized enterprises to total trade?
- What is the share of enterprises that trade with a certain partner country and the amount of trade value they account for?

For this purpose, the trade in goods between countries is broken down by economic activity, the size-class of enterprises, trade concentration, geographical diversification and products traded. The derived statistical information is meant to benefit:

a) the users of trade statistics, by providing new information on the traders' profile and
b) the users of business statistics, by providing complementary information on the trade of the enterprises.

The new information is then used to carry out more sophisticated kinds of analyses, e.g. to evaluate the role of European companies in the context of globalisation or to assess the impact of international trade in goods on employment, production and value added, which is essential in a globalised world where economies are increasingly interconnected.

3.2 Institutional Framework

Up to reference years 2007 and 2008, data were collected on a voluntary basis. However, from reference year 2009 onwards and according to the adoption of the new legal acts, the collection of data on trade by enterprise characteristics has been mandatory. Paragraph 8c of Council Regulation (EC) No 222/2009 on Community statistics relating to the trading of goods between Member States and article 6 of Regulation (EC) No 471/2009 on Community statistics relating to external trade with non-member countries, specify that national authorities shall compile annual statistics on trade by business characteristics.

Specifically, article 13a of Commission Regulation (EU) No 96/2010 on Community statistics relating to the trading of goods between Member States, as regards the simplification threshold, trade by business characteristics, specific goods and movements and nature of transaction codes, specifies that:

'National authorities shall compile annual statistics on trade by business characteristics. The statistical units shall be enterprises as defined in the Annex to Council Regulation (EEC) No 696/93. Statistical units are constructed by linking the identification number allocated to the

party responsible for providing information pursuant to Article 9(1)(a) of Regulation (EC) No 638/2004 with the legal unit of the Business Register in accordance with the variable 1.7a referred to in the Annex to Regulation (EC) No 177/2008 of the European Parliament and of the Council'.

The linking is described in detail in chapter 4, where the conceptual structure of register linkage is provided.

3.3 Scope of TEC

The scope of TEC is the same as for monthly trade statistics. TEC should be compiled according to the Community concept and it consists of both intra-and extra-EU trade flows.

Intra-EU trade statistics include:

- Community goods leaving the Member State of dispatch for a destination in another Member State (intra-EU exports) or entering the Member State of arrival after being initially dispatched from another Member State (intra-EU imports);
- Goods imported into a Member State under the customs procedure of inward processing or processing under customs control which are subsequently transferred to free circulation in another Member State;
- Specific movements or goods belonging to the scope of intra-EU trade statistics.

Extra-EU trade statistics are based on the special trade system, which means that goods from a non-EU country which are received into customs warehouses are not recorded in ITGS unless they subsequently go into free circulation in the Member State of receipt (or are placed under the customs procedures for inward processing). Similarly, outgoing goods from customs warehouses are not recorded as exports. Specific movements or goods belonging to the scope of extra-EU trade statistics are also included.

3.4 Concepts and Definitions

In this sub-chapter, a description of concepts and definitions related to TEC is provided. It includes the definitions of:

- trade value
- partner country
- product
- economic activity sector
- number of employees
- type of trader
- type of ownership
- exports intensity

The rational for limiting the description of existing concepts and definitions related to trade statistics and business statistics to the selection below only lies in the fact that these concept and term definitions will be used for the compilation of TEC. A wider range of trade and business related concepts and definitions can be found in the 'User guide on European statistics on international trade in goods' and in RAMON, Eurostat's metadata server.

3.4.1 Trade value

Definition: Trade value is the value of traded goods. It is calculated at national frontiers and as a FOB (free on board) basis for exports and dispatches and a CIF (cost, insurance, freight) basis for imports and arrivals. Hence, only incidental expenses (freight, insurance) are included and they are incurred for:

- exports and dispatches: in the part of the journey located on the territory of the Member State where the goods are exported from;
- imports and arrivals: in the part of the journey located outside the territory of the Member State where the goods are imported to.

3.4.2 Partner country

Definition: For dispatches and exports it is the country of destination of the goods. That is the last country to which it is known that, at the time of dispatch/ export, the goods are to be delivered. For imports, the definition of the partner country differs between Intrastat and Extrastat. For extra-EU imports it is the country of origin of the goods; for intra-EU arrivals it is the country (EU Member State) of consignment of goods.

Context: Trade flows are broken down by partner country, in accordance with the 'Nomenclature of countries and territories for the international trade statistics of the Community and statistics of trade between Member States', known as the 'Geonomenclature'.

3.4.3 Product

Definition: The outcome of economic activity and the generic term used for goods and services.

Context: Product classifications are designed to categorise goods and services that have common characteristics. They provide the basis for preparing statistics on the production, consumption, international trade and distributive trade. However, the scope of TEC is limited to the trade in goods.

3.4.4 Economic activity

Definition: It is any activity consisting in offering goods and services on a given market. An activity is characterised by an input of products, a production process and an output of products. In other words, an economic activity is said to take place when resources such as equipment, labour, manufacturing techniques, information networks or products are combined, leading to the creation of specific goods or services.

Context: Classifications of economic activities are designed to categorise data that can be related to the unit of activity. They provide the basis for preparing statistics of output, the various inputs to the production process, capital formation and the financial transactions of such units. Economic activities are classified according to NACE, the classification used to

classify economic entities (enterprises, local units and similar statistical units). Within the international trade statistics, the NACE classification refers to the economic activity of traders, i.e. enterprises that are active in international trade. In the following section we describe in detail the revised version of the economic activities classification, namely the NACE Rev.2 classification.

3.4.5 Number of employees

Definition: It is defined as the number of those persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. A worker is considered to be a wage or salary earner of a particular unit if he receives a wage or salary from the unit regardless of where the work is done (in or outside the production unit).

The number of employees is categorised according to the following groups:

- paid working proprietors;
- students, who have a formal commitment whereby they contribute to the unit's process of production in return for remuneration and/or education services;
- employees engaged under a contract specifically designed to encourage the recruitment of unemployed persons;
- home workers if there is an explicit agreement that the home worker is remunerated on the basis of the work done and they are included on the payroll.

Context: The number of employees is a mandatory variable to be recorded in the business registers for each enterprise (variable 3.9a) and local unit (variable 2.10a). According to the BR Regulation, the intention is to use the situation at the end of the year. However, as the end date approach is not harmonised the annual average can also be used as reference.

Note: Only the number of employees for each enterprise has to be reported for the TEC data compilation, since this is the only unit to be used as the statistical unit. Enterprise groups are not considered as statistical unit, thus each enterprise of the group has to be treated separately.

3.4.6 Type of trader

Definition[1]: The type of trader specifies the type of trade activity of the trader. It indicates whether the enterprise is involved only in exports or only imports or trade in both flows.

Context: The type of trader aims to describe the heterogeneity of enterprises according to their involvement in trade.

(1) TEC specific definition

3.4.7 Type of ownership

Definition[1]: The type of ownership is referring to the concept of control and to the affiliation of an enterprise. It indicates whether an enterprise is domestically or foreign controlled and if it is domestically controlled, whether it has affiliates abroad or not. In other words, the type of ownership refers to the delineation of enterprise groups and categorizing them. In this context, the concept of control prevails as referred in article 3 (4) of the Business Register Regulation (EC) No 177/2008. This Regulation applies the European System of Accounts (ESA) definition for the control as set out in point 2.26 of Annex A to Regulation (EC) no 2223/96. The concept of control prevails also in the FATS Regulation and is defined as follows:"'control' shall mean the ability to determine the general policy of an enterprise by choosing appropriate directors, if necessary. In this context, enterprise A is deemed to be controlled by an institutional unit B when B controls, whether directly or indirectly, more than half of the shareholders' voting power or more than half of the shares". This definition is consistent with the ESA definition.

Context: The type of ownership aims to describe the heterogeneity of enterprises according to their global status. A distinction of enterprises into domestically and foreign controlled enterprises has specific interest because of the important role of foreign affiliates. Furthermore, if domestically controlled enterprises with own affiliates abroad are further distinguished from all domestically controlled enterprises, the population all of multinational enterprises can be identified.

3.4.8 Exports intensity

Definition[1]: The exports intensity refers to the share of exports of turnover (ratio between exports and turnover).

Context: Exports intensity categorises enterprises according to the importance of foreign markets in their sales. The recent developments in the area of global value chains have raised a question on the heterogeneity of enterprises. It has been traditionally assumed that enterprises in the same activity sector are homogenous in terms of their productivity as well as in generating value-added and employment. However, this may not be a valid assumption any more in the globalised economy as productivity, value-added and employment may depend on the international orientation of enterprises, i.e. their involvement and position in the global value chains. Enterprises with high exports intensity are often also large-scale importers.

([1]) TEC specific definition

3.5 Classifications

3.5.1 Classification of products

There are two categories of products/goods classifications. Those products whose classification criterion is:

- the industrial origin of goods, which is related to the classification of economic activities (NACE) and
- the material of which the goods are made, which originates from the requirements of customs and international trade statistics with links to the industrial origin of goods.

In the former case, each product is assignable to a single heading of the classification of activities. It is therefore allocated to the economic activity which produces it. This results in a classification which is symmetrical to the classification of economic activities, namely the Classification of Products by Activity (CPA).

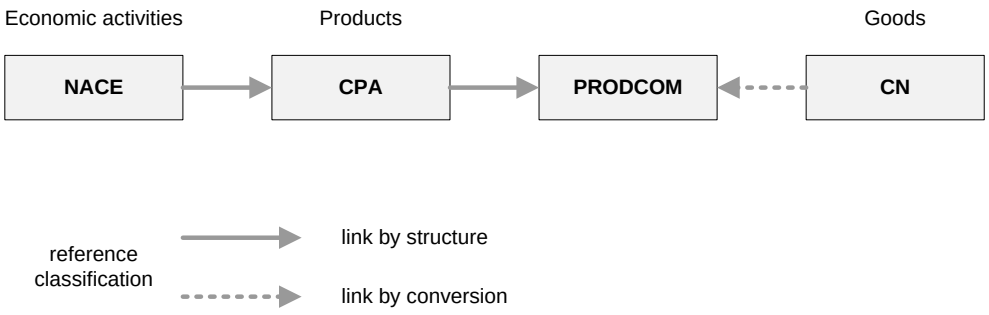
In the case where product classifications are mainly structured according to the material of which the goods are made, products have their historical origin in the requirements of customs and international trade statistics. This does not necessarily mean that they do not take some account of the industrial origin of the goods.

As the TEC domain aims to categorise trade flows according to economic activities, product classifications which are based on the industrial origin of the goods are more suitable for analysis than classifications based on material of goods. For this reason, CPA is used as the product classification in TEC.

A further product classification related to the CPA which is used for studying industrial production is PRODCOM. The conceptual connection between CPA, NACE, PRODCOM and CN is described in Figure 1. As it is shown, NACE is linked to CPA as a reference classification since each product is the outcome of the economic activity. CPA is in turn the reference classification for PRODCOM, whose headings are derived from CN.

A detailed description of the above mentioned classifications and their linkage is given in the sections below.

Figure 1: Conceptual association between CPA, NACE, PRODCOM and CN



3.5.1.1 Combined Nomenclature (CN)

The Combined Nomenclature (CN) is the classification used within the EU for the purposes of collecting and processing international trade statistics (both intra- and extra-Community). CN is based on the Harmonised commodity description and coding System (HS). The HS uses a six digit numerical code for the coding of products and the Combined Nomenclature is further breaking down the coding into an eight digit level, according to Community needs.

The CN is updated once a year to reflect changes in the development of technology and trade exchanges. More substantial changes take place every five or six years with the revision of the HS.

3.5.1.2 Statistical classification of products by activity (CPA)

The statistical classification of products by activity (CPA) is the European version of the United Nations' Central Product Classification (CPC). Similar to the CPC, the CPA aims to serve as an instrument for assembling and tabulating all kinds of statistics requiring product detail. However, it differs (from the CPC) not only at the level of detail but also in its structure.

The CPA is structured according to the industrial origin of goods criterion by using NACE as the reference classification. This means that the CPA is used in such a way that each product heading is assigned to a single heading of the NACE classification.

CPA version 2008, is based on Regulation (EC) No 451/2008 of the European Parliament and of the Council. According to this Regulation, the structure of the revised CPA 2008 corresponds up to the fourth level to the structure of NACE Rev. 2. This makes the two classifications 'symmetrical' on their structure. Consequently, CPA 2008 has the same hierarchical structure as NACE Rev. 2.

3.5.1.3 CPA and CN relationship

Although different in structure, CPA and CN come close to each other at the lower level of classifications. A comparison between these classifications is possible through the correspondence tables which describe the links between classifications at the most detailed level. Even if the correspondence tables do not provide a textual explanation, they can be used as a tool for the interpretation of the relevant classifications. For instance, if the classification in CN is known, the corresponding CPA item can easily be found.

3.5.2 Classification of economic activities

3.5.2.1 NACE Rev.2 – Statistical classification of economic activities

NACE Rev.2 is the European version of the International Standard Industrial Classification of all Economic Activities (ISIC Rev. 4). It is based on Regulation (EC) No 1893/2006 of the European Parliament and of the Council.

In NACE Rev.2, which replaced NACE Rev1.1, new concepts have been introduced and the level of detail has been increased (from 514 to 615 classes) to reflect different forms of production and the emerging of new industries. The increase in detail is particularly visible at the highest level of classification for service-producing activities, while for other activities, such as agriculture, it affects mostly the lower level of the classification. Therefore, NACE

Rev.2 provides a better picture of the overall economy and facilitates international comparisons. Simultaneous efforts have been made to maintain the same structure and codification system as in NACE Rev 1.1., so that the overall characteristics of NACE remain unchanged. The structure of NACE Rev. 2 is illustrated in Table 2 below.

Table 2: Architecture of NACE classification

Nomenclature	Level of breakdown	Code	Number
NACE Rev.2	Section	Alphabetical letters A to U	21
	Division	Two-digit numerical code	88
	Group	Three-digit numerical code	272
	Class	Four-digit numerical code	615

Source: Eurostat

The activity sector needs to be recorded in the Business Register for each enterprise, local unit and enterprise group. Principal activity code at NACE 4-digit level (variable 3.6) is a mandatory variable for enterprises. In addition, secondary activities (variable 3.7), if any, are conditional variables for enterprises which are subject to surveys. Only the principal activity should be considered in TEC. However, the secondary activities may be useful additional information for problematic cases (see chapter 5, specific cases).

3.5.2.2 CPA and NACE classification

As previously mentioned, the CPA is structured in such a way that it uses the NACE as the reference classification, i.e. each type of goods (or services) is produced by one and only one activity as defined in NACE. This link between the CPA and NACE can be seen in the coding, where at all levels of CPA, the coding of the first 4 digits is identical to that used in NACE.

4 Data linking and construction of populations

This chapter provides a description of the conceptual structure of business registers and its units (both administrative and statistical) and of trade registers. It further looks into the linkage between the registers as well as the definition of the target population to be covered for the compilation of statistics on trade by enterprise characteristics.

4.1 Conceptual structure of the Business Register

Business registers play an important role in the compilation process of business statistics. They detect and construct the active population of statistical units from administrative (legal) units. Statistical units and administrative units have different purposes.

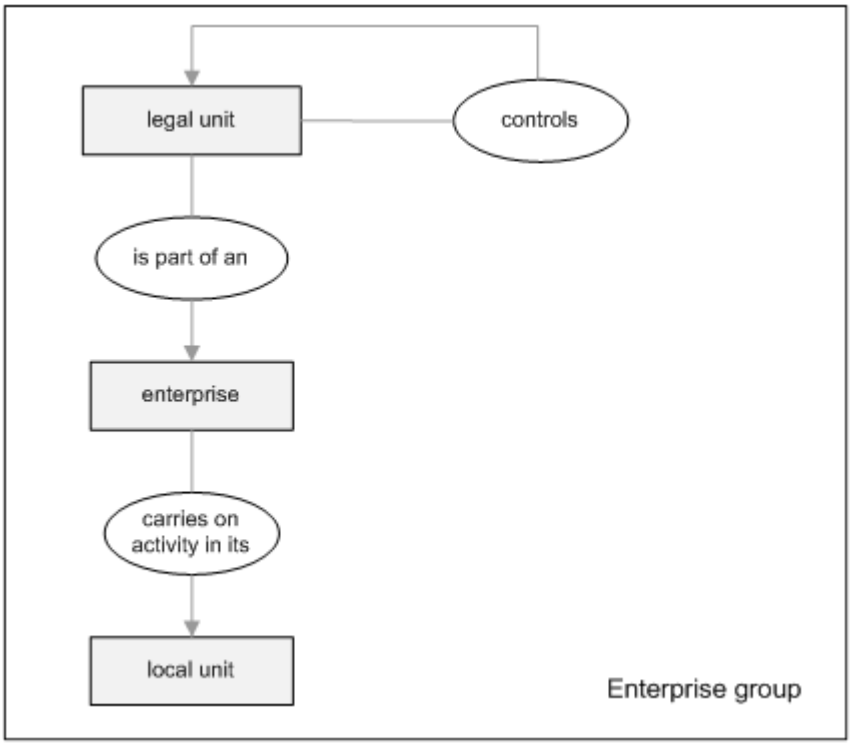
The **legal unit** is a part of the legal and administrative world. Only a legal unit may enter into contracts, be an owner of a property, rights or goods (i.e. production factors). However, a legal unit does not always reflect an economic activity. This is because a legal unit is a construct of law and administration. To give a correct description of the economic world, legal units must be converted into statistical units.

A **statistical unit** is defined as the object of a statistical survey and bearer of its statistical characteristics. Council Regulation (EEC) No 696/93 on the statistical units for the observation and analysis of the production system in the Community defines several statistical units of which the following three are the most important ones as their recording in business registers is mandatory:

- Enterprise: Enterprise is the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. It may also be a sole legal unit.
- Local unit: The local unit is an enterprise or part thereof (e.g. a workshop, factory, warehouse, office, mine or depot) situated in a geographically identified place. At or from this place, economic activity is carried out for which - save for certain exceptions - one or more persons work (even if only part-time) for one and the same enterprise.
- Enterprise group: Enterprise group is an association of enterprises bound together by legal and/or financial links. A group of enterprises can have more than one decision making centre, especially for policy on production, sales and profit. It may centralise certain aspects of financial management and taxation. It constitutes an economic activity which is empowered to make choices, particularly concerning the units which it comprises.

Business registers are required to hold information on the administrative (legal) units and their links to enterprises and enterprise groups. Legal units include a) legal persons whose existence is recognised by law independently of the individuals or institutions which may own them or are members of them and b) natural persons who are engaged in an economic activity in their own right. The legal unit always forms, either by itself or sometimes in combination with other legal units, the legal basis for the statistical unit known as the ‘enterprise’. The conceptual structure of a Business Register is displayed in Figure 2 below.

Figure 2: Conceptual structure of the Business Register

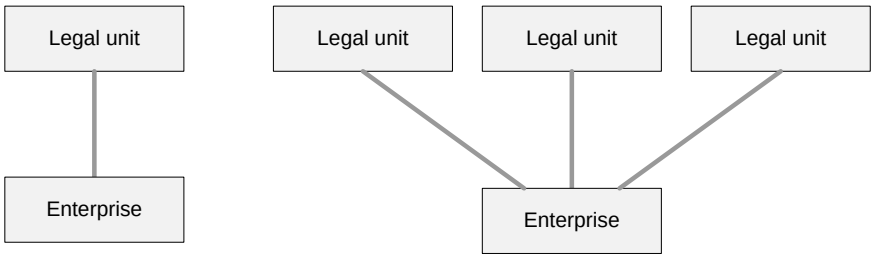


As it is indicated in the above figure, a Business Register consists of administrative (legal) units which construct, either on their own or in combination with other legal units, the enterprise. The enterprise carries out one or more activities in one or more locations, i.e. in its local unit(s). An association of enterprises bound together by legal and/or financial links comprises the enterprise group. The enterprise group imposes control over its units.

The relationship between an enterprise and a legal unit is defined as 'the enterprise corresponds either to a legal unit or to a combination of legal units, provided that the result is an organisational unit with a certain degree of autonomy'.

The link between an enterprise and a legal unit is not always one-to-one. An enterprise may consist of more than one different legal units resulting in a 'complex' enterprise. The following Figure 3 shows the relationship between an enterprise and the legal unit.

Figure 3: Relationship between enterprise and legal unit(s)



'Complex' enterprises may exist due to various reasons. Some of these reasons according to the Business Registers Recommendations Manual are listed below[1]:

- Historical reasons: One legal unit buys another legal unit and integrates it completely under its own production process. As an example can be seen a retail business which obtains the ownership of a legal unit which owns a shop. In this case, the shop has no longer autonomy because the decisions are taken outside that legal unit.
- Operational reasons: Certain activities may have been outsourced into separately controlled legal units for reasons of operational efficiency. For example, it may be more efficient to have one legal unit responsible for marketing and advertising the products of several other legal units within an enterprise.
- Tax or subsidy reasons: Particular activities undertaken by an enterprise may be taxed differently to others or may attract subsidies. In such cases, it can make sense to have them carried out by a separate legal unit to maximise the tax advantage for the business or to meet simpler administrative requirements.
- Other reasons are related for instance to a) a common wage settlement for employees regardless their occupation, e.g. it makes sense to employ the staff of a canteen, which is classified as a metal processing legal unit, in a separate legal unit which has lower wages for catering staff and b) facilitate the sale or closure of an enterprise group.

4.2 Conceptual structure of the Trade Register

In this section, a Trade Register is discussed at conceptual level. A Trade Register should be understood as a conceptual database whose main purpose is to record identification information on the companies involved in international trade, i.e. traders.

It should be noted that trade registers are not organized on a harmonized basis. Although provisions on intra-EU trade statistics require Member States to set up a register on intra-EU trade operators, there are no guidelines given to the organization of the register themselves. Nevertheless the register should be organised in such a way that it could gain the maximum benefit from other information sources and ensure maximum effectiveness of all its functions. The organization of the Trade Register can be decided individually by each Member State, based on the scope of the register, the variables it holds and its functions.

A Trade Register is an essential tool for the statistics collection and compilation process in intra-EU trade statistics. Four main uses for the register can be distinguished:

- collect in a timely and efficient way information on intra-EU traders;
- provide assistance in quality checking of the received data;
- assist any relevant analytical work, i.e. provision of estimates for those units that have not responded or are below a threshold;
- have a close link with the VAT system relating to intra-EU trade.

([1]) Business Registers Recommendations Manual - Chapter 7

The Trade Register should thus be used as the tool to mobilize the administrative data provided by tax authorities for statistical production. It should contain the value of VAT data declared by all intra-Community traders and Intrastat data submitted by the declarants. For extra-EU trade statistics, the need to exploit the Trade Register in the data collection and compilation process is not indispensable in a similar way as in intra-EU trade statistics. However, the Trade Register should also include company identification data and trade value of companies who trade with non-EU countries, although it is not requested by ESTAT regulations. Accordingly, the Trade Register should include or should be linked to the following information:

- identification data about the trader: ID number, name, address, phone, fax, e-mail, etc.;
- date of entry into the register and other relevant dates;
- liability and status of the traders to report for Intrastat;
- other indicators describing the profile of the trader: only intra, only extra, both intra and extra, main activity based on value of trade, involved or not in processing, etc.;
- status and demography of the trader: operating or not operating, liquidated, bankrupted, information on reorganisations, groups, mergers, take-overs and other information important for monitoring a business;
- monthly values of intra-Community trade and monthly VAT data;
- complete information on third party declarant, contact persons;
- reporting media and technical information needed for reporting;
- other information for contact and monitoring purposes, e.g. the most frequently traded commodities of the trader.

At this point some concepts used in trade registers should be clarified:

- The declaring unit in trade registers is called ‘trader’.
- A trader is defined as:
    - a taxable person carrying out an intra-Community trade transaction;
    - a natural or legal person lodging a customs declaration.

- For simplicity, only two ID numbers are used in this document:
    - the VAT number within intra EU-trade;
    - the Customs ID number within extra EU-trade.

- There may be also other ID numbers in use which may coincide with the above mentioned.

4.3 Conceptual structure of the Register linkage

The Business Register Regulation defines the link between the legal unit and the enterprise. The same regulation also establishes a link between the business registers and the register of intra- and extra- Community trade operators through a common unit of reference, namely the legal unit. The enterprise is the statistical unit to be used, which means that trade data must be linked to characteristics available in the Business Register for the enterprise through the legal unit. In this way, trade data are connected with the characteristics of an enterprise and they can be reported in terms of the economic activity and number of employees of the whole enterprise concerned.

A conceptual illustration of register entries and the linkage between trade and business registers is given in the following Table 3. To simplify the illustration, only the VAT number and Customs ID number are shown. They can be linked to the ID number of the legal unit (1.1) either through the VAT number (1.3) or the direct reference to the Trade Register (1.7). The ID number of the legal unit (1.1) itself is further associated to an enterprise. This linkage is established through variables ID number of the enterprise (3.1) and ID number of the legal unit of which the enterprise consists (3.3).

It should be noted that this illustration is only a conceptual one, based on the variables defined in the Business Register Regulation. In practice the linkage may be very straightforward, based on either one single ID number in the Trade Register and the Business Register or different ID numbers, but with one-to-one linkage between them. However, this should not be assumed to be always the case, as there may be more complicated linkages or the linkage may not always provide expected outcomes. The following cases are described in chapter 5:

5.1 Intra-annual business demography changes;

5.2 Large and complex businesses;

5.3 Incomplete business register data;

5.4 Treatment of estimated trade data;

5.5 Non-established traders and

5.6 VAT-groups.

Recommendations on how to deal with them in order to establish the linkage anyway are also provided.

Table 3: Conceptual illustration of the register entries and linkages[1]

Trade Register		Business Register				
Trader		Legal unit			Enterprise / statistical unit	
VAT number (intra-EU)	Customs ID number (extra-EU)	ID number of the legal unit (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	ID number of the enterprise (3.1)	ID number of the legal unit of which the enterprise consists (3.3)

Source: Eurostat

4.4 Construction of reference population[2]

Data from two different sources can be linked but this linking may not be perfect. This happens for mainly two reasons:

- Differences in coverage, e.g. registers may differ in scope, definitions of thresholds and frequency of updates;
- Errors in the ID numbers, e.g. an invalid or missing ID number or errors in the links recorded in registers.

In order to cover the complete trade flows for each compiling country and to treat each trader in a harmonised manner, the data linking methodology allocates traders to various reference populations. There are two criteria to consider:

- Validity of ID numbers;
- Linkage between trade and business registers.

Depending on how these criteria are met, total trade is allocated to the following populations for each trade flow concerning the whole reference year:

Population 1: Total trade

It corresponds to the total trade of a given country as defined in the section 0 including adjustments for trade below thresholds and non-response.

Population 7: Trade with valid codes

This population includes all traders who have reported trade transactions under a valid ID number, regardless of the data source. The data source can be the Intrastat declaration, VAT data for non-collected intra-EU trade (trade below the exemption threshold and non-response), customs data or data stemming from any other source in case of specific goods and movements.

A valid ID number refers to national ID numbers used in the Member State where the registration took place. Foreign companies registered for VAT in the reporting Member State

(1) The numbers in the illustration refer to the variables according to the Business Register Regulation.

(2) Note: this chapter has been revised according to the new concept which no longer distinguishes traders above and below the exemption thresholds. For this reason some populations (populations 2, 3 and 4) have become redundant. However, for the sake of clarity, the numbering of **populations** has not been changed.

would have to be removed from this population and allocated to population 6. However, if non-established traders have been included in the Business Register, they can be treated as normal traders (section 0).

Population 8: Trade with valid codes successfully matched with the Business Register

Population 8 is the reference population used in the compilation of TEC tables This population concerns traders who have reported trade transactions under a valid ID number and are successfully matched with the Business Register. It can be derived from population 7 by excluding traders who:

- cannot be successfully matched with the Business Register (Population 5);
- can be matched with the Business Register but whose activity sector is unknown or missing in the Business Register (Population 5).

Population 5: Unclassified trade

Unclassified trade refers to traders with valid ID numbers but with an activity sector that cannot be identified either due to non-matching or due to missing information on the activity sector in the Business Register. Missing information on the activity sector in business register data refers to cases where the link between Trade and Business Register is successful but the Business Register does not contain information. Non-matching refers to cases were the trader is identified in the Trade Register and has a valid ID number but the link to the Business Register could not be established.

Population 6: Unknown trade

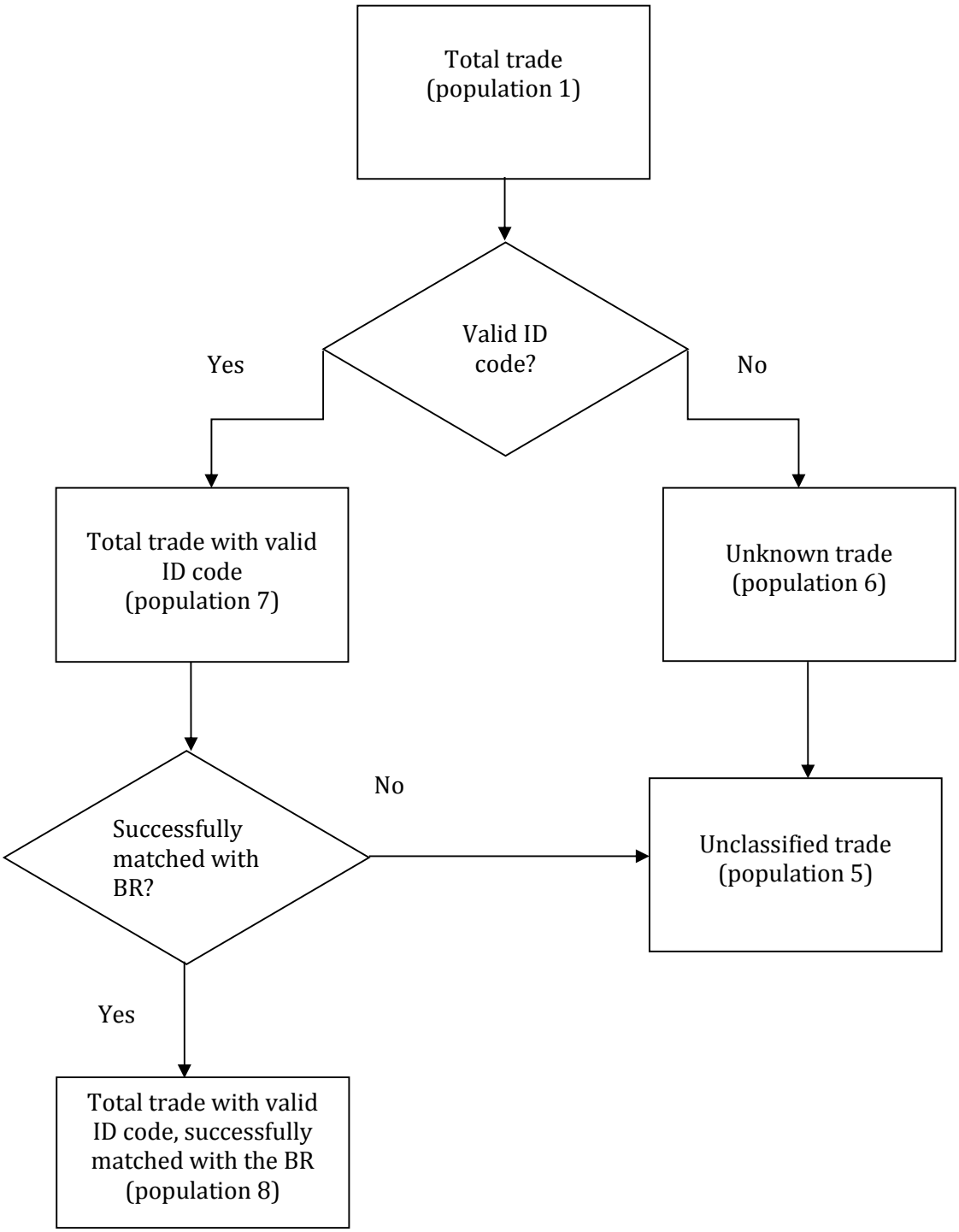
It consists of traders with invalid, artificial or missing ID numbers which cannot be associated to any identified trader. In addition, any discrepancy between the total value and the sum of values of the other groups, which is caused by estimations or other methodological reasons and which cannot be allocated to populations 7, 8 or 5, is allocated to unknown trade. Moreover, non-established traders are allocated to unknown trade, if they are not included in the Business Register.

The trade value all these cases account for will be included in the disseminated statistics as a residual. In intra-EU trade the trade value is calculated as the difference between population 1 and the sum of population 2 and population 4a. In extra-EU trade it is calculated as the difference between population 1 and population 2. Unknown trade is not broken down by products or partner countries.

It is possible to use an exclusion threshold for smallest traders from the core dataset to be used in the compilation of TEC tables. The exclusion should be based on a threshold in euros/national currency. It is recommended that the same exclusion threshold is applied to both intra- and extra-EU data or that the threshold is determined by considering the total trade of the given trader, i.e. all traders below the chosen threshold are excluded, regardless whether their trade consisted of intra- or extra-EU trade (or both). It is recommended that the exclusion threshold value should not exceed 5000 euros. Therefore in intra-EU trade, the exclusion concerns traders below the exemption threshold whose source is VAT data (Population 4a). The traders below the chosen exclusion threshold are treated as Unknown trade (Population 6) in the disseminated datasets.

The construction of reference populations for the compilation of trade statistics by enterprise characteristics is shown in Figure 4 below.

Figure 4: Structure of the target population for the statistics on trade by enterprise characteristics



5 Specific cases

Although the general principles on data linking are clear and straight-forward, there are several methodologically complex issues which need to be addressed more carefully. This section provides recommendations on how to treat some particular cases, like business demographic changes, problematic linkages caused by complex business structures, missing or estimated data and non-established traders.

5.1 Intra-annual business demography

The business population is subject to frequent demographic events over time. Business registers should keep track on the changes, so that the changes on administrative units are correctly converted to changes in statistical units. For TEC, the intra-annual business demography forms a particularly challenging issue as the datasets are constructed by linking monthly source data with annual business characteristics. Specific instructions on how to cope with intra-annual demographic changes to obtain annual statistics from the monthly data which are consistent with the methodology of business statistics are therefore necessary. It should be noted that some real life changes are of administrative nature; they do not necessarily lead to changes of statistical units. The key issue is to distinguish purely administrative events from events which have also an impact on statistics.

To provide explanations and recommendations for the cases which are relevant for the treatment of TEC, five different cases of business demographic changes presented below according to the typology of the Business Registers Recommendations Manual[1] can be identified.

1) Existential changes

They involve only one enterprise after the event and none before or alternatively, only one enterprise before and none after. The former one corresponds to a birth of a new enterprise and the latter one to death of an existing enterprise. For the Business Register, the consequence of a birth of an enterprise is a creation of a new record. Similarly, the death of an enterprise causes a deletion. For TEC, existential changes can be interpreted as a birth of a new trader or cease of activities of an established trader. As TEC measures the whole trader population, the existential changes do not cause further measures.

2) Changes within an enterprise

For the Business Register, these events do not cause creations or deletions of enterprises. However, they may cause other changes. The following three cases are identified:

- *Change of ownership* refers to a case where a new legal unit is formed to take over the activities of an existing enterprise;

([1]) Business Registers Recommendations Manual – Chapter 13

- *Restructuring within an enterprise* is an event which does affect the continuity of the enterprise but changes its structure in the progress, for instance creation or deletion of a local unit;
- *Change of enterprise group* is a special case where the enterprise itself does not change - the same combination of production factors exists before and after the event - but after the event it belongs to a different enterprise group than before.

In the first case, there should be an update on the identity number of the legal unit of which the enterprise consists (BR variable 3.3). The second case may lead to a change of enterprise characteristics like NACE (BR variable 3.6) or number of employees (BR variable 3.9). For the third case, the only change should concern links to the enterprise group (BR variable 3.12).).

Out of the three cases identified above, only the first one - change of ownership – has consequences for TEC as well as trade statistics in general. Let's assume a case where a change of ownership leads to a change of the legal unit and at the same time to a change of VAT number. Consequently, for Trade Register, a new VAT number and/or Customs ID number is created and the new unit inherits the reporting obligations from the old unit. For Business Register, a new legal unit is created. At the enterprise level, no new enterprises are created but the link between legal unit and enterprise is updated. The changes concern only the administrative codes but the enterprise is not affected. Therefore it is important that different VAT numbers are not treated as different enterprises.

The following example illustrates how a change of ownership is recorded in trade and business registers.[1] As can be seen the identity number of the enterprise (ID number 3.1) is the same before and after the event. To complement the tables a chronological presentation is also provided.

Table 4.1: Changes within an enterprise before the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	Y	1111	1111	1111	Y	1234	1111	Y

Source: Eurostat

(1) To simplify the illustrations in this chapter, it is assumed that the same ID number is used for all administrative recording (legal unit ID number is the same as VAT number and Customs ID number). A different ID number is used for enterprises in order to underline the difference between administrative and statistical units. The business registers should keep track of changes; usually, a time stamp recorded in business registers indicates when such an event has occurred. In this example the time stamps have been replaced by simple flags (yes/no) indicating whether the given administrative or statistical unit is active or not following the event.

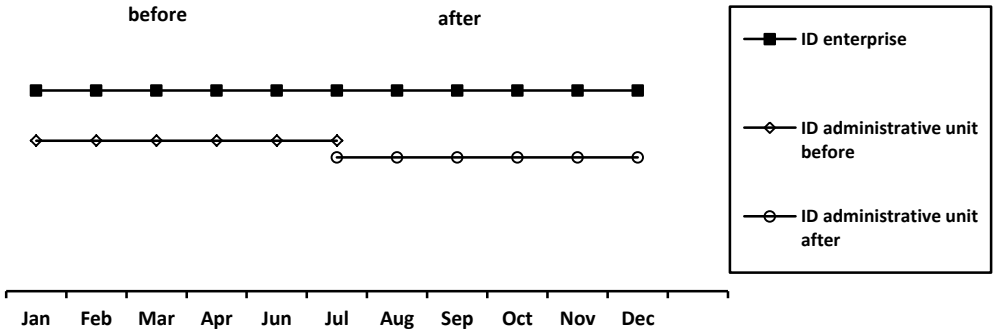
Table 4.2: Changes within an enterprise after the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	**N**	1111	1111	1111	**N**	1234	1111	Y
1119	**1119**	**Y**	**1119**	**1119**	**1119**	**Y**	**1234**	**1119**	**Y**

Source: Eurostat

As can be seen in the following chronological presentation, changes within an enterprise cause only changes that concern the administrative ID numbers. The enterprise is not affected. These cases have to be treated as one case. They do not lead to changes of statistical units.

Figure 5: Changes within an enterprise



1) Concentration

Concentration refers to events involving more than one enterprise before and one enterprise after the event or in other words, reduction of the number of existing enterprises. Two different kinds of concentration can be identified:

- *Merger.* Two enterprises integrate entirely and they both lose their identity because they are dissolved beyond recognition in the new organisation. In this case, a new enterprise is created in the Business Register with a new identity number while the predecessors are deleted (as active enterprises). Using the same illustration as above, a merger is recorded as follows:

Table 5.1: Merger before the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	Y	1111	1111	1111	Y	1234	1111	Y
2222	2222	Y	2222	2222	2222	Y	2345	2222	Y

Source: Eurostat

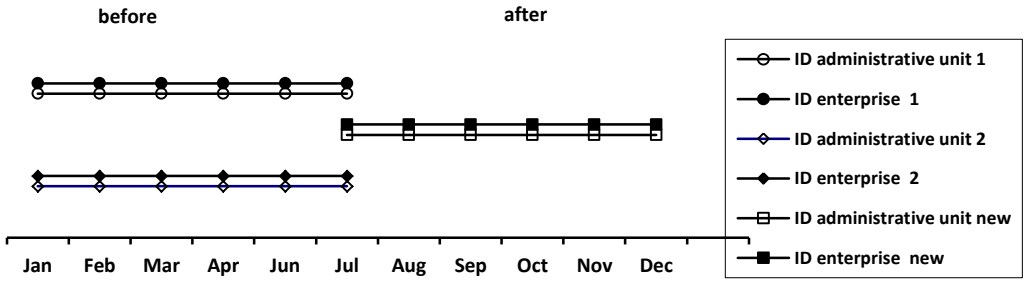
Table 5.2: Merger after the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	**N**	1111	1111	1111	**N**	1234	1111	**N**
2222	2222	**N**	2222	2222	2222	**N**	2345	2222	**N**
3333	**3333**	**Y**	**3333**	**3333**	**3333**	**Y**	**3456**	**3333**	**Y**

Source: Eurostat

The following chronological presentation shows that Mergers cause a deletion of the old enterprises and the creation of a new enterprise. All administrative units, legal numbers, VAT numbers, etc., as well as the ID number of the new enterprise change. These cases create new entries in the Business Register, thus they lead to changes of statistical units.

Figure 6: Concentration - Merger



- *Take-over*. Two enterprises integrate in such a way that one of them – a large one - remains relatively unchanged but another – a smaller one - is absorbed by the larger one. In this case, the large enterprise remains in the Business Register unchanged while the small one is deleted. However, some characteristics of the large enterprise will likely change. The corresponding recording of a take-over is the following:

Table 6.1: Take-over before the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	Y	1111	1111	1111	Y	1234	1111	Y
2222	2222	Y	2222	2222	2222	Y	2345	2222	Y

Source: Eurostat

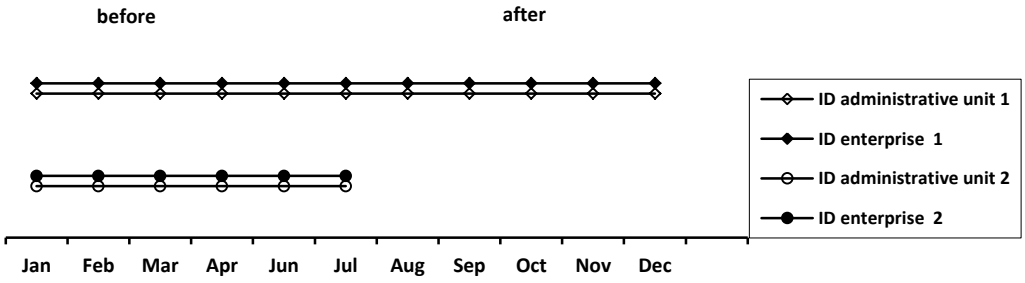
Table 6.2: Take-over after the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	**N**	1111	1111	1111	**N**	1234	1111	**N**
2222	2222	Y	2222	2222	2222	Y	2345	2222	Y

Source: Eurostat

Take-overs, as shown in the following chronological presentation, cause a deletion of an enterprise (enterprise 2), but there is no creation of a new enterprise. All administrative units, as well as the ID number of the first enterprise 1 remain unchanged. These cases delete an entry in the Business Register, thus it leads to an impact on statistics but not to changes of statistical units.

Figure 7: Concentration -Take-over



It should be noted that mergers and take-overs differ from the events listed under (2) Changes within an enterprise. Mergers and take-overs are events which occur not only in the real observable world but also in the statistical world.

2) De-concentration

De-concentration refers to changes involving one enterprise before and more than one enterprise after the event; in other words, it refers to the counterparts of concentration. Like in concentration, two cases can be identified:

- *Break-up.* An enterprise is divided in such a way that neither of the new enterprises retains the identity of the original enterprise. In this case, two new enterprises are created in the Business Register with new identity numbers while the predecessor is deleted.

Table 7.1: Break-up before the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	Y	1111	1111	1111	Y	1234	1111	Y

Source: Eurostat

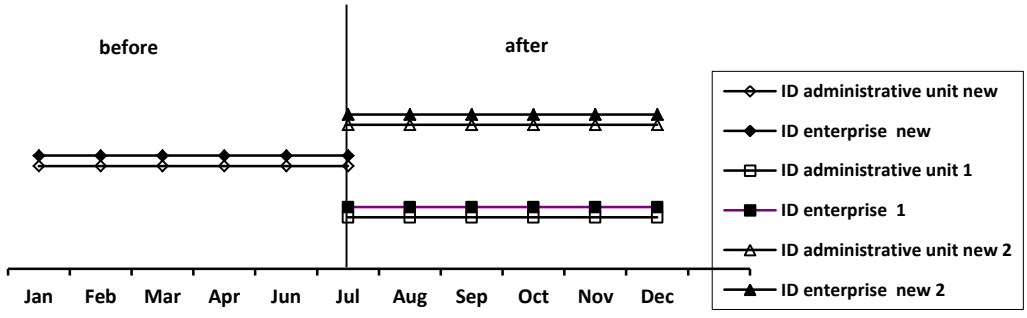
Table 7.2: Break-up after the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	**N**	1111	1111	1111	**N**	1234	1111	**N**
2222	**2222**	**Y**	**2222**	**2222**	**2222**	**Y**	**2345**	**2222**	**Y**
3333	**3333**	**Y**	**3333**	**3333**	**3333**	**Y**	**3456**	**3333**	**Y**

Source: Eurostat

The following chronological presentation shows that break-ups cause the deletion of an enterprise and creations of new enterprises. All administrative units, legal numbers, VAT numbers, etc., as well as the ID numbers of the new enterprises change. These cases create new entries in the Business Register and lead to changes of statistical units.

Figure 8: De-concentration - Break up



- *Split-off.* An enterprise is divided in such a way that one enterprise – a large one – retains the identity of the original enterprise while a new one, which is typically much smaller, is separated. In this case, the large enterprise remains in the Business Register unchanged while a new one is created. Some characteristics of the large enterprise will likely change. A split-off would be recorded as follows:

Table 8.1: Split-off before the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	Y	1111	1111	1111	Y	1234	1111	Y

Source: Eurostat

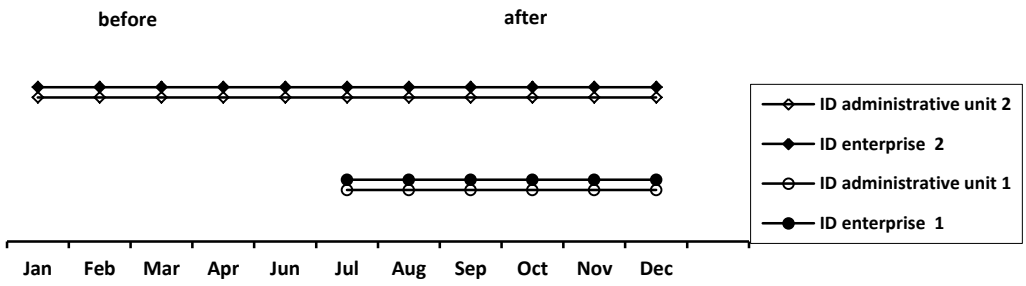
Table 8.2: Split-off after the event

Trade Register			Business Register						
Trader			Legal unit				Enterprise		
VAT number	Customs ID number	Active (Y/N)	ID number (1.1)	VAT number (1.3)	Reference to Trade Register (1.7)	Active (Y/N)	ID number (3.1)	ID number of the legal unit (3.3)	Active (Y/N)
1111	1111	Y	1111	1111	1111	Y	1234	1111	Y
2222	**2222**	**Y**	**2222**	**2222**	**2222**	**Y**	**2345**	**2222**	**Y**

Source: Eurostat

The following chronological presentation shows that Split-offs do not cause any deletions of enterprises. All administrative units, as well as the ID number of enterprise 1 remain unchanged, but there is a new creation of a new enterprise 2. These cases create a new entry in the Business Register and thus they lead to an impact on statistics as well as to changes of statistical units.

Figure 9: De-concentration - Split off



Break-ups and split-offs are similar to mergers and take-overs: they are events which occur not only in the real observable world but also in the statistical world.

3) Complex changes

Complex changes refer to changes involving more than one enterprise before and more than one enterprise after the event. Three cases can be identified:

- *Creation/cessation of a joint venture*. A joint venture is created when two or more independent enterprises agree to commit some of their resources to work together on a common project or on continuous business relationship, generally on an equal basis. None of the original enterprises exercise outright control over the entity created. A new enterprise is created in business registers while none of the originals are deleted. The cessation of a joint venture is the opposite case, leading to a deletion of one enterprise.
- *Restructuring within an enterprise group*. This event concerns enterprises under common control and involves more than one enterprise before and after the event.
- *Restructuring involving more than one enterprise group*. This event is similar to the previous one but is not constrained to one enterprise group.

All of the three cases may have a considerable impact on the enterprise population but their heterogeneous nature and infrequent occurrence make them difficult to cover in statistics.

To distinguish between real life changes and changes with statistical impact is very important. The business registers should keep track of changes. Usually, a time stamp recorded in business registers indicates when an event has occurred. A practical approach to monitor changes in the VAT number can be, for example, the performance of an additional file to keep track on the changes in the business unit of the Business Register. Thus, every time a VAT code changes for trade purposes, the unit could be maintained, otherwise, when the unit is the enterprise, trade values will be allocated to the statistical unit of the BR.

Recommendations:

- Changes in VAT numbers should be monitored closely.
- When the change has taken place in the real observable world but has not affected the enterprise as recorded in the Business Register, the different VAT numbers should be associated to a single enterprise in order to avoid double-counting of the number of enterprises.
- In complicated cases, business register or business statistics experts should be contacted in order to ensure consistent treatment.

5.2 Large and complex businesses

For the purposes of TEC compilation, the linkage between trade and business registers is one of the most important issues affecting the quality of statistics. The pre-requisite for accurate and coherent statistics is that trade flows of a given trader are allocated to the most relevant enterprise. It can be assumed that in most cases the default linkage is correct and provides the optimal outcome. However, the linkage may not always provide an expected outcome; trade flows may be allocated to enterprises whose characteristics seem to be in contrast with the economic reality or be incoherent with other statistics. These problems are more likely to exist for large and complex businesses.

An integral part of the management of business registers is the definition of statistical units and their activity sector. The Business Registers Recommendations Manual and the NACE Rev 2 Introductory Guidelines provide more information on such practices.

The Guidelines make a distinction between principal and secondary activities, on the one hand and ancillary activities, on the other hand. The principal activity of a statistical unit is the activity which contributes most to the total value added of the unit. A secondary activity is any other activity of the unit whose outputs are goods and services which are suitable for delivery to third parties. Principal and secondary activities are generally carried out with the support of a number of ancillary activities, such as accounting, transportation, storage, purchasing, sales promotion, repair and maintenance etc. Thus ancillary activities are those that exist solely to support the principal or secondary economic activities of a unit, by providing goods or services for the use of that unit only. An activity cannot be considered ancillary if a significant part of the output is sold on the market.

Ancillary activities are typical for large and complex businesses, in particular for enterprise groups. The Business Registers Recommendations Manual lists some typical ancillary activities (NACE Rev 2) in Chapter 19:

- Activities of holding companies (64.2);
- Real estate activities (68);
- Legal and accounting activities (69);
- Activities of head offices (70.1);
- Advertising and market research (73);
- Office administrative and support (82).

The above listed activities are typical ancillary activities which are normally not involved in international trade. Therefore linkages leading to them should be validated carefully and corrected whenever relevant and feasible.

On top of the ancillary activities, two other activities may play a particular role in international trade. Some activity sectors are involved in the logistical chain but their role is to provide services to the real traders rather than trade for their own account:

- Wholesale on a fee or contract basis (46.1)

  This group includes activities of agents, brokers and other wholesalers who trade on behalf and on the account of others. This activity should not be mixed with wholesale trade on own account (46.2 to 46.9).

- Warehousing and support activities for transportation (52)

  A particular attention should be given on activity 52.29 (Other transportation support activities) which includes for instance forwarding and customs activities.

Similarly to ancillary activities, linkages leading to them should be validated carefully and corrected whenever relevant and feasible.

In general it should be noted that corrections of the activity sector of enterprises should be made with a lot of responsibility. If trade statisticians perform corrections for the compilation of TEC data it must be ensured that the treatment is coherent and well documented. Cross-checks with other domains could help to validate the data correctly, as well as to allocate the trade value of large and complex units encountered to more plausible units.

Cross checks between the Trade Register and the FATS and SBS surveys could be performed through the Business Register. These cross checks could help to re-allocate the trade values to a more appropriate unit, for example, the enterprise that covers the productive process phase and belongs to the same group. NACE codes that typically represent ancillary activities could be replaced with more appropriate codes by using the codes available for the secondary activities in the Business Register for the same enterprise.

If an enterprise (with ancillary activity) belongs to an enterprise group, then the figures should be carefully checked.

Recommendations:

- The results should be validated carefully; particular attention should be given to ‘outliers’: enterprises which record large trade volumes with a small number of employees or with a NACE code typically representing ancillary activities.
- If an ‘outlier’ is found, the linkage should be validated and corrected, leading to a more plausible statistical unit. Names and addresses of the units can be used to identify them.
- The correction should nevertheless be done with caution. If it can be assumed that the linkage is correct, for instance when goods are imported for own use or domestic transaction from manufacturer to non-manufacturer has actually preceded the cross-border transaction, then editing is not recommended.
- In suspicious cases, business register or business statistics experts should be contacted in order to ensure consistent treatment.

5.3 Incomplete business register data

Incomplete business register data refers to cases where the linkage between Trade and Business Register is successful but the Business Register does not contain all the necessary information. In some cases either the activity code or the number of employees can be missing. Missing information is a specific case of error in the economic/stratification characteristics of the Business Register.

According to the methodological rules, the treatment is different depending on whether the activity code or number of employees is missing. If business registers do not store any activity code for an enterprise or the activity code has been defined as unknown, it should be treated in a same way as non-matched trade. These cases should be excluded from the compilation of indicators and allocated to unclassified activities. Missing number of employees, on the other hand, should be included in the compilation of indicators but with unknown size-class.

However, first of all it should be attempted to obtain information on missing data as far as possible from other sources. Employment data from social insurance agencies, for example, could be used as a source for the determination of missing information as well as data from the State Revenue Service. In some cases NACE codes could be defined by available information on the company from the internet or according to the products the company is trading. The latter should be done with caution, since enterprises might not have their main activity on the traded products, e.g. wholesale trade.

Recommendations:

- If the activity code is missing, other data sources could be used to determine it. This is recommended if the given trader accounts for a significant share of trade value and there are other public or statistical data sources available.
- If the number of employees is missing, other data sources could be also used. It can be also assumed that number of employees is more often missing from the smaller enterprises than from the larger ones.
- If the magnitude of incomplete data is significant, estimations based on sound methodology could be applied to determine the activity sector or number of employees.
- Business register or business statistics experts could be also contacted.

5.4 Treatment of estimated trade data

Estimated data refers to non-response in trade data, in particular in Intrastat. According to the Intrastat Regulation, missing data need to be compensated with adjustments so that the statistics refer to the complete trade of the given Member State. The magnitude of non-response varies between Member States and over the years. Also the adjustment method and allocation of adjusted trade are not harmonised across Member States: the Intrastat Regulation sets out only the requirement to allocate the estimated data to product codes and partner countries in the disseminated statistics. However, this is not fully sufficient for the compilation of TEC. If the estimated data are not allocated directly to traders, i.e. to ‘true’ traders with correct ID numbers, they will be considered as unknown trade. On the other hand, if the estimated data can be allocated to traders, they could be used like normal data.

To allocate adjustments for non-response at trader level, estimation methods could be used like, for example, probability estimation.

Recommendations:

- If the adjustments for non-response are allocated to traders with the necessary details, then adjusted data can be used like collected data. The estimated partner country and product should be used wherever possible.
- If the adjustments for non-response are allocated to traders but without partner country or product details, trade should be allocated to unknown partner country in Table 4 and to unknown product in Table 6.

5.5 Non-established traders

Non-established traders are foreign companies which carry out trade transactions in the reporting Member State and are registered for VAT or have appointed a tax representative. They can be identified through their ID number. This ID number usually differs from the standard national one and consequently, their trade is allocated to unknown trade.

Only in cases where non-established traders have a valid national ID number they can be treated like normal data. In cases were non-established traders are included in the scope of the Business Register and the NACE codes are available they can be treated as complete data. If the number of employees is missing, they should be included in the compilation of indicators but with unknown size-class, as described in section 0.

In general, non- established traders do not have a national ID number, and have to be allocated to unknown trade. However, first of all, non-established traders have to be identified. Depending on the reporting procedure used in the Member States, non-established traders could be identified through specific postcodes, according to the ID number of the trader, by customs number or through the internet by checking if a foreign trader is doing business solely under VAT-code.

Recommendations:

- Non established traders should be identified.
- It should be checked whether they can be treated as normal data; otherwise they should be allocated to unknown trade.
- If available, the number and trade value reported by non-established traders allocated to unknown trade should be reported separately.

5.6 VAT-groups

Under certain circumstances, several VAT declarants may report VAT as a group. In this case, VAT is recorded only by one VAT number. The contents of a VAT group may correspond to more than one enterprise, thus making the allocation of trade to an appropriate statistical unit difficult.

Methods to allocate the declared values to appropriate statistical units can differ, depending on the reporting system used by Member States. If, for example, the tax authorities publish information on VAT groups Intrastat data could be compared with the tax information of the VAT group. Other methods could be supplements forms for VAT group declarations that contain information concerning each VAT group member.

Another approach could be to use the enterprise with the activity code that most closely matches. In cases where more than one NACE codes are applicable for a VAT number, the NACE code which is dominant for the group could be chosen.

Recommendation:

- The declared values should be allocated to appropriate statistical units.

6 Data compilation

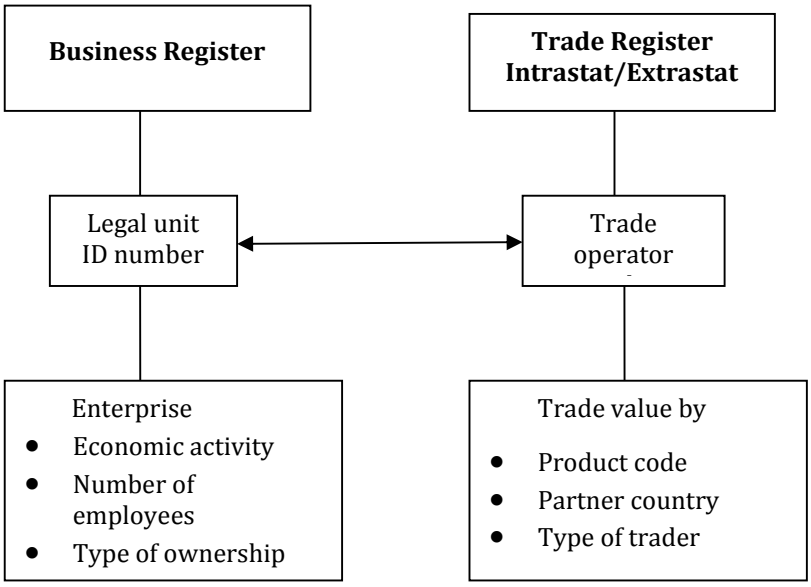
This chapter describes the procedure followed for the compilation and validation of TEC. It first provides a conceptual description of the steps to be taken for the compilation of TEC. Secondly, it lists the data required for the compilation of statistics on trade by enterprise characteristics and finally it describes a number of rules applied for the validation of data at national and European level.

6.1 Compilation steps

The first step for the compilation of TEC is to establish a link between trade data and business registers, and construct the appropriate reference populations as described in section 4. At this step, the specific cases described in section 5 should also be considered.

At the second step, the trade value of each trader is linked with the enterprise characteristics recorded in the Business Register. Specifically, each trade operator provides a trade value by product and partner country. This is then combined with the main characteristics (economic activity sector, number of employees and type of ownership) of the enterprise in the Business Register. This relationship is shown in **Figure 10** below.

Figure 10: Relationship between trade data and Business Register



The third step is to compile a number of tables according to the data requirements defined in section 0. **Reference population 8 should be used in all tables.** These are:

0. Reference populations
1. Trade by activity sector and type of trader
2. Trade by activity sector and enterprise size class
3. Concentration of trade by activity

4. Trade by partner countries and activity
5. Trade by number of partner countries and activity
6. Trade by commodity and activity
8. Trade by activity sector and type of ownership
9. Trade by exports intensity and activity sector
10. Trade by activity sector
11. Trade by partner countries and size-class

The fourth step is to complete the SDMX compliant file according to Eurostat's instructions (see Annex 10.1).

Another step of the data compilation procedure is the definition of confidential data. A detailed description of the type of data confidentiality applied to international trade statistics as well as the rules which countries should apply to prevent data disclosure with minimum loss of information, is given in Chapter 0.

The sixth and final step of data compilation refers to the transmission of data on TEC to Eurostat. This process is described in Chapter 7.

6.2 Data requirements

This subchapter provides a description of a) the Tables required for the compilation of the indicators and b) the breakdown variables used in the production of these Tables.

6.2.1 Tables

TEC consist of tables which need to be provided according to predetermined breakdowns. **Tables 0 to 6 refer to the mandatory data collection while Tables 8 to 11 are optional.**

(Table 7, relating to traders below the exemption threshold, became redundant / was removed in 2012, when it was decided that all tables referring to intra-EU trade should include all traders).

Table 0: Reference populations

This table serves as an overview of the matching of source data. It gathers the information on the reference populations as described in chapter 0 and provides quality indicators on data matching. It also derives information on the unmatched trade which can be integrated in the disseminated datasets.

Table 1: Trade by activity sector and type of trader

This table serves to provide information on how traders are involved in international trade. It shows the number of enterprises trading within only one flow or in both flows and the trade value these enterprises account for.

Data should be provided in number of enterprises and trade value broken down by flow and partner.

Table 2: Trade by activity sector and enterprise size class

This table aims to show the contribution of economic activities and size of an enterprise (in terms of number of employees) to total trade. They can be used to analyse the impact of international trade on employment and to estimate the importance of small and medium-sized enterprises for trade.

Data should be provided in number of enterprises and trade value broken down by activity sector, flow and partner.

Table 3: Concentration of trade value by activity sector

International trade is usually concentrated in a few enterprises. This table aims to show how much of the total trade is accounted for by the top 5, 10, 20 etc. enterprises.

Data should be provided in trade value broken down by activity sector, 'top enterprises', flow and partner.

Table 4: Trade by partner countries and activity sector

This table shows the number of enterprises trading with certain partner countries or country zones and the value these trading accounts for. It aims to identify the most common exports or imports markets.

Data should be provided in number of enterprises and trade value broken down by activity sector, flow and partner country.

Table 5: Trade by number of partner countries and activity sector

This table aims to show the geographic diversity of the markets. Specifically, it shows the number of countries the goods are imported from or exported to.

Data should be provided in number of enterprises and trade value broken down by activity sector, number of partner countries, flow and partner.

Table 6: Trade by commodity and activity sector

This table aims to show which sectors of the economy were involved in the trade of each product group. It allocates the trade of each commodity to the activity of the trading enterprise.

Data should be provided in trade value broken down by activity sector, product, flow and partner.

Table 8: Trade by activity sector and type of ownership

This table aims to show the contribution of economic activities and type of ownership to total trade. It can be used to analyse the impact of globalisation on international trade and to estimate the importance of multinational enterprises for trade.

Data should be provided in number of enterprises and trade value broken down by activity sector, type of ownership, flow and partner.

Table 9: Trade by activity sector and exports intensity

This table shows the importance of foreign markets, measured in terms of ratio of exports with turnover. It gives insights on the heterogeneity of enterprises by categorising all trading enterprises into more foreign market oriented (with high exports intensity) and more domestic market intensive (with lower exports intensity).

Data should be provided in number of enterprises and trade value broken down by activity sector, exports intensity, flow and partner.

Table 10: Trade by activity sector

This table gives more detailed information about the contribution of economic activities to total trade. Data are requested at more detailed level of the activity sector than in other tables but without other characteristics.

Data should be provided in number of enterprises and trade value broken down by activity sector, flow and partner.

Table 11: Trade by partner countries and enterprise size class

This table aims to give insights on the internationalisation of small- and medium sized enterprises. It complements table 4 by applying the same detailed breakdown of partner countries but categorises enterprises by size classes instead of activity sectors.

6.2.2 Breakdowns

This section describes in detail the breakdown variables used in the production of Tables, namely:

- flow
- activity sector
- enterprise size class
- concentration of trade
- partner
- number of partner countries
- commodity
- type of ownership
- type of trader
- exports intensity

It provides information on the classification of its breakdown variable and, where appropriate, a description of the Tables each breakdown variable corresponds to, their definition, the unit of measure and the way these breakdown variables are derived.

Flow

Imports (IMP) and exports (EXP) are requested for all tables. In addition, total (TOT) consisting of both flows is requested in tables 0 and 1.

Activity sector

The requested data on TEC have to be made available according to NACE Rev. 2 classification. Three different levels of breakdowns are used:

1. Aggregated breakdown in tables 3, 4 and 5:
    - Industry (BTE)
    - Trade (G)
    - (AFHTU)
2. Normal breakdown in tables 1, 2, 6, 8 and 9:
    - Division level for sections C (10 to 33) and G (45 to 47)
    - Section level for sections A, B, D, E, F, H, J, K, L, M, N
    - Other for activities I and O to U (_O)
    - Unknown (_U)
    - Total (_T)
3. Detailed breakdown in table 10:
    - Group level (3-digit) for sections C and G,
    - Division level (2-digit) for others A, B, D to F, H to U
    - Unknown (_U)
    - Total (_T)

Enterprise size class

The size of an enterprise is measured in numbers of employees. For the purpose of TEC, the following classification shall be used:

- 0 to 9 employees (ELT10)
- 10 to 49 employees (E10T49)
- 50 to 249 employees (E50T249)
- 250 or more employees (EGE250)
- Unknown (_U)
- Total (_T)

Concentration of trade

It is expressed in terms of trade value concentrated in a few top enterprises. ‘Top enterprises’ are the largest enterprises measured in terms of trade value. The value of each class is defined as the accumulated value of the top X enterprises (sum of trade value of all enterprises from the largest one till X).

Example: all enterprises are first placed in a descending order of their trade value. In order to construct the respective classes, the trade value of the first 5 enterprises is summed up, then

the trade value of the first 10 enterprises, then the first 20 and so on till we get to the accumulated trade value of the first 1000 enterprises.

The following classification shall be used:

- Top 5 enterprises (T5)
- Top 10 enterprises (T10)
- Top 20 enterprises (T20)
- Top 50 enterprises (T50)
- Top 100 enterprises (T100)
- Top 500 enterprises (T500)
- Top 1000 enterprises (T1000)
- Total (_T)

Partner

The requested data on TEC have to be broken down into:

- Total trade (WORLD)
- Intra-EU trade (EU28)
- Extra-EU trade (EXT_EU28)

In Table 4 the detailed breakdown with individual partner countries and partner aggregates has to be used. Traders below the exemption threshold should be allocated to 'Non-specified partner countries in intra-EU trade' (NT_EU_X).

Number of partner countries

The number of partner countries is calculated by counting first the number of individual partner countries of each enterprise. The enterprises with the same number of partner countries are then summed up to form the following first seven classes:

- 1 partner country (P1)
- 2 partner countries (P2)
- 3 to 5 partner countries (P3T5)
- 6 to 9 partner countries (P6T9)
- 10 to 14 partner countries (P10T14)
- 15 to 19 partner countries (P15T19)
- 20 or more partner countries (PGE20)
- Unknown (_U)
- Total (_T)

Specific rules:

If a trader has trade activities with known and unknown partner countries, the number of enterprises is calculated by adding them up. All unknown partner countries reported under code 5900 'miscellaneous countries' (QR, QV, QS, QW, QQ and QU codes) should be treated as one country. Thus, for example, if one trader has trade activities with one known county and several unknown countries, the number of partner countries should be summed up to two.

For partner WORLD, the trade below the Intrastat exemption threshold is treated as follows:

- If a trader is below the Intrastat exemption threshold in intra-EU trade and has n partner countries in extra-EU trade (n>0), the number of partner countries is 1+n. Example: if a trader has 1 partner in extra-EU trade, it will be allocated to class 2 partner countries.
- If a trader is below the Intrastat exemption threshold in intra-EU trade and has no extra-EU trade (n>0), the number of partner countries is 1.
- All cases which cannot be allocated to one of the above groups should be classified as unknown.

Commodity

The requested data on TEC have to be made available according to the Classification of Products by Activity in the European Economic Activity (CPA 2008).

The following breakdowns shall be used:

- CPA divisions for section C (divisions 10 to 32);
- Section level for the products of sections A, B, D and E;
- Other for rest of the products (_O);
- Unknown (_U) for the products which are not classified at CN8 level. These include also estimates of trade below the exemption threshold;
- Total (_T).

These are described in detail in the Annex of the CPA.

Type of ownership

The priority break down is the distinction of domestically and foreign controlled enterprises, with a further distinction of domestically controlled enterprises into indigenous, i.e. without own affiliates abroad, and multinationals, i.e. with own affiliates abroad:

- Domestically controlled enterprises (D)
- Domestically controlled enterprises without own affiliates abroad (DI)
- Domestically controlled enterprises with own affiliates abroad (DM)
- Foreign controlled enterprises (F)
- Unknown (_U)
- Total (_T)

Compilation instruction: Total enterprise population consists of domestically and foreign controlled enterprises (_T = D + F). Therefore the primary distinction should between these two groups. Further distinction of domestically controlled enterprises should be made, if the

business registers contain necessary information. If an enterprise is not allocated to being either a domestically and foreign controlled one, it should be allocated to unknown category.

Type of trader

Enterprises are broken down according to their trade activity into traders who have only export activities, traders who have only import activities and traders who have trade activities in both flows.

- Exporter only (EXP)
- Importer only (IMP)
- Two-way trader (TWT)

Three other categories are derived:

- All importers (IMPT = IMP + TWT)
- All exporters (EXPT = EXP + TWT)
- All trading enterprises (_T = EXP + IMP + TWT)

Compilation instruction in Table 1: the categorisation of traders has to be based on the total trade (partner world), taking into account all data sources. Every enterprise can be categorised to only one class (EXP or IMP or TWT). After categorisation, it is included in the counting of number of enterprises and contribution to the trade value by flow and partner.

Exports intensity

Export intensity is calculated for each enterprise by dividing **total exports** by **total turnover**. Please note that although data is requested to be broken down into intra- and extra-EU trade, the determination of exports intensity has to be based on total exports.

Enterprises have to be categorised as follows:

- No exports (PC0T24)
- Between more than 0% and less than 25 % (PC25T49)
- Between 25 % and less than 50 % (PC25T49)
- Between 50 % and less than 75 % (PC50T74)
- 75 % or more (PC_GE75)
- Unknown (_U)
- Total (_T)

Remarks:

- If an enterprise records only imports, its exports intensity is 0.
- If turnover is not available for an enterprise, its exports intensity is _U.
- If the exports value is greater than turnover, for instance in cases where exports include processing transactions, the exports intensity is 100%.

6.2.3 Variables

The data must be provided in terms of the trade value and the number of enterprises.

- Trade value (VALUE): All values must be expressed in euro for the Member States of the euro area and in national currency for the others. The values must be reported without decimals (integers).
- Number of enterprises (NB_ENT): The number of enterprises must be reported for each cells requested. Number of enterprises is not requested for Table 6.

6.3 TEC datasets

Since the year 2016 (reference period 2014), the TEC data collection consists of 11 SDMX-compliant datasets: T0, T1, T2, T3, T4, T5, T6, T8, T9, T10, T11. All 11 datasets are described by the same DSD, i.e. they share the same conceptual structure.

Annex 10.1 provides a detailed description of the statistical concepts, the Data Structure Definition (DSD), a cross-reference to code lists and examples of SDMX-ML messages.

6.4 Data validation

6.4.1 Data validation at national level

The validation rules that should be observed by the TEC files sent in CSV or SDMX-ML format are structured according to the validation levels classification established by the ESS.VIP on validation. These are:

- **Validation Level 0 (Format checks):** these checks are identical for all 11 datasets, as the 11 datasets all share the same structure. (annex 10.2.1).
- **Validation Level 1 (Intra-dataset checks):** for each of the 11 datasets, a different set of intra-dataset checks must be performed (annex 10.2.2). These checks consist of:
    - File-level checks on the completeness of the file and uniqueness of the records;
    - Intra-record checks on the validity of the codes used for each DSD concept;
    - Intra-record checks on the validity of code combinations across different dimensions;
    - Inter-record consistency checks.
- **Validation Level 2 (Inter-dataset checks):** for the inter-dataset validation of the data, the set of validation checks described in annex 10.2.3 must be performed. The inter-dataset checks are all consistency checks.
- **Validation Level 3 (Intra-domain checks):** TEC data must be checked against COMEXT trade data. The set of validation rules to be applied can be found in annex 10.2.4. The intra-domain checks are all consistency checks.

The format checks (level 0) and the file-level checks on the completeness of the file and uniqueness of the records (level 1) are of highest priority, and the negative result implies the **refusal of the file**. The other checks may result in a list of errors, and the Member State will

be asked to send a replacement file. **There is no automatic correction of the errors or imputation of missing values.**

6.4.2 Data validation at Eurostat

After the transmission of the national TEC to the Commission, Eurostat takes the following steps to check for data coherence:

- All Tables are checked to ensure that they are all filled in and the correct classifications and breakdowns have been used;
- A cross-checking is carried out to ensure consistency between the different Tables (internal consistency);
- Total trade values are compared to those of external databases, e.g the Comext database to check consistency with the monthly trade total values (external consistency);
- If errors or inconsistencies are detected, Eurostat contacts the countries for clarifications/modifications.

7 Confidentiality

Regulation (EC) No 223/2009 of the European Parliament and of the Council stipulates the main principles and provisions for receiving, processing and disseminating confidential data. According to article 3 of this Regulation, confidential data is defined as 'data which allow statistical units to be identified, either directly or indirectly, thereby disclosing individual information. To determine whether a statistical unit is identifiable, account shall be taken of all relevant means that might reasonably be used by a third party to identify the statistical unit'.

Article 2 of the same Regulation refers to the 'statistical confidentiality' as the protection of confidential data related to single statistical units which are obtained directly for statistical purposes or indirectly from administrative or other sources and implying the prohibition of use for non-statistical purposes of the data obtained and of their unlawful disclosure.

There are two principles of confidentiality: active confidentiality and passive confidentiality. Active confidentiality means that the National Statistical Authorities (NSAs) take the initiative to suppress the data without informing the trade operator concerned. Passive confidentiality means that data is suppressed only at the request of traders who feel that their interests would be harmed by the dissemination of their trade. The trader has to explain why the publicity of its data would have a negative impact on its business including the risk of the enterprise being identified. The NSAs need to define to which extent data provided by the trader should be considered as confidential and consequently apply suppression to disseminated statistics.

Active confidentiality is normally used in statistics describing statistical units like businesses. However, applying active confidentiality for international trade statistics is difficult for two main reasons: a) due to richness of details, there is a risk to suppress too much data which would then limit its usefulness and b) management of active confidentiality on monthly basis would need a comprehensive register of enterprises involved in trade activities.

For TEC, the active confidentiality is a more applicable concept than passive confidentiality as data are broken down by the characteristics of statistical units. Also, for most indicators, TEC are provided not only in terms of trade value but also in terms of number of enterprises. This could create situations where the statistical units can be directly or indirectly identified. Thus, articles 13a (8) and 15(9) of the intra- and extra-EU regulations 96/2010 and 113/2010 respectively relating to the compilation of statistics on trade by enterprise characteristics explicitly stipulate the use of active confidentiality:

'Member States shall ensure that statistics are provided in such a way that dissemination by the Commission (Eurostat) does not make it possible to identify an enterprise or trader. National authorities shall specify what data are affected by confidentiality provisions'.

The legal provisions define only the principle to be applied. The application of confidentiality in practice is under the responsibility of the NSAs. Each NSA should establish the rules to define confidential data. This implies also that it is the Member States' responsibility to mark their data as confidential before their transmission to the Commission (Eurostat)

Besides the legal provisions, Member States should follow a number of practical recommendations in order to ensure data disclosure with a minimum loss of information. These recommendations are listed below:

- Confidential data should be clearly flagged ('C').
- Member States should indicate whether the suppression concerns either the trade value or the number of enterprises or both variables.
- Unintentional revealing of confidential data should be avoided by applying secondary confidentiality. Secondary confidentiality needs to be applied when there is only one confidential flag in a Table and this cell is under an aggregate. In this case, the cell marked as confidential can be revealed by simply subtracting the aggregate of the rest of the cells from the total.
- The links between Tables should be taken into account when defining confidential records. This means that a record referring to an activity sector which is marked as confidential in one table, e.g. Table 2 should also be marked as confidential in a related Table, e.g. Table 6.
- Unnecessary suppression should be avoided if the only record flagged 'C' is a minor fraction of the total trade or if it refers to an unknown class.

8 Data transmission, treatment and dissemination

8.1 Data transmission

TEC data shall be transmitted to the Commission (Eurostat) within 18 months after the end of the reference year. The file format to be used is described in chapter 6.3. The transmission should be carried out via EDAMIS (Stadium), dataset COMEXT_ENTERPR_A.

8.2 Data treatment

The disseminated TEC data differ from the collected data for two reasons. The first obvious reason is the confidentiality: all confidential cells are suppressed before dissemination. The other reason concerns the construction of reference populations. As explained in chapter 4.3, a number of criteria based on data availability and validity are applied to construct reference populations. In the end, only the complete data which meet all the criteria can be used to calculate the key indicators. Data failing to meet one or more criteria do not have all necessary variables available so they cannot be used in the calculation of indicators. However, as the share of complete data varies between Member States and between flows, publishing indicators based only on the complete data does not give a coherent picture over Member States. Therefore, it is necessary to establish rules which guarantee the dissemination of comparable statistics.

For the sake of clarity, the data collected shall refer to Tables, while the disseminated data shall refer to Datasets. For the dissemination of TEC the following three principles are used:

A. Ten Datasets are disseminated

These correspond to Tables 1 to 11 as follows:

- Dataset 1: Trade by activity and enterprise size class (Table 2)
- Dataset 2: Concentration of trade by activity (Table 3)
- Dataset 3: Trade by partner country and activity (Table 4)
- Dataset 4: Trade by number of partner countries and activity (Table 5)
- Dataset 5: Trade by commodity and activity (Table 6)
- Dataset 6 : Trade by type of traders (Table 1)
- Dataset 7: Trade by activity and type of ownership (Table 8)
- Dataset 8: Trade by exports intensity (Table 9)
- Dataset 9: Trade by activity sectors (Table 10)
- Dataset 10: Trade by partner countries and size-class (Table 11)

Table 0 is not disseminated. The data of this Table are used in the compilation of Datasets 1 to 10.

B. Disseminated datasets refer to total trade

The indicators reported in Tables 2 to 6 and 8 to 11 refer only to a part of total trade (reference populations 8). These data need to be complemented with data from two other populations:

- Unclassified trade (derived from Table 0);
- Unknown trade (derived from Table 0).

The total trade in disseminated datasets always refers to a total trade of 100%.

C. Disseminated datasets are kept as simple as possible in terms of available dimensions

TEC consist of multiple dimensions of which some, for instance reference populations, are not suitable for dissemination as dimensions. For this reason, some dimensions need to be combined in the production process.

In practice, the above mentioned dissemination principles are applied as follows:

- All datasets are expressed in terms of trade value (in 1000s euro), while Datasets 1, 3,4,6,7,8,9 and 10 are also expressed in terms of number of enterprises.
- Each dataset has the following primary dimensions:
  - Reporting country
  - Period
  - Flow
  - Partner
  - Activity sector
- A secondary dimension depends on the given dataset:
  - Dataset 1: Size class
  - Dataset 2: Top enterprises
  - Dataset 3: Partner (country or zone)
  - Dataset 4: Number of partner countries
  - Dataset 5: Product
  - Dataset 6: Type of traders
  - Dataset 7: Type of ownership
  - Dataset 8: Exports intensity
  - Dataset 9: Activity sectors
  - Dataset 10: Partner (country or zone) and size-class

- Treatment of unclassified trade:

Data on unclassified trade are shown as a separate class under primary dimension (activity sector).

- Treatment of unknown trade:

Similarly to unclassified trade, data on unknown trade have been added to dissemination datasets as a separate class under primary dimension (activity sector).

- Confidentiality and flags:

Confidential records are flagged with 'C'.

8.3 Dissemination channels

Domain TEC has been created and is currently accessible through Easy Comext. Easy Comext is accessible either directly at http://epp.eurostat.ec.europa.eu/newxtweb/ or via the Eurostat website: http://ec.europa.eu/eurostat/web/international-trade/data/database .

Figure 11: TEC dissemination in Comext

9 Quality reporting

The role of quality reporting was strengthened in Regulation (EC) No 223/2009 of the European Parliament and of the Council on European statistics ('Statistical Law), recently amended by Regulation (EU) 2015/759 of the European Parliament and of the Council of 29 April 2015. Article 11 makes a reference to the European Statistics Code of Practice while article 12 defines the quality dimensions and calls for sector legislation to implement the modalities, structure and periodicity of quality reports.

There are 8 standard quality dimensions used in the ESS of which some are usually merged in the quality reporting:

- **Relevance:** It is the degree to which statistical outputs meet current and potential user needs. It depends on whether all the statistics that are needed are produced and the extent to which concepts used (definitions, classifications etc.,) reflect user needs.

- **Accuracy:** The accuracy of statistical outputs in the general statistical sense is the degree of closeness of estimates to the true values.

- **Timeliness and punctuality:** The timeliness of statistical outputs is the length of time between the event or phenomenon they describe and their availability. Punctuality is the time lag between the release date of data and the target date on which they were scheduled for release as announced in an official release calendar, laid down by Regulations or previously agreed among partners.

- **Accessibility and clarity:** Accessibility and clarity refer to the simplicity and ease with which users can access statistics, with the appropriate supporting information and assistance.

- **Coherence and comparability:** The coherence of two or more statistical outputs refers to the degree to which the statistical processes by which they were generated used the same concepts - classifications, definitions, and target populations – and harmonised methods. Coherent statistical outputs have the potential to be validly combined and used jointly. Examples of joint use are where the statistical outputs refer to the same population, reference period and region but comprise different sets of data items (say, employment data and production data) or where they comprise the same data items (say, employment data) but for different reference periods, regions, or other domains. Comparability is a special case of coherence and refers to the latter example above where the statistical outputs refer to the same data items and the aim of combining them is to make comparisons over time, or across regions, or across other domains.

The Intrastat and Extrastat Regulations include detailed provisions on the annual quality reporting procedure. Starting from 2012, TEC was included in this procedure. The annual Quality Report which Member States have to transmit to Eurostat includes some quality indicators concerning TEC. Most of them are pre-filled by Eurostat.

The following TEC quality indicators are compiled for each reference year and included in the annual Quality Report:

Relevance:

- Number of missing mandatory tables.

A*ccuracy:*

- Number of enterprises successfully matched with the Business Register;
- Global trade value of enterprises successfully matched with the Business Register;
- Percentage of confidential cells in each table;
- Confidentiality practices for TEC data.

Timeliness and punctuality:

- Time lag (in number of calendar days) between end of reference period and date of transmission of first results to Eurostat;
- Number of delayed data deliveries;
- Average delay of the delayed data deliveries.

10 Annexes

10.1 Use of SDMX-ML for TEC data transmissions

This document serves as a technical description of the TEC SDMX-ML implementation. It describes the structural information included in the SDMX-ML Data Structure Definition and gives samples as well as guidelines for creating SDMX-ML data sets. The use of SDMX messages for TEC as defined in this document is compliant with the SDMX 2.0 standard (http://www.sdmx.org)

10.1.1 Relevant Documents

The SDMX Standards Version 2.0 is maintained from the SDMX initiative (www.sdmx.org). The complete package of SDMX Standards version 2.0 can be downloaded from http://www.sdmx.org/index.php?page_id=16#package. The complete package includes the following sections:

[1] Section 01 Framework
Introduces the documents in the Version 2.0 package and provides requirements for conformity.

[2] Section 02 Information Model: UML Conceptual Design
UML model and functional description, definition of classes, associations and attributes.

[3] Section 03A SDMX-ML
Specifies and documents the XML formats for describing structure, data, metadata and interfaces to the registry.

[4] Section 03B SDMX-ML
A .ZIP file containing XML schemes and sample documents.

[5] Section 04 SDMX-EDI
Specifies and documents the EDIFACT format for describing structure and data. Includes samples.

[6] Section 05 Registry Specification - Logical Interfaces
Provides the specification for the logical registry interfaces, including subscription/notification, registration/submission of data and metadata, and querying.

[7] Section 06 Implementor's Guide for SDMX Standards
Provides a high level explanation of the Information Model that will be useful for implementers, together with examples. Provides best practices and information for implementers wishing to work with both the XML and EDIFACT formats.

[8] Section 07 Web Services Guidelines
Provides suggestions for the use of SDMX-ML formats in web services.

10.1.2 Dataflows

Dataflows are transmitted in the framework of the exchange of statistical data between Eurostat and the Member States. Each dataflow corresponds to a file to be provided. The SDMX implementation for TEC data exchange therefore foresees that 11 distinct files are transmitted, one for each TEC table.

Dataflow	Description	Periodicity of data transmission	Data Structure Definition
TEC_T0_A	TEC reference populations	Annual	TEC
TEC_T1_A	TEC overview of traders	Annual	TEC
TEC_T2_A	TEC trade by activity sector and size class	Annual	TEC
TEC_T3_A	TEC concentration of trade by activiy sector	Annual	TEC
TEC_T4_A	TEC trade by partner countries and activity sector	Annual	TEC
TEC_T5_A	TEC trade by number of partner countries and activity sector	Annual	TEC
TEC_T6_A	TEC trade by commodity and activity sector	Annual	TEC
TEC_T8_A	TEC trade by type of control and activity sector	Annual	TEC
TEC_T9_A	TEC trade by exports intensity and activity sector	Annual	TEC
TEC_T10_A	TEC trade by activity sector	Annual	TEC
TEC_T11_A	TEC trade by partner coutries and size-class	Annual	TEC

Source: Eurostat

10.1.3 Statistical Concepts

The following table shows the name and the description of the statistical concepts used in the different datasets of TEC. They are grouped into a unique concept scheme.

ID	Name	Format
FREQ	Frequency	
REPORTING_COUNTRY	Reporting Country	
PARTNER	Partner	
NACE_REV2	Economic activity	
NB_EMPLOYEE	Number of employee	
NB_ENTERPRISE	Number of enterprise	
NB_PARTNER	Partner country	
CPA	Commodity	
TRADE_POPULATION	Trade population	
TEC_FLOW	Flow	
TYPE_OF_CONTROL	Type of control	
TYPE_OF_TRADER	Type of trader	
EXPORTS_INTENSITY	Exports intensity	
MEASURE	Measure	
TIME_PERIOD	Time Period	
VALUE	Trade value	Numeric(15)
NB_ENT	Number of enterprise	Numeric(15)
OBS_VALUE	Observation value	
OBS_STATUS	Observation status	
CONF_STATUS	Confidentiality flag	
TABLE_ID	Table Identification	

Source: Eurostat

10.1.4 List of Code Lists

The following table lists the code lists used by the statistical concepts.

Code List ID	Code List Name
CL_SDMX_FREQ+1.0	Standard SDMX codes for frequency
CL_GEO_EUCCEFTA+1.2	
CL_TEC_COUNTRY_TRADE+1.0	
CL_TEC_ACTIVITY+1.0	
CL_TEC_NB_EMPLOYEE+1.0	
CL_TEC_NB_ENTERPRISE+1.0	
CL__TEC_NB_PARTNER+1.0	
CL_TEC_CPA+1.0	
CL_TEC_TRADE_POPULATION+1.0	
CL_FLOW+1.3	
CL_TEC_TYPE_CONTROL+1.0	
CL_TEC_TYPE_TRADER+1.0	
CL TEC_SIZECLASS_PERCENT+1.0	
CL_TEC_MEASURE+ESTAT+1.0	
CL_TEC_TABLEID+1.0	TEC table codes
CL_SDMX_OBS_STATUS+1.0	Standard SDMX codes for observation status
CL_SDMX_CONF_OBS+1..0	Standard SDMX codes for confidentiality status

Source: Eurostat

Code values of the above mentioned code lists are presented in section 'Code lists'.

10.1.5 Data Structure Definition

The following tables describe the TEC DSD. These tables contain all the components (dimensions, attributes, measures) included in the DSD and the associated Concepts and Code Lists used by these components.

DATA STRUCTURE DEFINITION	
ID	TEC
Name	Trade by Enterprise Characteristics DSD
Version	1
Agency ID	ESTAT
Valid From	
Valid To	

Position in Key	Concept					Representation				Dimension Type	XS Level
	ID	Name	Concept Scheme			Code List			Text Format		
			ID	VER	AGENCY	ID	VER	AGENCY			
1	FREQ	Frequency	CS_TEC	1	ESTAT	CL_SDMX_FREQ	1	SDMX		Frequ/cy	Observation
2	REPORTING_COUNTRY	Reporting Country	CS_TEC	1	ESTAT	CL_GEO_EUCCEFTA	1.2	ESTAT			Observation
3	PARTNER	Partner	CS_TEC	1	ESTAT	CL_TEC_COUNTRY_TRADE	1	ESTAT			Observation
4	NACE_REV2	Economic activity	CS_TEC	1	ESTAT	CL_TEC_ACTIVITY	1	ESTAT			Observation
5	NB_EMPLOYEE	Number of employee	CS_TEC	1	ESTAT	CL_TEC_NB_EMPLOYEE	1	ESTAT			Observation
6	NB_ENTERPRISE	Number of enterprise	CS_TEC	1	ESTAT	CL_TEC_NB_ENTERPRISE	1	ESTAT			Observation
7	NB_PARTNER	Number of partner countries	CS_TEC	1	ESTAT	CL_TEC_NB_PARTNER	1	ESTAT			Observation
8	CPA	Commodity	CS_TEC	1	ESTAT	CL_TEC_CPA	1	ESTAT			Observation
9	TRADE_POPULATION	Trade population	CS_TEC	1	ESTAT	CL_TEC_TRADE_POPULATION	1	ESTAT			Observation
10	TEC_FLOW	Flow	CS_TEC	1	ESTAT	CL_FLOW	1.3	ESTAT			Observation
11	TYPE_OF_CONTROL	Type of control	CS_TEC	1	ESTAT	CL_TEC_TYPE_CONTROL	1	ESTAT			Observation
12	TYPE_OF_TRADER	Type of trader	CS_TEC	1	ESTAT	CL_TEC_TYPE_TRADER	1	ESTAT			Observation
13	EXPORTS_INTENSITY	Exports intensity	CS_TEC	1	ESTAT	CL_TEC_SIZECLASS_PERCENT	1.3	ESTAT			Observation
14	MEASURE	Measure	CS_TEC	1	ESTAT	CL_TEC_MEASURE	1	ESTAT		Measure	
15	TIME_PERIOD	Time Period	CS_TEC	1	ESTAT		1	ESTAT			

Source: Eurostat

Measures											
Type	Concept					Representation				Measure Dimension	Code
	ID	Name	Concept Scheme			Code List			Text Format		
			ID	VER	Agency	ID	VER	Agency			
Primary	OBS_VALUE	Observation Value	CS_TEC	1	ESTAT					N/A	N/A
Cross-Sectional	VALUE	Cross-sectional measure	CS_TEC	1	ESTAT					MEASURE	VALUE
Cross-Sectional	NB_ENT	Cross-sectional measure	CS_TEC	1	ESTAT					MEASURE	NB_ENT

Attributes												
Attachm/t level	Concept					Representation				Attrib. Type	Ass. status	XS Level
	ID	Name	Concept Scheme			Code List			Text Format			
			ID	VER	Agency	ID	VER	Agency				
Observ/n	OBS_STATUS	Observation status	CS_TEC	1	ESTAT	CL_SDMX_OBS_STATUS	1	SDMX			C	Observation (VALUE NB_ENT)
Observ/n	CONF_STATUS	Confid/y flag	CS_TEC	1	ESTAT	CL_SDMX_CONF_OBS	1	SDMX			C	Observation (VALUE NB_ENT)
Data Set	TABLE_ID	Table Identifica/n	CS_TEC	1	ESTAT	CL_TEC_TABLEID	1	ESTAT			M	Dataset

Source: Eurostat

10.1.6 Code Lists

CL_SDMX_FREQ	
AGENCY:	SDMX
VERSION:	1
CODE	**DESCRIPTION**
A	Annual
B	Daily - business week
D	Daily
H	Hourly
M	Monthly
N	Minutely
Q	Quarterly
S	Half-yearly, semestrial
W	Weekly

CL_GEO_EUCCEFTA	
AGENCY:	ESTAT
VERSION:	1.2
CODE	**DESCRIPTION**
AT	Austria
BE	Belgium
BG	Bulgaria
CH	Switzerland
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GB	United Kingdom
GR	Greece
HR	Croatia
HU	Hungary
IE	Ireland
IS	Iceland
IT	Italy
LI	Liechtenstein
LT	Lithuania
LU	Luxembourg
LV	Latvia

ME	Montenegro
MK	Former Yugoslav Republic of Macedonia, the
MT	Malta
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
RS	Serbia
SE	Sweden
SI	Slovenia
SK	Slovakia
TR	Turkey

CL_TEC_COUNTRY_TRADE	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
AE	United Arab Emirates
AFR_N	North Africa
AFR_OTH	Other African countries
AME_C_CRB	Central America and Caribbean
AME_N	North America
AME_S	South America
AR	Argentina
ASI_NME	Near and Middle Eastern countries
ASI_OTH	Other Asian countries
AT	Austria
AU	Australia
BE	Belgium
BG	Bulgaria
BR	Brazil
CA	Canada
CH	Switzerland
CL	Chile
CN	China, People's Republic of
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
DZ	Algeria
EE	Estonia
EG	Egypt
ES	Spain

EU27	EU27 total
EU28	EU28 total
EUR_OTH	Other European Countries
EXT_EU27	Extra-EU27 total
EXT_EU28	Extra-EU28 total
EXT_EU_X	Non-specified partner countries in extra-EU trade and non-determined countries
FI	Finland
FR	France
GB	United Kingdom
GR	Greece
HK	Hong Kong
HR	Croatia
HU	Hungary
ID	Indonesia
IE	Ireland
IL	Israel
IN	India
INT_EU_X	Non-specified partner countries in intra-EU trade
IR	Iran, Islamic Republic of
IS	Iceland
IT	Italy
JP	Japan
KR	Korea, Republic of
KZ	Kazakhstan
LT	Lithuania
LU	Luxembourg
LV	Latvia
MA	Morocco
MT	Malta
MX	Mexico
MY	Malaysia
NG	Nigeria
NL	Netherlands
NO	Norway
OCE_PLR	Oceania and Polar regions
PL	Poland
PT	Portugal
QA	Qatar
RO	Romania
RU	Russia
SA	Saudi Arabia
SE	Sweden
SG	Singapore
SI	Slovenia
SK	Slovakia
TH	Thailand

TN	Tunisia
TR	Turkey
TW	Taiwan
UA	Ukraine
US	USA
VN	Viet-Nam
WORLD	World
ZA	South Africa

CL_TEC_ACTIVITY	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
A	AGRICULTURE, FORESTRY AND FISHING
A01	Crop and animal production, hunting and related service activities
A02	Forestry and logging
A03	Fishing and aquaculture
AFHTU	NACE branches other than Industry or Trade
B	MINING AND QUARRYING
B05	Mining of coal and lignite
B06	Extraction of crude petroleum and natural gas
B07	Mining of metal ores
B08	Other mining and quarrying
B09	Mining support service activities
BTE	Industry
C	MANUFACTURING
C10	Manufacture of food products
C101	Processing and preserving of meat and production of meat products
C102	Processing and preserving of fish, crustaceans and molluscs
C103	Processing and preserving of fruit and vegetables
C104	Manufacture of vegetable and animal oils and fats
C105	Manufacture of dairy products
C106	Manufacture of grain mill products, starches and starch products
C107	Manufacture of bakery and farinaceous products
C108	Manufacture of other food products
C109	Manufacture of prepared animal feeds
C11	Manufacture of beverages
C12	Manufacture of tobacco products
C13	Manufacture of textiles
C131	Preparation and spinning of textile fibres
C132	Weaving of textiles
C133	Finishing of textiles
C139	Manufacture of other textiles
C14	Manufacture of wearing apparel

C141	Manufacture of wearing apparel, except fur apparel
C142	Manufacture of articles of fur
C143	Manufacture of knitted and crocheted apparel
C15	Manufacture of leather and related products
C151	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness; dressing and dyeing of fur
C152	Manufacture of footwear
C16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
C161	Sawmilling and planing of wood
C162	Manufacture of products of wood, cork, straw and plaiting materials
C17	Manufacture of paper and paper products
C171	Manufacture of pulp, paper and paperboard
C172	Manufacture of articles of paper and paperboard
C18	Printing and reproduction of recorded media
C181	Printing and service activities related to printing
C182	Reproduction of recorded media
C19	Manufacture of coke and refined petroleum products
C191	Manufacture of coke oven products
C192	Manufacture of refined petroleum products
C20	Manufacture of chemicals and chemical products
C201	Manufacture of basic chemicals, fertilisers and nitrogen compounds, plastics and synthetic rubber in primary forms
C202	Manufacture of pesticides and other agrochemical products
C203	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
C204	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
C205	Manufacture of other chemical products
C206	Manufacture of man-made fibres
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
C211	Manufacture of basic pharmaceutical products
C212	Manufacture of pharmaceutical preparations
C22	Manufacture of rubber and plastic products
C221	Manufacture of rubber products
C222	Manufacture of plastic products
C23	Manufacture of other non-metallic mineral products
C231	Manufacture of glass and glass products
C232	Manufacture of refractory products
C233	Manufacture of clay building materials
C234	Manufacture of other porcelain and ceramic products
C235	Manufacture of cement, lime and plaster
C236	Manufacture of articles of concrete, cement and plaster
C237	Cutting, shaping and finishing of stone
C239	Manufacture of abrasive products and non-metallic mineral products n.e.c.
C24	Manufacture of basic metals
C241	Manufacture of basic iron and steel and of ferro-alloys

C242	Manufacture of tubes, pipes, hollow profiles and related fittings, of steel
C243	Manufacture of other products of first processing of steel
C244	Manufacture of basic precious and other non-ferrous metals
C245	Casting of metals
C25	Manufacture of fabricated metal products, except machinery and equipment
C251	Manufacture of structural metal products
C252	Manufacture of tanks, reservoirs and containers of metal
C253	Manufacture of steam generators, except central heating hot water boilers
C254	Manufacture of weapons and ammunition
C255	Forging, pressing, stamping and roll-forming of metal; powder metallurgy
C256	Treatment and coating of metals; machining
C257	Manufacture of cutlery, tools and general hardware
C259	Manufacture of other fabricated metal products
C26	Manufacture of computer, electronic and optical products
C261	Manufacture of electronic components and boards
C262	Manufacture of computers and peripheral equipment
C263	Manufacture of communication equipment
C264	Manufacture of consumer electronics
C265	Manufacture of instruments and appliances for measuring, testing and navigation; watches and clocks
C266	Manufacture of irradiation, electromedical and electrotherapeutic equipment
C267	Manufacture of optical instruments and photographic equipment
C268	Manufacture of magnetic and optical media
C27	Manufacture of electrical equipment
C271	Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus
C272	Manufacture of batteries and accumulators
C273	Manufacture of wiring and wiring devices
C274	Manufacture of electric lighting equipment
C275	Manufacture of domestic appliances
C279	Manufacture of other electrical equipment
C28	Manufacture of machinery and equipment n.e.c.
C281	Manufacture of general-purpose machinery
C282	Manufacture of other general-purpose machinery
C283	Manufacture of agricultural and forestry machinery
C284	Manufacture of metal forming machinery and machine tools
C289	Manufacture of other special-purpose machinery
C29	Manufacture of motor vehicles, trailers and semi-trailers
C291	Manufacture of motor vehicles
C292	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
C293	Manufacture of parts and accessories for motor vehicles
C30	Manufacture of other transport equipment
C301	Building of ships and boats
C302	Manufacture of railway locomotives and rolling stock

C303	Manufacture of air and spacecraft and related machinery
C304	Manufacture of military fighting vehicles
C309	Manufacture of transport equipment n.e.c.
C31	Manufacture of furniture
C32	Other manufacturing
C321	Manufacture of jewellery, bijouterie and related articles
C322	Manufacture of musical instruments
C323	Manufacture of sports goods
C324	Manufacture of games and toys
C325	Manufacture of medical and dental instruments and supplies
C329	Manufacturing n.e.c.
C33	Repair and installation of machinery and equipment
C331	Repair of fabricated metal products, machinery and equipment
C332	Installation of industrial machinery and equipment
D	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY
D35	Electricity, gas, steam and air conditioning supply
D351	Electric power generation, transmission and distribution
D352	Manufacture of gas; distribution of gaseous fuels through mains
D353	Steam and air conditioning supply
E	WATER SUPPLY, SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES
E36	Water collection, treatment and supply
E37	Sewerage
E38	Waste collection, treatment and disposal activities; materials recovery
E381	Waste collection
E382	Waste treatment and disposal
E383	Materials recovery
E39	Remediation activities and other waste management services
F	CONSTRUCTION
F41	Construction of buildings
F42	Civil engineering
F43	Specialised construction activities
G	WHOLESALE AND RETAIL TRADE, REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
G45	Wholesale and retail trade and repair of motor vehicles and motorcycles
G451	Sale of motor vehicles
G452	Maintenance and repair of motor vehicles
G453	Sale of motor vehicle parts and accessories
G454	Sale, maintenance and repair of motorcycles and related parts and accessories
G46	Wholesale trade, except of motor vehicles and motorcycles
G461	Wholesale on a fee or contract basis
G462	Wholesale of agricultural raw materials and live animals
G463	Wholesale of food, beverages and tobacco
G464	Wholesale of household goods
G465	Wholesale of information and communication equipment

G466	Wholesale of other machinery, equipment and supplies
G467	Other specialised wholesale
G469	Non-specialised wholesale trade
G47	Retail trade, except of motor vehicles and motorcycles
G471	Retail sale in non-specialised stores
G472	Retail sale of food, beverages and tobacco in specialised stores
G473	Retail sale of automotive fuel in specialised stores
G474	Retail sale of information and communication equipment in specialised stores
G475	Retail sale of other household equipment in specialised stores
G476	Retail sale of cultural and recreation goods in specialised stores
G477	Retail sale of other goods in specialised stores
G478	Retail sale via stalls and markets
G479	Retail trade not in stores, stalls or markets
H	TRANSPORTATION AND STORAGE
H49	Land transport and transport via pipelines
H50	Water transport
H51	Air transport
H52	Warehousing and support activities for transportation
H53	Postal and courier activities
I	ACCOMMODATION AND FOOD SERVICE ACTIVITIES
I55	Accommodation
I56	Food and beverage service activities
J	INFORMATION AND COMMUNICATION
J58	Publishing activities
J59	Motion picture, video and television programme production, sound recording and music publishing activities
J60	Programming and broadcasting activities
J61	Telecommunications
J62	Computer programming, consultancy and related activities
J63	Information service activities
K	FINANCIAL AND INSURANCE ACTIVITIES
K64	Financial service activities, except insurance and pension funding
K65	Insurance, reinsurance and pension funding, except compulsory social security
K66	Activities auxiliary to financial services and insurance activities
L	REAL ESTATE ACTIVITIES
L68	Real estate activities
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES
M69	Legal and accounting activities
M70	Activities of head offices; management consultancy activities
M71	Architectural and engineering activities; technical testing and analysis
M72	Scientific research and development
M73	Advertising and market research
M74	Other professional, scientific and technical activities
M75	Veterinary activities
N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES

N77	Rental and leasing activities
N78	Employment activities
N79	Travel agency, tour operator and other reservation service and related activities
N80	Security and investigation activities
N81	Services to buildings and landscape activities
N82	Office administrative, office support and other business support activities
O	PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY
O84	Public administration and defence; compulsory social security
P	EDUCATION
P85	Education
Q	HUMAN HEALTH AND SOCIAL WORK ACTIVITIES
Q86	Human health activities
Q87	Residential care activities
Q88	Social work activities without accommodation
R	ARTS, ENTERTAINMENT AND RECREATION
R90	Creative, arts and entertainment activities
R91	Libraries, archives, museums and other cultural activities
R92	Gambling and betting activities
R93	Sports activities and amusement and recreation activities
S	OTHER SERVICE ACTIVITIES
S94	Activities of membership organisations
S95	Repair of computers and personal and household goods
S96	Other personal service activities
T	ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE
T97	Activities of households as employers of domestic personnel
T98	Undifferentiated goods- and services-producing activities of private households for own use
U	ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES
U99	Activities of extraterritorial organisations and bodies
_O	Other NACE activities
_T	Total - All NACE activities

CL_TEC_NB_ENTERPRISE	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
T10	Top 10 enterprises
T100	Top 100 enterprises
T1000	Top 1000 enterprises
T20	Top 20 enterprises
T5	Top 5 enterprises
T50	Top 50 enterprises
T500	Top 500 enterprises
_T	All enterprises

CL_TEC_NB_PARTNER	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
P1	1 partner country
P10T14	10 to 14 partner countries
P15T19	15 to 19 partner countries
P2	2 partner countries
P3T5	3 to 5 partner countries
P6T9	6 to 9 partner countries
PGE20	20 or more partner countries
_T	Total
_U	Unknown

CL_TEC_CPA	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
CPA_A	Products of agriculture, forestry and fishing
CPA_B	Mining and quarrying
CPA_C10	Food products
CPA_C11	Beverages
CPA_C12	Tobacco products
CPA_C13	Textiles
CPA_C14	Wearing apparel
CPA_C15	Leather and related products
CPA_C16	Wood and of products of wood and cork

CPA_C17	Paper and paper products
CPA_C18	Printing and recording services
CPA_C19	Coke and refined petroleum products
CPA_C20	Chemicals and chemical products
CPA_C21	Basic pharmaceutical products and pharmaceutical preparations
CPA_C22	Rubber and plastic products
CPA_C23	Other non-metallic mineral products
CPA_C24	Basic metals
CPA_C25	Fabricated metal products
CPA_C26	Computer, electronic and optical products
CPA_C27	Electrical equipment
CPA_C28	Machinery and equipment n.e.c.
CPA_C29	Motor vehicles, trailers and semi-trailers
CPA_C30	Other transport equipment
CPA_C31	Furniture
CPA_C32	Other manufactured goods
CPA_D	Electricity, gas, steam and air conditioning
CPA_E	Water supply, sewerage, waste management and remediation services
_O	Other CPA products
_U	Unknown
_T	Total: sum all CPA sections

CL_TEC_TRADE_POPULATION	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
ATH	Traders above statistical exemption thresholds with valid id-codes
ATH_BR	Traders above statistical exemption thresholds with valid id-codes succesfully matched with the Business Register
ATH_BTH	Total trade with valid codes
ATH_NCL	Unclassified activities, above threshold
BR	Total trade with valid codes of which successfully matched with the Business Register
BTH	Intra-EU traders below the Intrastat exemption threshold
BTH_BR	Intra-EU traders below the Intrastat exemption threshold successfully matched with the Business Register
BTH_NCL	Unclassified activities, below threshold
NCL	Unclassified activities, total
_T	Total trade
_U	Unknown trade

CL_FLOW	
AGENCY:	ESTAT
VERSION:	1.3
CODE	**DESCRIPTION**
BAL	Balance
EXP	Exports
IMP	Imports
TOT	Total

CL_TEC_TYPE_CONTROL	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
D	Domestically controlled enterprises
DI	Domestically controlled enterprises without own affiliates abroad
DM	Domestically controlled enterprises with own affiliates abroad
F	Foreign controlled enterprises
_T	Total
_U	Unknown

CL_TEC_TYPE_TRADER	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
EXP	Exporter only
EXPT	Exporter
IMP	Importer only
IMPT	Importer
TWT	Two-way trader
_T	Total

CL_TEC_SIZECLASS_PERCENT	
AGENCY:	ESTAT
VERSION:	1.3
CODE	**DESCRIPTION**
PC0	Zero percent
PC0T24	From 0 (0 excluded) to 24 percent
PC25T49	From 25 to 49 percent
PC50T74	From 50 to 74 percent
PC_GE75	75 percent or over
_U	Unknown
_T	Total

CL_TEC_MEASURE	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
NB_ENT	number of enterprises
VALUE	value

CL_TEC_TABLEID	
AGENCY:	ESTAT
VERSION:	1
CODE	**DESCRIPTION**
T0	Table 0
T1	Table 1
T2	Table 2
T3	Table 3
T4	Table 4
T5	Table 5
T6	Table 6
T7	Table 7
T8	Table 8
T9	Table 9
T10	Table 10
T11	Table 11

CL_SDMX_OBS_STATUS	
AGENCY:	SDMX
VERSION:	1
CODE	**DESCRIPTION**
A	Normal
B	Break
D	Definition differs (see metadata)
E	Estimated value
F	Forecast value
H	Missing value; holiday or weekend
I	Imputed value (CCSA definition)
L	Missing value; data exist but were not collected
M	Missing value
N	Not significant
P	Provisional value
Q	Missing value; suppressed
S	Strike
U	Low reliability

CL_SDMX_CONF_OBS	
AGENCY:	SDMX
VERSION:	1
CODE	**DESCRIPTION**
C	Confidential statistical information
D	Secondary confidentiality set by the sender, not for publication
F	Free (free for publication)
N	Not for publication, restricted for internal use only
S	Secondary confidentiality set and managed by the receiver, not for publication

10.1.7 Message Implementation Guidelines

The following sections describe sample files that correspond to the DSD outlined above. Some specific requirements for the data types and values used for certain attributes are also described, based on the documents mentioned on page 1.

The following XML excerpt is used in all SDMX-ML messages and contains metadata concerning the transmitted DataSet. The required fields in order for the header to be valid per SDMX-ML format are indicated with bold characters:

<Header>

the top-level tag of the Header. In the Header element, the following tags reside:

<ID>TEC<\ID>

contains a data flow definition id to which the data set must comply.

<Test>true</Test>

indicates whether the data set is for testing purposes or not (boolean)

<Truncated>false</Truncated>

is used in response to Query messages, and is set to true only if the response has been truncated to meet size limits suggested by the default Limit attribute in the Query message.

<Name xml:lang="en">Dataset for Message Implementation Guidelines</Name>

contains a language-specific name describing the data set (more names using different values for xml:lang attribute can be added for other languages).

<Prepared>2014-04-14T12:00:00+02:00</Prepared>

contains the preparation date of the data set (date+time).

<Sender id="FI1"/>

contains the sender's ID in attribute id and may contain additional information regarding the sender of the data set (see SDMX standard for details).

<Receiver id="ESTAT"/>

contains the receiver's ID and may contain additional information regarding the receiver of the data set (see SDMX standard for details).

<KeyFamilyRef>TEC_T0</KeyFamilyRef>

is used to reference a key family for a contained data set, using its id.

<KeyFamilyAgency>ESTAT</KeyFamilyAgency>

specifies the agency of the key family using its coded id.

<DataSetAgency>ESTAT</DataSetAgency>

provides the code identifier/abbreviation for the maintenance agency of a data set.

<DataSetID>TEC_T0_A</DataSetID>

provides an identifier for a contained data set.

<DataSetAction>Append</DataSetAction>

provides a list of actions, describing the intention of the data transmission from the sender's side (New, Append, Replace, Delete Information – see SDMX standard for details).

<Extracted>2014-04-13T12:00:00+02:00</Extracted>

is a time-stamp from the system rendering the data (date+time).

<ReportingBegin>2013-01-01T00:00:00+02:00</ReportingBegin>

provides the beginning of the time period covered by the message (date+time).

<ReportingEnd>2013-12-31T23:59:59+02:00</ReportingEnd>

provides the end of the time period covered by the message (date+time).

<Source xml:lang="en">Information about the source of the data...</Source>

provides language-specific, human-readable information about the source of the data (more information using different value for xml:lang attribute can be added for other languages).

</Header>

the end tag of the header.

10.1.8 Compact Sample

In this section, the format of the compact SDMX-ML dataset is described. The top-level tag of a compact DataSet with the required namespaces is described below:

<CompactData

the tag name for the Compact SDMX-ML DataSet.

xmlns="http://www.SDMX.org/resources/SDMXML/schemas/v2_0/message"

the core namespace for all SDMX-ML messages.

xmlns:compact="http://www.SDMX.org/resources/SDMXML/schemas/v2_0/compact"

the 'compact' prefix used in the tags of the Compact SDMX-ML DataSet with the corresponding namespace.

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

specifies the XML Schema definition language, which offers facilities for describing the structure and constraining the contents of XML 1.0 documents, including those which exploit the XML Namespace facility.

xsi:schemaLocation="http://www.SDMX.org/resources/SDMXML/schemas/v2_0/message <path_to_XSD>/SDMXMessage.xsd"

provides hints as to the physical location of schema documents used to validate the message. In case we have the the localisation of the 'SDMXMessage.xsd' schema is a url. It can be replaced by either a local directory.

>

closing the <CompactData> tag

The first tag included in the <CompactData> tag is the <Header> tag presented above. The next tag at the same level is the <DataSet> tag. This includes, in a nested structure, all the Series and Observations that contain the data with the corresponding attributes to be transmitted, according to the DSD:

<tec:DataSet TABLE_ID="T0">

the start tag of the Compact DataSet. The attribute TABLE_ID is attached there.

<tec:Series FREQ="A" REPORTING_COUNTRY="BE" PARTNER="EU27" NACE_REV2="_T" NB_EMPLOYEE="_T" NB_ENTERPRISE="_T" NB_PARTNER="_T" CPA="_T" TRADE_POPULATION="BR" TEC_FLOW="TOT" TYPE_OF_CONTROL="_T" TYPE_OF_TRADER="_T" EXPORTS_INTENSITY="_T" MEASURE="NB_ENT">

includes all the dimensions except the TIME.

<tec:Obs TIME_PERIOD="2012" OBS_VALUE="500" OBS_STATUS="A" CONF_STATUS="F" />

is the observation tag in which we find the date and the measures as attribute of the observation value.

</tec:Series>

the end tag of the Series in this DataSet. If more Series need to be reported in the same DataSet (a different SeriesKey) more <Series> tags should be added here.

</tec:DataSet>

the end tag of the DataSet.

</CompactData>

10.1.9 Input file format

This section provides some guidance to design the input CSV fomat to be used for conversion to SDMX-ML with the SDMX converter tool.

The header of the CSV file should look like this:

TABLE_ID;FREQ;REPORTING_COUNTRY;PARTNER;NACE_REV2;NB_EMPLOYEE;NB_ENTERPRISE;NB_PARTNER;CPA;TRADE_POPULATION;TEC_FLOW;TYPE_OF_CONTROL;TYPE_OF_TRADER;EXPORTS_INTENSITY;MEASURE;TIME_PERIOD;OBS_VALUE;OBS_STATUS;CONF_STATUS

This is a sample of CSV records:

T2,A,BE,EU27,C12,E10T49,_T,_T,_T,_T,IMP,_T,_T,_T,NB_ENT,2012,250,A,F
T2,A,BE,EU27,C13,ELT10,_T,_T,_T,_T,IMP,_T,_T,_T,VALUE,2012,240,A,F
T2,A,BE,EU27,C12,E10T49,_T,_T,_T,_T,EXP,_T,_T,_T,NB_ENT,2012,230,A,F
T2,A,BE,EU27,C13,ELT10,_T,_T,_T,_T,EXP,_T,_T,_T,VALUE,2012,220,A,F
T2,A,BE,EXT_EU27,C12,E10T49,_T,_T,_T,_T,IMP,_T,_T,_T,NB_ENT,2012,210,A,F
T2,A,BE,EXT_EU27,C13,ELT10,_T,_T,_T,_T,IMP,_T,_T,_T,VALUE,2012,200,A,F
T2,A,BE,EXT_EU27,C12,E10T49,_T,_T,_T,_T,EXP,_T,_T,_T,NB_ENT,2012,190,A,F
T2,A,BE,EXT_EU27,C13,ELT10,_T,_T,_T,_T,EXP,_T,_T,_T,VALUE,2012,180,A,F
T2,A,BE,WORLD,C12,E10T49,_T,_T,_T,_T,IMP,_T,_T,_T,NB_ENT,2012,170,A,F
T2,A,BE,WORLD,C13,ELT10,_T,_T,_T,_T,IMP,_T,_T,_T,VALUE,2012,160,A,F
T2,A,BE,WORLD,C12,E10T49,_T,_T,_T,_T,EXP,_T,_T,_T,NB_ENT,2012,150,A,F
T2,A,BE,WORLD,C13,ELT10,_T,_T,_T,_T,EXP,_T,_T,_T,VALUE,2012,140,A,F

The SDMX converter needs a mapping file to convert the CSV file to SDMX-ML. This file is provided by Eurostat.

10.1.10 Code list constraints

The SDMX-ML files sent by the data providers are validated in Eurostat against a subset of codes that are relevant to the table sent. For instance, the SDMX-ML file for TEC Table 1 should only contain the codes used in that table. The DSD Matrixfile contains all the information about which codes are applicable in each table. The DSD Matrix file can be subdivided into three parts: the "Overview" sheet, the "Matrix" sheet and the code list sheets.

The "Overview" sheet lists the concepts used in the TEC DSD (the information is analogous to that contained in this document).

The "Matrix" sheet (see picture below) summarises how each concept is used in the various TEC tables. Each column corresponds to a concept from the concept scheme (the coded concepts are shown in blue), while each row corresponds to TEC table. The cells therefore link a table and a concept, and contain:

- A # sign if the code list from the concept is fully used in the table;
- A % sign if the code list from the concept is partially used in the table;
- A code if the concept is fixed to a single code.

Example: The cell at the intersection of table "T1" and concept FREQ contains code A. This means that table "T1" uses only code A (Annual) from the concept FREQ (Frequency).

The DSD Matrix file also contains a sheet for each code list used in the TEC DSD. In each one of these sheets, the codes applicable for each table are identified. The following picture is an extract of the sheet corresponding to code list CL_TEC_ACTIVITY. The sheet indicates that only code "VALUE" will be accepted for Table 3, while both "NB_ENT" and "VALUE" will be accepted for Table 4.

10.2 Data validation

10.2.1 Format checks

TEC data for all 11 datasets are structured according to a specifically defined SDMX Data Structure Definition (DSD). The DSD is available on Eurostat's Euro-SDMX training registry with the following specifications:

- DSD Agency: ESTAT
- DSD Name: TEC
- DSD Version: 1.0

The DSD contains 15 dimensions and 3 attributes. The structure of the DSD is summarised in the following table.

Concept ID	Description	Role	Code list or format	Mandatory/ Optional
FREQ	Frequency	Frequency dimension	CL_SDMX_FREQ (version 1.0)	Mandatory
REPORTING_COUNTRY	Reporting Country	Dimension	CL_GEO_EUCCEFTA (version 1.2)	Mandatory
PARTNER	Partner	Dimension	CL_TEC_COUNTRY_TRADE (version 1.0)	Mandatory
NACE_REV2	Economic activity	Dimension	CL_TEC_ACTIVITY (version 1.0)	Mandatory
NB_EMPLOYEE	Number of employees	Dimension	CL_TEC_NB_EMPLOYEE (version 1.0)	Mandatory
NB_ENTERPRISE	Number of enterprises	Dimension	CL_TEC_NB_ENTERPRISE (version 1.0)	Mandatory
NB_PARTNER	Number of partner countries	Dimension	CL_TEC_NB_PARTNER (version 1.0)	Mandatory
CPA	Commodity	Dimension	CL_TEC_CPA (version 1.0)	Mandatory
TRADE_POPULATION	Trade population	Dimension	CL_TRADE_POPULATION (version 1.0)	Mandatory
TEC_FLOW	Flow	Dimension	CL_FLOW (version 1.3)	Mandatory
TYPE_OF_CONTROL	Type of control	Dimension	CL_TEC_TYPE_CONTROL (version 1.0)	Mandatory
TYPE_OF_TRADER	Type of trader	Dimension	CL_TEC_TYPE_TRADER (version 1.0)	Mandatory
EXPORTS_INTENSITY	Exports intensity	Dimension	CL_TEC_SIZECLASS_PERCENT (version 1.3)	Mandatory
MEASURE	Measure	Measure Dimension	CL_TEC_MEASURE (version 1.0)	Mandatory
TIME_PERIOD	Time Period	Time dimension	YYYY	Mandatory
OBS_VALUE	Observation Value	Primary measure	Long	Mandatory
OBS_STATUS	Observation status	Attribute (Observation level)	CL_SDMX_OBS_STATUS (version 1.0)	Optional
CONF_STATUS	Confidentiality flag	Attribute (Observation level)	CL_CONF_OBS (version 1.0)	Optional
TABLE_ID	Table Identification	Attribute (Dataset level)	CL_TEC_TABLEID (version 1.0)	Mandatory

Source: Eurostat

TEC data is expected to be sent in one of the two following formats:

- Compact SDMX-ML (SDMX version 2.0)
- CSV

When CSV is used as the transmission format, the information transmitted will correspond only to the 'Dataset' element in the SDMX-ML format: no information regarding the 'Header' element in the SDMX-ML format will be included.

For the CSV files, semi-colons will be used as the field separators[1]. Each record should consist of 19 fields. The correspondence between CSV fields and DSD concepts can be found in the table below.

CSV field #	DSD Concept	Mandatory/ Optional
1	TABLE_ID	Mandatory
2	FREQ	Mandatory
3	REPORTING_COUNTRY	Mandatory
4	PARTNER	Mandatory
5	NACE_REV2	Mandatory
6	NB_EMPLOYEE	Mandatory
7	NB_ENTERPRISE	Mandatory
8	NB_PARTNER	Mandatory
9	CPA	Mandatory
10	TRADE_POPULATION	Mandatory
11	TEC_FLOW	Mandatory
12	TYPE_OF_CONTROL	Mandatory
13	TYPE_OF_TRADER	Mandatory
14	EXPORTS_INTENSITY	Mandatory
15	MEASURE	Mandatory
16	TIME_PERIOD	Mandatory
17	OBS_VALUE	Mandatory
18	OBS_STATUS	Optional
19	CONF_STATUS	Optional

Source: Eurostat

(1) A different separator can be defined in the SDMX converter; by default it is ";".

10.2.2 Intra-dataset checks

These checks can be divided in four categories:

1) File-level checks on the completeness of the file and uniqueness of the records.

These checks are repeated for each dataset and consist to verify that:

- Every record in the dataset has a unique key. The key is formed by the 15 dimensions in the DSD.
- The number of records in the file is equal to the total number foreseen for this dataset. This number is given by the product of the possible accepted values for each dimensions, minus the number of invalid combinations.

2) Intra-record checks on the validity of the codes used for each DSD concept

These checks are performed for each dimension/attribute in the record. The code must correspond to one of the codes of the related codelist which are allowed for this dataset.

In each dataset some dimensions or attributes have a fixed value, that is the same value is repeated for all records. For example, the dimension REPORTING_COUNTRY is obviously the same for all records. When the dimension is not relevant for such dataset, all records are filled in with the default value _T (which stands for Total).

For all the dimensions/attributes which are not indicated as fixed, the accepted values are indicated in the TEC DSD Matrix.

3) Intra-record checks on the validity of code combinations across different dimensions.

For each dataset, it is requested to send the statistical information (OBS_VALUE) for each combination of the relevant dimensions of the dataset, that is the dimensions which are not indicated as fixed. For some datasets, it could be possible that some combinations of dimensions are meaningless; they should not be included in the dataset.

4) Inter-record consistency checks

These are basic validation rules on the statistical values provided (OBS_VALUE). They correspond to the checks included in the excel template (validation rows and validation columns). The rules are based on a comparison between two values (eg. total and sum of single components), that is they compare two groups of records (made of one or more records) defined by the value(s) of a specific dimension. This comparison should be repeated within each group defined by the other relevant dimensions (that is the other dimensions that are not fixed). This group of records is defined in the text as ‘combination’.

For each dataset, the validation criteria are presented according to the same structure:

a) Fixed dimensions and attributes
b) Invalid combinations
c) Total records
d) Validation rules for OBS_VALUE

Dataset T0 (Table 0 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T0

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NACE_REV2, NB_EMPLOYEE, NB_ENTERPRISE, NB_PARTNER, CPA, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

CONF_STATUS = F

b) Invalid combinations

TRADE_POPULATION	MEASURE
_T	NB_ENT
_U	NB_ENT

c) Total records

72

d) Validation rules for OBS_VALUE

Rule T0_1

For each combination of PARTNER, TEC_FLOW and MEASURE = VALUE:

the sum of TRADE_POPULATION = (BR, NCL, _U) is equal to TRADE_POPULATION = _T

Rule T0_2

For each combination of TRADE_POPULATION, TEC_FLOW and MEASURE = VALUE:

the sum of PARTNER = (EU28, EXT_EU28) is equal to PARTNER = WORLD

Dataset T1 (Table 1 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T1

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_ENTERPRISE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

b) Invalid combinations

TEC_FLOW	TYPE_OF_TRADER
IMP	EXP
IMP	EXPT
IMP	_T
EXP	IMP
EXP	IMPT
EXP	_T
TOT	IMP
TOT	IMPT

TOT EXP
TOT EXPT
TOT TWT

c) Total records

1806

d) Validation rules for OBS_VALUE

Rule T1_1
For each combination of NACE_REV2, PARTNER = WORLD and TEC_FLOW = IMP:
the sum of TYPE_OF_TRADER = (IMP, TWT) is equal to TYPE_OF_TRADER = IMPT
Rule T1_2
For each combination of NACE_REV2, PARTNER = WORLD and TEC_FLOW =EXP:
the sum of TYPE_OF_TRADER = (EXP, TWT) is equal to TYPE_OF_TRADER = EXPT
Rule T1_3
For each combination of NACE_REV2, PARTNER = WORLD, MEASURE=NB_ENT and TEC_FLOW = TOT:
(TYPE_OF_TRADER = IMP and FLOW = IMP) + (TYPE_OF_TRADER =TWT and FLOW = IMP) + (TYPE_OF_TRADER = EXP and FLOW = EXP) = _T (TYPE_OF_TRADER)
Rule T1_4
For each combination of NACE_REV2, PARTNER = WORLD, MEASURE=VALUE and TEC_FLOW = TOT:
the sum of TYPE_OF_TRADER = (IMPT, EXPT) is equal to TYPE_OF_TRADER = _T
Rule T1_5
For each combination of PARTNER, TEC_FLOW, TYPE_OF_TRADER, MEASURE:
the sum of NACE_REV2 = (A,B,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28, C29,C30,C31,C32,C33,D,E,F,G45,G46,G47,H,J,K,L,M,N,_O) is equal to NACE_REV2 = _T
Rule T1_6
For each combination of PARTNER, TEC_FLOW, TYPE_OF_TRADER, MEASURE:
the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T2 (Table 2 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T2

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_ENTERPRISE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

3096

d) Validation rules for OBS_VALUE

Rule T2_1

For each combination of PARTNER, NACE_REV2, TEC_FLOW, MEASURE:

the sum of NB_EMPLOYEE = (ELT10, E10T49, E50T249, EGE250, _U) is equal to NB_EMPLOYEE = _T

Rule T2_2

For each combination of PARTNER, NB_EMPLOYEE, TEC_FLOW, MEASURE:

the sum of NACE_REV2 = (A,B,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28, C29,C30,C31,C32,C33,D,E,F,G45,G46,G47,H,J,K,L,M,N,_O) is equal to NACE_REV2 = _T

Rule T2_3

For each combination of PARTNER, NB_EMPLOYEE, TEC_FLOW, MEASURE:

the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T3 (Table 3 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T3

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

MEASURE = VALUE

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

192

d) Validation rules for OBS_VALUE

Rule T3_1

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

NB_ENTERPRISE = T10 is greater than NB_ENTERPRISE = T5

Rule T3_2

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

NB_ENTERPRISE = T20 is greater than NB_ENTERPRISE = T10

Rule T3_3

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

NB_ENTERPRISE = T50 is greater[1] than NB_ENTERPRISE = T20

Rule T3_4

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

NB_ENTERPRISE = T100 is greater than NB_ENTERPRISE = T50

Rule T3_5

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

NB_ENTERPRISE = T500 is greater than NB_ENTERPRISE = T100

Rule T3_6

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

NB_ENTERPRISE = T1000 is greater than NB_ENTERPRISE = T500

Rule T3_7

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

NB_ENTERPRISE = _T is greater than NB_ENTERPRISE = T1000

Rule T3_8

(1) For some countries it could be necessary to use "greater or equal" for NB_ENTERPRISE = T50, T100, T500, T1000, _T.

For each combination of PARTNER, TEC_FLOW, NB_ENTERPRISE = (T5, T10, T20, T50, T100, T500, T1000):

the sum of NACE_REV2 = (AFHTU, BTE, G) is greater than NACE_REV2 = _T

Rule T3_9

For each combination of PARTNER, TEC_FLOW, NB_ENTERPRISE = _T:

the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T4 (Table 4 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T4

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_ENTERPRISE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

1248

d) Validation rules for OBS_VALUE

Rule T4_1

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

the sum of PARTNER = (BE, BG, CZ, DK, DE, EE, IE, GR, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, GB, INT_EU_X) is equal to PARTNER = EU28

Rule T4_2

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = EUR_OTH is greater than the sum of PARTNER = (CH,IS,NO,RU,TR,UA)

Rule T4_3

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = AFR_N is greater than the sum of PARTNER = (DZ, EG, MA, TN)

Rule T4_4

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = AFR_OTH is greater than the sum of PARTNER = (NG, ZA)

Rule T4_5

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = AME_N is greater than the sum of PARTNER = (CA, US)

Rule T4_6

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = AME_C_CRB is greater than PARTNER = MX

Rule T4_7

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = AME_S is greater than the sum of PARTNER = (AR, BR, CL)

Rule T4_8

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = ASI_NME is greater than the sum of PARTNER = (AE, IL, IR, QA, SA)

Rule T4_9

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

PARTNER = ASI_OTH is greater than the sum of PARTNER = (CN, HK, ID, IN, JP, KR, KZ ,MY, SG, TH, TW, VN)

Rule T4_10

For each combination of PARTNER, TEC_FLOW, MEASURE:
PARTNER = OCE_PLR is greater than PARTNER = AU
Rule T4_11
For each combination of PARTNER, TEC_FLOW, MEASURE:
the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T5 (Table 5 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T5

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_ENTERPRISE, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

432

d) Validation rules for OBS_VALUE

Rule T5_1

For each combination of PARTNER, NACE_REV2, TEC_FLOW, MEASURE:

The sum of NB_PARTNER = (P1, P2, P3T5, P6T9, P10T14, P15T19, PGE20, _U) is equal to NB_PARTNER = _T

Rule T5_2

For each combination of PARTNER, NB_PARTNER, TEC_FLOW, MEASURE:

the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T6 (Table 6 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T6

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_ENTERPRISE, NB_PARTNER, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

MEASURE = VALUE

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

7740

d) Validation rules for OBS_VALUE

Rule T6_1

For each combination of PARTNER, NACE_REV2, TEC_FLOW:

The sum of CPA = (CPA_A, CPA_B, CPA_C10, CPA_C11, CPA_C12, CPA_C13, CPA_C14, CPA_C15, CPA_C16, CPA_C17, CPA_C18, CPA_C19,CPA_C20, CPA_C21, CPA_C22, CPA_C23, CPA_C24, CPA_C25, CPA_C26, CPA_C27, CPA_C28, CPA_C29, CPA_C30, CPA_C31, CPA_C32, CPA_D, CPA_E, _O, _U) is equal to CPA = _T

Rule T6_2

For each combination of PARTNER, CPA, TEC_FLOW:

the sum of NACE_REV2 = (A,B,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28, C29,C30,C31,C32,C33,D,E,F,G45,G46,G47,H,J,K,L,M,N,_O) is equal to NACE_REV2 = _T

Rule T6_3

For each combination of PARTNER, CPA, TEC_FLOW:

the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T8 (Table 8 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T8

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_ENTERPRISE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

3096

d) Validation rules for OBS_VALUE

Rule T8_1

For each combination of PARTNER, NACE_REV2, TEC_FLOW, MEASURE:

the sum of TYPE_OF_CONTROL = (D, F, _U) is equal to TYPE_OF_CONTROL = _T

Rule T8_2

For each combination of PARTNER, NACE_REV2, TEC_FLOW, MEASURE:

the sum of TYPE_OF_CONTROL = (DI, DM, F, _U) is equal to TYPE_OF_CONTROL = _T

Rule T8_3

For each combination of PARTNER, TEC_FLOW, TYPE_OF_CONTROL , MEASURE:

the sum of NACE_REV2 = (A,B,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28, C29,C30,C31,C32,C33,D,E,F,G45,G46,G47,H,J,K,L,M,N,_O) is equal to NACE_REV2 = _T

Rule T8_4

For each combination of PARTNER, TEC_FLOW, TYPE_OF_CONTROL , MEASURE:

the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T9 (Table 9 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T9

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_ENTERPRISE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER = _T

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

3612

d) Validation rules for OBS_VALUE

Rule T9_1

For each combination of PARTNER, NACE_REV2, TEC_FLOW, MEASURE:

the sum of EXPORTS_INTENSITY = (PC0, PC0T24, PC25T49, PC50T74, PC_GE75, _U) is equal to EXPORTS_INTENSITY = _T

Rule T9_2

For each combination of PARTNER, TEC_FLOW, EXPORTS_INTENSITY , MEASURE:

the sum of NACE_REV2 = (A,B,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,D,E,F,G45,G46,G47,H,J,K,L,M,N,_O) is equal to NACE_REV2 = _T

Rule T9_3

For each combination of PARTNER, TEC_FLOW, EXPORTS_INTENSITY, MEASURE:

the sum of NACE_REV2 = (AFHTU, BTE, G) is equal to NACE_REV2 = _T

Dataset T10 (Table 10 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T10

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NB_EMPLOYEE, NB_ENTERPRISE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

2748

d) Validation rules for OBS_VALUE

Rule T10_1

For each combination of PARTNER, TEC_FLOW, MEASURE:

the sum of NACE_REV2 = (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U) is equal to NACE_REV2 = _T

Rule T10_2

For each combination of NACE_REV2, TEC_FLOW, MEASURE:

the sum of PARTNER = (EU28, EXT_EU28) is equal to PARTNER = WORLD

Dataset T11 (Table 11 of the old Excel template)

a) Fixed dimensions and attributes

TABLE_ID = T1

FREQ = A

REPORTING_COUNTRY = according to the codelist CL_GEO_EUCCEFTA

NACE_REV2, NB_ENTERPRISE, NB_PARTNER, CPA, TRADE_POPULATION, TYPE_OF_CONTROL, TYPE_OF_TRADER, EXPORTS_INTENSITY = _T

TIME_PERIOD = 2014

b) Invalid combinations

None

c) Total records

1872

d) Validation rules for OBS_VALUE

Rule T11_1

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

the sum of PARTNER = (BE, BG, CZ, DK, DE, EE, IE, GR, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, GB, INT_EU_X) is equal to PARTNER = EU28

Rule T11_2

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = EUR_OTH is greater than the sum of PARTNER = (CH,IS, NO,RU,TR,UA)

Rule T11_3

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = AFR_N is greater than the sum of PARTNER = (DZ, EG, MA, TN)

Rule T11_4

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = AFR_OTH is greater than the sum of PARTNER = (NG, ZA)

Rule T11_5

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = AME_N is greater than the sum of PARTNER = (CA, US)

Rule T11_6

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = AME_C_CRB is greater than PARTNER = MX

Rule T11_7

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = AME_S is greater than the sum of PARTNER = (AR, BR, CL)

Rule T11_8

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = ASI_NME is greater than the sum of PARTNER = (AE, IL, IR, QA, SA)

Rule T11_9

For each combination of NB_EMPLOYEE, TEC_FLOW, MEASURE:

PARTNER = ASI_OTH is greater than the sum of PARTNER = (CN, HK, ID, IN, JP, KR, KZ ,MY, SG, TH, TW, VN)

Rule T11_10

For each combination of PARTNER, TEC_FLOW, MEASURE:

PARTNER = OCE_PLR is greater than PARTNER = AU

Rule T11_11

For each combination of PARTNER, TEC_FLOW, MEASURE:

the sum of NB_EMPLOYEE = (ELT10, E10T49, E50T249, EGE250, _U) is equal to NB_EMPLOYEE = _T

10.2.3 Inter-dataset checks

Each table listed below represents a group of records, one for each dataset, for which the OBS_VALUE should be the same. In fact, within each group the dimensions indicated (except for TABLE_ID) have the same value, that is they define the same statistics.

1) Intra-EU imports, number of enterprises

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EU28	BTE	_T	_T	IMP	_T	NB_ENT

Nace G

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EU28	G	_T	_T	IMP	_T	NB_ENT

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EU28	AFHTU	_T	_T	IMP	_T	NB_ENT

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	EU28	_T	_T	_T	IMP	_T	IMPT	NB_ENT
T2, T4, T5, T8	EU28	_T	_T	_T	IMP	_T	_T	NB_ENT

2) Intra-EU imports, value

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EU28	BTE	_T	_T	_T	_T	IMP	_T	VALUE

Nace G

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EU28	G	_T	_T	_T	_T	IMP	_T	VALUE

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EU28	AFHTU	_T	_T	_T	_T	IMP	_T	VALUE

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	EU28	_T	_T	_T	_T	_T	IMP	_T	IMPT	VALUE
T2, T3, T4, T5, T6, T8	EU28	_T	_T	_T	_T	_T	IMP	_T	_T	VALUE

3) Intra-EU exports, number of enterprises

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EU28	BTE	_T	_T	EXP	_T	NB_ENT

Nace G

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EU28	G	_T	_T	EXP	_T	NB_ENT

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EU28	AFHTU	_T	_T	EXP	_T	NB_ENT

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	EU28	_T	_T	_T	EXP	_T	EXPT	NB_ENT
T2, T4, T5, T8	EU28	_T	_T	_T	EXP	_T	_T	NB_ENT

4) Intra-EU exports, value

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EU28	BTE	_T	_T	_T	_T	EXP	_T	VALUE

Nace G

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EU28	G	_T	_T	_T	_T	EXP	_T	VALUE

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EU28	AFHTU	_T	_T	_T	_T	EXP	_T	VALUE

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	EU28	_T	_T	_T	_T	_T	EXP	_T	EXPT	VALUE
T2, T3, T4, T5, T6, T8	EU28	_T	_T	_T	_T	_T	EXP	_T	_T	VALUE

5) Extra-EU imports, number of enterprises

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EXT_EU28	BTE	_T	_T	IMP	_T	NB_ENT

Nace G

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EXT_EU28	G	_T	_T	IMP	_T	NB_ENT

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EXT_EU28	AFHTU	_T	_T	IMP	_T	NB_ENT

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	EXT_EU28	_T	_T	_T	IMP	_T	IMPT	NB_ENT
T2, T4, T5, T8	EXT_EU28	_T	_T	_T	IMP	_T	_T	NB_ENT

6) Extra-EU imports, value

Nace B to E

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPL OYEE	NB_ENTER PRISE	NB_PARTN ER	CPA	TEC_FLOW	TYPE_OF_ CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EXT_EU28	BTE	_T	_T	_T	_T	IMP	_T	VALUE

Nace G

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPL OYEE	NB_ENTER PRISE	NB_PARTN ER	CPA	TEC_FLOW	TYPE_OF_ CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EXT_EU28	G	_T	_T	_T	_T	IMP	_T	VALUE

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPL OYEE	NB_ENTER PRISE	NB_PARTN ER	CPA	TEC_FLOW	TYPE_OF_ CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EXT_EU28	AFHTU	_T	_T	_T	_T	IMP	_T	VALUE

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLO YEE	NB_ENTER PRISE	NB_PARTN ER	CPA	TEC_FLOW	TYPE_OF_C ONTROL	TYPE_OF_T RADER	MEASURE
T1	EXT_EU2 8	_T	_T	_T	_T	_T	IMP	_T	IMPT	VALUE
T2, T3, T4, T5, T6, T8	EXT_EU2 8	_T	_T	_T	_T	_T	IMP	_T	_T	VALUE

7) Extra-EU exports, number of enterprises

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EXT_EU28	BTE	_T	_T	EXP	_T	NB_ENT

Nace G

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EXT_EU28	G	_T	_T	EXP	_T	NB_ENT

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	EXT_EU28	AFHTU	_T	_T	EXP	_T	NB_ENT

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	EXT_EU28	_T	_T	_T	EXP	_T	EXPT	NB_ENT
T2, T4, T5, T8	EXT_EU28	_T	_T	_T	EXP	_T	_T	NB_ENT

8) Extra-EU exports, value

Nace B to E

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EXT_EU28	BTE	_T	_T	_T	_T	EXP	_T	VALUE

Nace G

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EXT_EU28	G	_T	_T	_T	_T	EXP	_T	VALUE

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	EXT_EU28	AFHTU	_T	_T	_T	_T	EXP	_T	VALUE

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	EXT_EU28	_T	_T	_T	_T	_T	EXP	_T	EXPT	VALUE
T2, T3, T4, T5, T6, T8	EXT_EU28	_T	_T	_T	_T	_T	EXP	_T	_T	VALUE

9) World imports, number of enterprises

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	WORLD	BTE	_T	_T	IMP	_T	NB_ENT

Nace G

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	WORLD	G	_T	_T	IMP	_T	NB_ENT

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	WORLD	AFHTU	_T	_T	IMP	_T	NB_ENT

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	WORLD	_T	_T	_T	IMP	_T	IMPT	NB_ENT
T2, T4, T5, T8	WORLD	_T	_T	_T	IMP	_T	_T	NB_ENT

10) World imports, value

Nace B to E

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPL OYEE	NB_ENTER PRISE	NB_PARTN ER	CPA	TEC_FLOW	TYPE_OF_ CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	WORLD	BTE	_T	_T	_T	_T	IMP	_T	VALUE

Nace G

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPL OYEE	NB_ENTER PRISE	NB_PARTN ER	CPA	TEC_FLOW	TYPE_OF_ CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	WORLD	G	_T	_T	_T	_T	IMP	_T	VALUE

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPL OYEE	NB_ENTER PRISE	NB_PARTN ER	CPA	TEC_FLOW	TYPE_OF_ CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	WORLD	AFHTU	_T	_T	_T	_T	IMP	_T	VALUE

Nace TOTAL

TABLE_ID	PARTNER	NACE_RE V2	NB_EMPL OYEE	NB_ENTE RPRISE	NB_PART NER	CPA	TEC_FLO W	TYPE_OF _CONTRO L	TYPE_OF _TRADER	MEASURE
T1	WORLD	_T	_T	_T	_T	_T	IMP	_T	IMPT	VALUE
T2, T3, T4, T5, T6, T8	WORLD	_T	_T	_T	_T	_T	IMP	_T	_T	VALUE

11) World exports, number of enterprises

Nace B to E

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	WORLD	BTE	_T	_T	EXP	_T	NB_ENT

Nace G

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	WORLD	G	_T	_T	EXP	_T	NB_ENT

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T4, T5, T8	WORLD	AFHTU	_T	_T	EXP	_T	NB_ENT

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_PARTNER	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	WORLD	_T	_T	_T	EXP	_T	EXPT	NB_ENT
T2, T4, T5, T8	WORLD	_T	_T	_T	EXP	_T	_T	NB_ENT

12) World exports, value

Nace B to E

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	WORLD	BTE	_T	_T	_T	_T	EXP	_T	VALUE

Nace G

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	WORLD	G	_T	_T	_T	_T	EXP	_T	VALUE

Nace AFHTU

TABLE_ID	PARTNER	NACE_REV 2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	MEASURE
T2, T3, T4, T5, T6, T8	WORLD	AFHTU	_T	_T	_T	_T	EXP	_T	VALUE

Nace TOTAL

TABLE_ID	PARTNER	NACE_REV2	NB_EMPLOYEE	NB_ENTERPRISE	NB_PARTNER	CPA	TEC_FLOW	TYPE_OF_CONTROL	TYPE_OF_TRADER	MEASURE
T1	WORLD	_T	_T	_T	_T	_T	EXP	_T	EXPT	VALUE
T2, T3, T4, T5, T6, T8	WORLD	_T	_T	_T	_T	_T	EXP	_T	_T	VALUE

10.2.4 Intra-domain checks

The TEC values for the population 1 (total trade) should correspond to the sum of the monthly values for the detailed intra-EU and extra-EU data, as transmitted by the Member State (including the latest revisions) and loaded in Comext database. If we define the latter as 'Comext' value, then the validation rule can be indicated as:

TABLE_ID	PARTNER	TRADE_POPULATION	TEC_FLOW	MEASURE	OBS_VALUE
T0	EU28	_T	IMP	VALUE	= Comext value
T0	EU28	_T	EXP	VALUE	= Comext value
T0	EXT_EU28	_T	IMP	VALUE	= Comext value
T0	EXT_EU28	_T	EXP	VALUE	= Comext value

Source: Eurostat

10.3 Legal acts

10.3.1 Intra-EU trade

- Regulation (EC) No 638/2004 of the European Parliament and of the Council of 31 March 2004 on Community statistics relating to the trading of goods between Member States, amended by

  Regulation (EC) No 222/2009 of the European Parliament and of the Council
  Commission Regulation (EU) No 1093/2013
  Regulation (EU) No 659/2014 of the European Parliament and of the Council

OJ L 102, 7.4.2004, p.1 (*consolidated version, 7.7.2014*)

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02004R0638-20140717

- Commission Regulation (EC) No 1982/2004 of 18 November 2004 implementing Regulation (EC) No 638/2004 of the European Parliament and of the Council on Community statistics relating to the trading of goods between Member States and repealing Commission Regulations (EC) No 1901/2000 and (EEC) No 3590/92, amended by

  Commission Regulation (EC) No 1915/2005
  Commission Regulation (EC) No 91/2010
  Commission Regulation (EC) No 96/2010
  Commission Regulation (EC) No 1093/2013

OJ L 343, 19.11.2004, p. 3 – 19 (*consolidated version, 26.11.2013*)

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02004R1982-20131126

10.3.2 Extra-EU trade

- Regulation (EC) No 471/2009 of the European Parliament and of the Council of 6 May 2009 on Community statistics relating to external trade with non-member countries and repealing Council Regulation (EC) No 1172/95

OJ L 152, 16.6.2009, p. 23 – 29

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:152:0023:0029:EN:PDF

- Commission Regulation (EU) No 92/2010 of 2 February 2010 implementing Regulation (EC) No 471/2009 of the European Parliament and of the Council on Community statistics relating to external trade with non-member countries, as regards data exchange between customs authorities and national statistical authorities, compilation of statistics and quality assessment

OJ L 31, 3.2.2010, p. 4 – 6

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:031:0004:0006:EN:PDF

- Commission Regulation (EU) No 113/2010 of 9 February 2010 implementing Regulation (EC) No 471/2009 of the European Parliament and of the Council on Community statistics relating to external trade with non-member countries, as regards trade coverage, definition of the data, compilation of statistics on trade by business characteristics and by invoicing currency, and specific goods or movements.

OJ L 37, 10.2.2010, p. 1 - 11

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010R0113&qid=1461168617620&from=EN

10.3.3 Business registers

- Regulation (EC) No 177/2008 of the European Parliament and of the Council of 20 February 2008 establishing a common framework for business registers for statistical purposes and repealing Council Regulation (EEC) No 2186/93.

OJ L 61, 5.3.2008, p. 6 – 16

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:061:0006:0016:EN:PDF

- Commission Regulation (EC) No 192/2009 of 11 March 2009 implementing Regulation (EC) No 177/2008 of the European Parliament and of the Council establishing a common framework for business registers for statistical purposes, as regards the exchange of confidential data between the Commission (Eurostat) and Member States.

OJ L 67, 12.3.2009, p. 14 – 21

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:067:0014:0021:EN:PDF

- Commission Decision of 11 March 2009 concerning derogations from certain provisions of Regulation (EC) No 177/2008 of the European Parliament and of the Council of 20 February 2008 establishing a common framework for business registers for statistical purposes.

OJ L 75, 21.3.2009, p. 11 – 14

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009D0252&rid=1

- Commission Regulation (EU) No 1097/2010 of 26 November 2010 implementing Regulation (EC) No 177/2008 of the European Parliament and of the Council establishing a common framework for business registers for statistical purposes, as regards the exchange of confidential data between the Commission (Eurostat) and central banks.

OJ L 312, 27.11.2010, p. 1 – 6

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010R1097&rid=1

- Decision of the European central Bank of 27 December 2010 on the transmission of confidential data under the common framework for business registers for statistical purposes (ECB/2010/33).

OJ L 6, 11.1.2011, p. 37 – 39

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:006:0037:0039:EN:PDF

10.3.4 Structural Business Statistics

- Regulation (EC) No 295/2008 of the European Parliament and of the Council of 11March 2008 concerning structural business statistics (recast).

OJ L 97, 9.4.2008, p. 13–59 (*consolidated version, 4.9.2014*)

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02008R0295-20140523

- Commission Regulation (EC) No 97/2009 of 2 February 2009 implementing Regulation (EC) No 295/2008 of the European Parliament and of the Council concerning structural business statistics, as regards the use of the flexible module.

OJ L 33, 3.2.2009, p.6-7

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009R0097&from=EN

- Commission Regulation (EC) No 250/2009 of 11 March 2009 implementing Regulation (EC) No 295/2008 of the European Parliament and of the Council as regards the definitions of characteristics, the technical format for the transmission of data, the double reporting requirements for NACE Rev.1.1 and NACE Rev.2 and derogations to be granted for structural business statistics.

OJ L 86, 31.3.2009, p.1 – 169

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02009R0250-20150721&from=EN

- Commission Regulation (EU) No 275/2010 of 30 March 2010 implementing Regulation (EC) No 295/2008 of the European Parliament and of the Council as regards the criteria for the evaluation of the quality of structural business statistics.

OJ L 86, 1.4.2010, p.1 *(consolidated version, 23.5.2014)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02010R0275-20140523&qid=1461686767636&from=EN

10.3.5 Short-term statistics

- Council Regulation (EC) No 1165/98 of 19 May 1998 concerning short-term statistics.

OJ L 162, 5.6.1998, p. 1 *(consolidated version, 21.6.2012)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01998R1165-20120621&rid=1

- Commission Regulation (EC) No 586/2001 of 26 March 2001 on implementing Council Regulation (EC) No 1165/98 concerning short-term statistics as regards the definition of Main Industrial Groupings (MIGS).

OJ L 86, 27.3.2001, p.11 *(consolidated version, 1.1.2009)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02001R0586-20090101&qid=1461839386153&from=EN

- Commission Regulation (EC) No 1502/2006 of 28 September 2006 implementing Council Regulation (EC) No 1165/98 concerning short-term statistics as regards derogations to be granted to Member States.

OJ L 281, 12.10.2006, p. 1 – 14

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006R1502&qid=1461838996485&from=EN

- Commission Regulation (EC) No 1503/2006 of 28 September 2006 implementing and amending Council Regulation (EC) No 1165/98 concerning short-term statistics as regards definitions of variables, list of variables and frequency of data compilation.

OJ L 281, 12.10.2006, p. 15 – 29

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006R1503&qid=1461169635408&from=EN

- Commission Regulation (EC) No 657/2007 of 14 June 2007 implementing Council Regulation (EC) No 1165/98 concerning short-term statistics as regards the establishment of European sample schemes.

OJ L 140, 30.5.2008, p. 5 – 8 *(consolidated version, 9.4.2015)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02007R0657-20150409&qid=1461839970995&from=EN

- Commission Regulation (EC) No 472/2008 of 29 May 2008 implementing Council Regulation (EC) No 1165/98 concerning short-term statistics as regards the first base year to be applied for time series in NACE Revision 2 and, for time series prior to 2009 to be transmitted according to NACE revision 2, the level of detail, the form, the first reference period, and the reference period.

OJ L 140, 30.5.2008, p. 5 – 8

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008R0472&rid=1

10.3.6 Statistics on manufactured goods (Prodcom)

- Council Regulation (EEC) No 3924/91 of 19 December 1991 on the establishment of a Community survey of industrial production (Prodcom).

OJ L 374 of 31.12.1991, p. 1 – 3 *(consolidated version, 20.4.2009)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01991R3924-20090420&rid=1

- Commission Regulation (EC) No 912/2004 of 29 April 2004 implementing Council Regulation (EEC) No 3924/91 on the establishment of a Community survey of industrial production.

OJ L 163, 30.4.2004, p. 71 – 72 *(consolidated version, 1.1.2008)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02004R0912-20080101&from=EN

10.3.7 Foreign affiliates statistics (FATS)

- Regulation (EC) No 716/2007 of the European Parliament and of the Council of 20 June 2007 on Community statistics on the structure and activity of foreign affiliates.

OJ L 171, 29.6.2007, p. 17 – 31 *(consolidated version, 1.7.2013)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02007R0716-20130701&from=EN

- Commission Regulation (EC) No 364/2008 of 23 April 2008 implementing Regulation (EC) No 716/2007 of the European Parliament and of the Council, as regards the technical format for the transmission of foreign affiliates statistics and the derogations to be granted to Member States.

OJ L 112, 24.4.2008, p. 14 – 21

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:112:0014:0021:EN:PDF

10.3.8 Statistical unit

- Council Regulation (EEC) No 696/93 of 15 March 1993 on the statistical units for the observation and analysis of the production system in the Community.

OJ L 76, 30.03.1993, p. 1-11 *(consolidated version, 11.12.2008)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01993R0696-20081211&rid=1

10.3.9 Confidentiality

- Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics and repealing Regulation (EC, Euratom) No 1101/2008 of the European Parliament and of the Council on the transmission of data subject to statistical confidentiality to the Statistical Office of the European Communities, Council Regulation (EC) No 322/97 on Community Statistics, and Council Decision 89/382/EEC, Euratom establishing a Committee on the Statistical Programmes of the European Communities.

OJ L 87, 31.3.2009, p.164 – 173 (*consolidated version, 8.6.2015)*

http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1461333584527&uri=CELEX:02009R0223-20150608

10.4 Classifications

10.4.1 Combined Nomenclature (CN)

- Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff.

OJ L 256, 07.09.1987, p. 1 – 675 (*consolidated version, 1.1.2000*)

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01987R2658-20000101&from=EN

- Commission Regulation (EC) No 1754/2015 of 6 October 2015 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff.

OJ L 285, 30.10.2015, p.1 - 926

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R1754&qid=1461170452649&from=EN

- Explanatory notes to the combined nomenclature of the European Communities; Publication of the Commission made in accordance with Article 9(1) of Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff.

OJ C 133, 30.5.2008, p.1 - 402

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52008XC0530(07)&from=EN

10.4.2 Statistical classification of products by activity (CPA 2008)

- Regulation (EC) No 451/2008 of the European Parliament and of the Council of 23 April 2008 establishing a new statistical classification of products by activity (CPA) and repealing Council Regulation (EEC) No 3696/93.

OJ L 145, 4.6.2008, p.65 - 226

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008R0451&qid=1461170806729&from=EN

- Commission Regulation (EU) No 1209/2014 of 29 October 2014 amending Regulation (EC) No 451/2008 of the European Parliament and of the Council establishing a new statistical classification of products by activity (CPA) and repealing Council Regulation (EEC) No 3696/93

OJ L 336, 22.11.2014, p.1 - 149

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R1209&qid=1461170909470&from=EN

10.4.3 PRODCOM classification

- Commission Regulation (EU) No 2015/1711 of 17 September 2015 establishing for 2015 the 'Prodcom list' of industrial products provided for by Council Regulation (EEC) No 3924/91.

OJ L 254, 30.9.2015, p. 1 – 350

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R1711&rid=2

10.4.4 Statistical classification of economic activities (NACE Rev. 2)

- Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulations on specific statistical domains.

OJ L 393, 30.12.2006, p. 1 – 39 *(consolidated version, 29.4.2008)*

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006R1893-20080429&from=EN

10.4.5 Country Nomenclature (GEONOM)

- Commission Regulation (EU) No 1106/2012 of 27 November 2012 implementing Regulation (EC) No 471/2009 of the European Parliament and of the Council on Community statistics relating to external trade with non-member countries, as regards the update of the nomenclature of countries and territories

OJ L 328, 28.11.2012, p.7 - 15

http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012R1106&qid=1461172315786&from=EN

10.4.6 CPA – CN Correspondence

- Correspondence tables between the Statistical Classification of Products by Activity in the European Economic Community and the Combined Nomenclature:

CN 2016 – CPA 2008

http://ec.europa.eu/eurostat/ramon/relations/index.cfm?TargetUrl=LST_LINK&StrNomRelCode=CN 2016 - CPA 2008&StrLanguageCode=EN

10.5 Methodological documents

- User Guide on European statistics on international trade in goods, 2015 edition

http://ec.europa.eu/eurostat/web/international-trade-in-goods/methodology/manuals-and-guidelines

- Quality Report on European statistics on international trade in goods, 2015 edition

http://ec.europa.eu/eurostat/web/international-trade-in-goods/methodology/manuals-and-guidelines

- Business registers recommendations manual, Eurostat, 2010

http://ec.europa.eu/eurostat/documents/3859598/5915609/KS-32-10-216-EN.PDF/398ebf46-64b6-4204-b209-f29357a341d4?version=1.0

HOW TO OBTAIN EU PUBLICATIONS

Free publications:

- one copy:
  via EU Bookshop (http://bookshop.europa.eu);
- more than one copy or posters/maps:
  from the European Union's representations (http://ec.europa.eu/represent_en.htm);
  from the delegations in non-EU countries (http://eeas.europa.eu/delegations/index_en.htm);
  by contacting the Europe Direct service (http://europa.eu/europedirect/index_en.htm) or calling 00 800 6 7 8 9 10 11 (freephone number from anywhere in the EU) (*).

  (*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

Priced publications:

- via EU Bookshop (http://bookshop.europa.eu).

KS-GQ-16-002-EN-N

Publications Office

ISBN 978-92-79-57966-0