

Building the System of National Accounts - business register and statistical classifications

Statistics Explained

This article is part of a [set of background articles](#) explaining in some detail how statistics producers, such as national or international statistical institutes, may build a coherent [system of national accounts \(SNA\)](#), especially in developing countries. The articles are based on the official Eurostat handbook [Essential SNA - Building the basics](#) and they focus particularly on the early stages of the implementation.

The aim of this article is to highlight the fact that the status and quality of the statistical infrastructure make a decisive contribution to the compilation and quality of [national accounts](#). Two of the main pillars of statistical infrastructure are identified and described in separate sections: the [statistical business register \(SBR\)](#) and [classifications](#). While a good quality statistical business register should offer a realistic view of a country's businesses, the classifications implemented by countries should envisage comparability in space and time.

The other two main components of statistical infrastructure, [statistical data sources](#) and [administrative data sources](#) have their own articles.

Business register

The statistical business register (SBR) plays an essential role in the construction and maintenance of an integrated economic information system, serving multiple purposes. One of these objectives is to provide quality data needed for the compilation of national accounts indicators. In other words, it is a list of businesses which includes those engaged in the production of goods and services.

For statistical purposes the business register is a tool used for preparing and coordinating [surveys](#) as well as an information source used in the statistical analysis of the business population and its demography. It is also used for administrative data as well as for identifying and constructing statistical units.

The register comprises:

- all [enterprises](#) carrying on economic activities contributing to the [gross domestic product \(GDP\)](#) and their [local units](#) ;
- the legal units of which those enterprises consist;
- truncated enterprise groups and multinational enterprise groups;
- all [resident](#) enterprise groups.

Objective

The SBR exists primarily for the purpose of supplying a framework for all economic surveys. Therefore it is designed to provide a means of coordinating the coverage of business surveys and of achieving consistency in classifying statistical reporting units. It also serves as a data source for compiling demographic information about businesses.

Variables

The typical units in an SBR are legal units and local units, whereas for statistical purposes, these must be transformed into units such as enterprises and establishments.

Legal units include:

- legal persons whose existence is recognised by law irrespective of the individuals or institutions which may own them or are members of them;
- natural persons engaged in an economic activity in their own right.

A legal unit always forms, either by itself or sometimes in combination with other legal units, the legal basis for a statistical unit known as the 'enterprise'.

Identification Characteristics	1.1.		Identity number
	1.2a.		Name
	1.2b.		Address (including postcode) at the most detailed level
	1.2c.	Optional	Telephone and fax numbers, e-mail address, and information to permit electronic collection of data
	1.3.		Value Added Tax (VAT) registration number or, failing that, other administrative identity number
Demographic Characteristics	1.4.		Date of incorporation for legal persons or date of official recognition as an economic operator for natural persons
	1.5.		Date on which the legal unit ceased to be part of an enterprise (as identified in 'Main variables collected for an Enterprise – 3.3')
Economic/Stratification Characteristics	1.6.		Legal form
	1.7b.	Optional	Reference to balance sheet data (for units required for publication of accounts), and Reference to the balance of payments register or foreign direct investment register, and Reference to the firms register
Link with Enterprise Group	1.8.		Identity number of the all-resident/truncated enterprise group, to which the unit belongs
	1.9.		Date of association to the all-resident/truncated group
	1.10.		Date of separation from the all-resident/truncated group
	1.11a.		Identity number(s) of resident legal unit(s), which are controlled by the legal unit
	1.11b.		Identity number of the resident legal unit, which controls the legal unit
	1.12a.		Country(ies) of registration, and identity number(s) or name(s) and address(es) of the non-resident legal unit(s), which are controlled by the legal unit
	1.12b.	Conditional	VAT number(s) of non-resident legal which are controlled by the legal unit
	1.13a.		Country of registration, and identity number or name and address of the non-resident legal unit, which controls the legal unit
	1.13b.	Conditional	VAT number of the non-resident legal unit, which controls the legal unit
	1.14a.	Conditional	(a) Identity number(s), and (b) shares (%) of resident legal unit(s) owned by the legal unit
	1.14b.	Conditional	(a) Identity number(s), and (b) shares (%) of resident legal unit(s), which own(s) the legal unit
	1.15.	Conditional	(a) Country(ies) of registration, and (b) identity number(s) or, name(s), address(es), and VAT number(s), and (c) shares (%) of non-resident legal unit(s) owned by the legal unit
1.16.	Conditional	(a) Country(ies) of registration, and (b) identity number(s) or, name(s), address(es), and VAT number(s), and (c) shares (%) of non-resident legal unit(s), which own(s) the legal unit	

Figure 1: Main variables collected for a Legal Unit - Source: Regulation 177/2008 of 20 February 2008 on establishing a common framework for business registers for statistical purposes and repealing Council Regulation (EEC) No 2186/93

A **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, an 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.

Identification Characteristics	2.1.		Identity number
	2.2a.		Name
	2.2b.		Address (including postcode) at the most detailed level
	2.2c.	Optional	Telephone and fax numbers, e-mail address, and information to permit electronic collection of data
Demographic Characteristics	2.3.		Identity number of the enterprise (in "Main variables collected for an enterprise – 3.1"), to which the local unit belongs
	2.4.		Date of commencement of activities
Economic/ Stratification Characteristics	2.5.		Date of final cessation of activities
	2.6.		Principal activity code at 4-digit level
	2.7.	Conditional	Secondary activities, if any, at 4-digit level; this point concerns only local units which are the subject of surveys
	2.8.	Optional	Activity carried out in the local unit constituting an ancillary activity of the enterprise to which it belongs (Yes/No)
	2.9.		Number of persons employed
	2.10a.		Number of employees
	2.10b.	Optional	Number of employees in full-time equivalents
	2.11.		Geographical location code
Links with Other Registers	2.12.	Conditional	Reference to associated registers, in which the local unit appears and which contain information which can be used for statistical purposes (if such associated registers exist)

Figure 2: Main variables collected for a Local Unit - Source: Regulation 177/2008 of 20 February 2008 on establishing a common framework for business registers for statistical purposes and repealing Council Regulation (EEC) No 2186/93

Identification Characteristics	3.1.		Identity number
	3.2a.		Name
	3.2b.	Optional	Postal, e-mail and website addresses
	3.3.		Identity number(s) of the legal unit(s) of which the enterprise consist(s)
Demographic Characteristics	3.4.		Date of commencement of activities
	3.5.		Date of final cessation of activities
Economic/ Stratification Characteristics	3.6.		Principal activity code at 4-digit level
	3.7.	Conditional	Secondary activities, if any, at 4-digit level; this point concerns only enterprises which are the subject of surveys
	3.8.		Number of persons employed
	3.9a.		Number of employees
	3.9b.	Optional	Number of employees in full-time equivalents
	3.10a.		Turnover save as provided in 3.10b
	3.10b.	Optional	Turnover for agriculture, hunting and forestry, fishing, and public administration and defense, compulsory social security, private households with employed persons and extra-territorial organizations
	3.11.		Institutional sector and sub-sector according European System of Accounts
Links with Other Registers	3.12.		Identity number of the all-resident/truncated enterprise group, to which the enterprise belongs

Figure 3: Main variables collected for an Enterprise - Source: Regulation 177/2008 of 20 February 2008 on establishing a common framework for business registers for statistical purposes and repealing Council Regulation (EEC) No 2186/93

In the first section, *Basic concepts*, of the article, [Building the System of National Accounts - basic concepts](#), the relationships between enterprises, local units and establishments are outlined.

The units listed in a register should be described according to type of statistical unit (legal unit, local unit and enterprise) using three categories of variables:

- **Identification variables** (identity number, name of enterprise, name of the owner, address, legal status);
- **Stratification variables** (economic activity, number of employees, sales turnover, geographical location);
- **Demographic variables** (births, date of changes in economic activity, deaths).

It is important to ensure the utmost accuracy of data, particularly those used as stratification variables in the sampling process (for example, variables relating to size and activity classification), together with identification data thus enabling contact with firms. The main variables included in an SBR are presented in Figures 1, 2 and 3.

The use of standardised statistical units in an SBR guarantees time-consistency in surveys, avoids duplications and omissions in data collection and improves the final quality of results by allowing greater coordination between surveys. The existence of a unique identification number, usually a legal code attributed by the tax

administration, can greatly enhance the capacity for coordination between the various sources, including administrative ones.

Implementing and developing an SBR

The starting point for the construction of an SBR is invariably the use of administrative records showing the enterprises created and maintained for supporting administrative regulations. In order to answer statistical needs, information from administrative registers is adapted and included in an SBR.

H. Berby and Y. Bergström (1997), Development of a Demonstration Data Base for Business Register Management. An Example of a Statistical Business Register According to the Regulation and Recommendations of the European Union, Statistics Norway.

Figure 4: An example of Business Register implementation

The main issue in managing an SBR is its maintenance and update, given the pace of change in the business world. Registers must be updated at least once a year.

The most effective method of updating an SBR combines using information from [administrative sources](#)¹, business surveys and register maintenance surveys.

The Central Business Register (CEMPRE) is a comprehensive database maintained by the Brazilian Institute of Geography and Statistics or IBGE, which contains data about the universe of units enrolled in the tax office, companies and their local units in the Brazilian economy.

The Business Register has adopted the same definition of legal units as that used by the administrative records, that is, enterprises are the legal units registered in the Internal Revenue Service and each of their different addresses is treated as an establishment. This means that the smallest unit in the statistical register is a mix of theoretical definition of local unit and establishment: one location, one or more activities, one legal identification (usually one for each local unit, but in a few cases more than one legal identification for the same location may be found).

CEMPRE checks the existence of enterprises, their different local units (addresses), identifying them by name (legal situation), location, unique legal identification number, activity code, size (based on the variable number of employees, salaries paid, income) and other elements needed for administering the register, these constitute the reference base for the sampling design of business surveys.

All major administrative registers, as well as CEMPRE, use a single identification number for legal units. This 14-digit key-number enables perfect linkage between administrative and statistical business registers, and also links enterprises to their local units. The first 8 digits are assigned to an enterprise, the following 4 digits are a serial number for identifying its local units, and the 2 last digits are check codes. The existence of a single identification code and the adoption of the same basic unit of investigation by administrative registers and the statistical institute facilitate update procedures and prevent duplicate entries for an enterprise in the register.

The maintenance and update of the Business Register is based on previous sample surveys and complemented by data from the administrative record with the widest coverage available.

Figure 5: Implementation of the Brazilian statistical business register - Source: Instituto Brasileiro de Geografia e Estatística (IBGE) – Estadísticas del Cadastro Central de Empresas (CEMBRE), IBGE

- **Administrative sources** have the advantage of covering the entire enterprise universe. It is essential for statistical and administrative bodies to employ a standardised activity classification system. Failure to do so may seriously compromise the final quality of the results of surveys based on a register. The use of conversion tables to adapt the data to the classification employed by the statistical body is not recommended, because this process results in major quality losses, since it is common to find situations where the transfer is not direct or one-to-one. To avoid this problem, statistical offices should attempt to persuade the bodies that produce the main administrative records to use a single activity classification table.

¹Authorities responsible for the primary registration of private sector businesses, tax offices, social security offices, government departments for information about public sector establishments (schools, hospitals, public utilities etc.), organisations of professionals (physicians, lawyers, etc.) and the ministry of agriculture for agricultural establishments.

- **Surveys** offer more complete information, albeit for a more restricted population.
- **Register maintenance surveys** are specifically undertaken to update an SBR. Some statistical agencies undertake the survey in cooperation with the primary registration authority. For small enterprises, including informal sector operators, register maintenance surveys are crucial.

Questions for practitioners

An important issue relating to the construction of statistics and the national accounts system of a country is the existence and the quality of its business register.

The main issues concerning business registers relevant for statistics and national accounts are:

- Does an SBR exist in the statistical office or does it need to be constructed? What other administrative records and registers exist in the country?
- If an SBR exists, how good is the quality of its information? Is it based on the most suitable administrative sources? Is it updated regularly? In countries where administrative records are insufficient or unavailable for frequently feeding and updating their business registers, an economic census becomes a crucial tool for providing information about active enterprises and establishments required for compiling national accounts.
- To what extent does the quality of an SBR affect the quality of statistical surveys used for compiling national accounts?
- Is the classification of industries used in an SBR in line with SNA requirements?
- Is the SBR used as a sample for statistical surveys?

Classifications

Classifications are a key element in the compilation of [statistical indicators](#). The SNA uses several classifications; some of them are specific to the compiling of national accounts, such as classifying units into institutional sectors, goods and services, or transactions. Others are common to national accounts and other statistical domains.

The premise used for compiling national accounts is that data sources should be adapted and collected in accordance with international classifications.

The implementation of a classification and the main classifications used in SNA are presented below.

Importance of adopting international classifications

Classifications organise units such as persons, enterprises, activities, etc. into groups according to a standard format defined according to the principles and criteria that have been used to construct them.

A standard statistical classification (SSC) is a set of discrete categories that may be assigned to a specific variable registered in a statistical survey or in an administrative file, and used in the production or presentation of statistics. National statistical authorities are responsible for the implementation, development, use and updating and/or revision of the national standard statistical classifications (NSSCs).

International standard statistical classifications (ISSCs) are developed and adopted by international institutions to ensure correct implementation of international agreements and to standardise national and international communication, promoting comparability of international statistics. ISSCs are products of agreements between national authorities responsible for statistics in the respective areas, and may serve as models for developing corresponding national, multinational and regional statistical instruments.

One of the advantages of ISSCs is that they can be adopted as national classifications by countries that do not have the experience or resources to develop them; in addition they can be used as a guide for adapting national classifications to international standards.

Implementing a classification

Four types of methodological issues must be considered when adapting ISSCs for national use: issues relating to the identification of user requirements; issues relating to the conceptual basis for the SSCs and their structure; issues relating to the collection of the information required for developing the classification and maintenance and update of classifications.

1. **User requirements** : It should be determined who the users are, how they will use the classification and the statistics produced with its help, to accommodate the adaptation of ISSCs to national needs.
2. **Conceptual tasks** : Primary statistical units² should be identified, as well as the possible ISSC categories to be assigned to them. How statistical units are linked to the classification's primary unit needs to be determined. The structure of the classification needs to be defined in order to arrange content in such way that the aggregations of the most detailed categories in the set are based upon similar criteria and which will be meaningful for descriptive and analytic comparisons. Rules should be drawn up to identify when statistical units should be classified into the same most detailed classification category, and when they should be classified differently. Similarity criteria are required to define higher-level categories (aggregated groups of categories) in hierarchical classifications³.
3. **Collecting and presenting information** : in order to develop a classification, information needs to be collected and explanatory notes prepared which explain the boundaries between each of the classification categories using definitional descriptions and/or listing what is included or excluded. It is also important to present correspondence tables which enable systematic comparisons between classifications to be made and which present a classification structure map, listing levels, codes, hierarchies, etc. Correspondence tables indicate how, where and to what extent, concepts and categories in one classification may be found in other classifications, or in earlier versions of the same classification.
4. **Maintenance of a classification** includes the activities undertaken to ensure classification errors, or ones in the explanatory notes or associated coding tools are corrected. Updating is an important process for presenting all the news in the field, for modifying descriptive category definitions, as well as introducing new categories into the existing structure and new coding tools.

Defining the primary variable(s) of a classification:

In the International Standard Classification of Occupations (ISCO), the primary variable is "occupation" which is defined as "the main tasks and duties of work performed". In ISIC, the primary variable is "activity" defined as the main productive economic activity of a unit (establishment, enterprise or household), as indicated by the principal production process of that economic activity.

Defining rules for linking different statistical units to the classification's primary unit:

In the case of classifying persons by 'industry', e.g. according to ISIC, a link has to be established between each person and a job, e.g. the 'main job' held during the reference period, which can then be linked to an establishment, as this is one of the main statistical units for ISIC.

Formulating rules for classifying units into the same detailed categories:

In ISCO, the rule is that when the main tasks and duties of a set of jobs are characterized by a high degree of similarity, then these jobs should be classified into the same detailed category. The main tasks and duties define an occupation, which is the designation for the most detailed element in the set of categories of this classification. For ISIC, the rule is that when the economic activity of two establishments is characterized by a common production process resulting in the same homogeneous set of products, then the two units should be classified into the same detailed category.

Formulating similarity criteria for defining higher level categories:

In ISCO, the main similarity criteria are the skill level and skill specializations needed to carry out the tasks and duties of the jobs, where skill level is the main criterion used to delineate the most aggregate categories, while skill specialization is used to delineate the more detailed categories within the aggregate categories.

Figure 6: Cases of conceptual tasks for implementing a classification - Source: Standard statistical classification - Basic Principles, E. Hoffmann, M. Chamie, paper presented at the 30th UN Statistical Commission, 1999

Main classifications

²The observable units that can be assigned to one unique category of the classification without reference to any other observable unit.

³A tree-like structure consists of different levels into which a response can be classified depending on its detail. The most detailed level is always the lowest level of the classification.

(a) **International standard industrial classification of all economic activities Revision 4 (ISIC, Rev.4)** is the international reference classification for productive activities. It groups activities according to homogeneous production technologies for a range of products.

A - Agriculture, forestry and fishing
B - Mining and quarrying
C - Manufacturing
D - Electricity, gas, steam and air conditioning supply
E - Water supply; sewerage, waste management and remediation activities
F - Construction
G - Wholesale and retail trade; repair of motor vehicles and motorcycles
H - Transportation and storage
I - Accommodation and food service activities
J - Information and communication
K - Financial and insurance activities
L - Real estate activities
M - Professional, scientific and technical activities
N - Administrative and support service activities
O - Public administration and defence; compulsory social security
P - Education
Q - Human health and social work activities
R - Arts, entertainment and recreation
S - Other service activities
T - Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U - Activities of extraterritorial organizations and bodies

Figure 7: Top Level of ISIC Rev.4

General Industrial Classification of Economic Activities within the European Communities (NACE) has been developed using ISIC Rev.4, categories at all levels of NACE have been defined so as to be either identical or to form subsets of single ISIC categories.

The North American Industry Classification System (NAICS) was developed in the mid-1990s and has undergone some changes to increase comparability among the three custodians of this classification (Canada, Mexico and USA). However, definitions of individual categories have been designed in a way that statistical data collected according to NAICS can be aggregated into the two-digit divisions of ISIC, Rev.4, ensuring comparability of data.

The Australian and New Zealand Standard Industrial Classification (ANZSIC) was revised in 2006 and broadly aligned with ISIC at the detailed level.

Figure 8: Examples of national classification adaptations to ISIC - Source: United Nations Statistics Division-Classifications Registry-National Classifications

The scope of ISIC is to provide a set of activity categories that can be utilised for the collection and reporting of statistics according to such activities. It provides a comprehensive framework within which economic data can be collected and reported in a format that is designed for purposes of economic analysis, decision-taking and policy-making. ISIC Rev.4 aims to present a set of activity categories in such a way that entities can be classified according to the economic activity they carry out. ISIC Rev.4 is a classification according to kind of economic activity.

The **main uses** of ISIC are:

- In the field of national accounts, the ISIC classification is used to develop the production account and the generation of income accounts by industry. In this sense, the following main aggregates are compiled by industry: output, intermediate consumption, value added, compensation of employees, gross operating surplus. The supply and uses tables are based on ISIC, providing the value of different products produced by and consumed in different industries.
- ISIC provides the basis for the construction of the survey framework, namely the Statistical business

register. An SBR contains information on the enterprises detailed in different classifications: the one used for the main activity being ISIC.

- The observation and collection of selling prices for industrial products used to calculate the industrial production price index (IPPI) are carried out on a representative sample of economic operators for each ISIC activity class.
- ISIC is the basis for addressing the reports and surveys of enterprises related to their activity performance, thus obtaining indicators (intermediate inputs, compensation of employees, fixed assets, etc.) by industry. Structural surveys cover enterprises from almost all ISIC classes. The turnover/value and volume indices of turnover are obtained from ISIC. Specific industry surveys are based on samples from the business register, enterprises involved in the same activity formed by grouping ISIC classes.
- Many social indicators relate to ISIC classification, being compiled by industry indicators such as: number of employees, gross/net average salary, labour force cost indices, etc.

(b) **Central product classification Version 2 (CPC Ver.2)** is a classification based on the physical characteristics of goods or on the nature of services rendered. It includes products that are an output of an economic activity, including transportable goods, non-transportable goods and services. CPC presents categories for all products that can be the object of domestic or international transactions or that can be stocked.

- 1 - Agriculture, forestry and fishery products;
- 2 - Food products, beverages and tobacco; textiles, apparel and leather products;
- 3 - Other transportable goods, except metal products, machinery and equipment;
- 4 - Metal products, machinery and equipment;
- 5 - Constructions and construction services;
- 6 - Distributive trade services; accommodation, food and beverage serving services; transport services; and electricity, gas and water distribution services;
- 7 - Financial and related services; real estate services; and rental and leasing services;
- 8 - Business and production services;
- 9 - Community, social and personal services.

Figure 9: Top Level of CPC Ver.2

The Classification of Products by Activity (CPA) is the European version of the CPC, and the purposes it serves are in line with those of the CPC. Whilst the CPC is merely a recommended classification, however, the CPA is legally binding in the European Community. Since the elements of the CPA are based on those of the CPC, links between the CPA and the *Harmonized Commodity Description and Coding System (HS)* exist in the same way as those between the CPC and the HS which have been referred to above. According to the desegregation level of the CPA, it can be broken into 21 sections identified by an alphabetical code, 88 divisions identified by a two-digit numerical code, 261 groups identified by a three-digit numerical code, 575 classes identified by a four-digit numerical code, 1342 categories identified by a five-digit numerical codes, and 3142 sub-categories identified by a six-digit numerical code.

Figure 10: Example of national classification adaptations to CPC - Source: RAMON, Eurostat's Metadata Server

CPC Ver. 2, finalised in 2008, was imposed by the revision of the [Harmonized system \(HS\)](#) in 2007, by the fourth revision of ISIC and by the changes in the world economy.

The **main purpose** of the CPC is to provide a framework for comparing international product statistics and to serve as a guide for developing or revising existing product classification schemes to make them compatible with international standards.

The **main uses** of CPC are:

- the SNA uses the CPC to balance the supply and uses tables. In this sense, all main component aggregates are balanced by product;

- the CPC is used as an instrument for assembling and tabulating all kinds of statistics requiring product detail;
- for the calculation of industrial production indices, [quantitative data](#) regarding achieved production of goods are registered using the CPC;
- the industrial production price index is based on selling prices for industrial products identified by CPC, for selected industries classified using ISIC.

	<i>ISIC, Rev.4</i>	<i>CPC, Ver. 1.1</i>	<i>SITC Rev.4</i>
Sections	21	10	10
Divisions	88	70	67
Groups	238	305	261
Classes	419	1,167	2,970
Sub-classes or basic headings	N/A	2,096	2,970

Figure 11: Classification hierarchy - Source: Report of the Task Force on National Accounts, UN Economic and Social Council, March 2001 (E/CN.3/2001/7)

(c) [Standard international trade classification \(SITC Rev.4\)](#) classifies commodities into different categories according to the nature of the merchandise and the materials used in their production as well as according to their stage of production, in turn suitable for economic analysis. The origin of SITC is the Harmonized Commodity Description and Coding System (HS07). SITC is the aggregated classification of transportable goods both for international trade statistics and for analytical purposes.

The **scope** of SITC is to cover all goods classifiable in HS except for monetary gold, gold coin and current coin. All basic headings in SITC Rev.4, (except for 911.0 - Postal packages not classified according to kind and 931.0 - Special transactions and commodities not classified according to kind) are defined in terms of HS07 subheadings.

The SITC is used :

- In SNA, as a classification of imports and exports. This classification identifies details of commodities for a variety of purposes, including customs, statistical and analytical purposes, particularly for the presentation of external trade statistics with detailed commodity specifications.
- To present and disseminate the huge amount of data in respect of import and export of goods.

These three classifications (ISIC, CPC and SITC) are closely interrelated. ISIC represents the activity side of the system, CPC is the central instrument for classifying goods and services and SITC is, for analytical purposes, the aggregated classification of goods for international trade statistics. Both CPC and SITC use the headings and subheadings of the HS as building blocks for their categories. Subsequently, relationships with other classifications that may require a degree of comparability with ISIC have been added to these considerations. By rearranging the CPC categories according to their industrial origin and using the link between CPC, SITC and HS, a detailed correspondence table between SITC, CPC and ISIC has been established.

(d) The [Classification by broad economic categories \(BEC\) Rev.3](#) was initially developed by UNSD for internal purposes in order to reclassify merchandise imports (reported in terms of SITC) into the product categories relevant to the SNA. Over time, many countries have started to use BEC for a variety of purposes including economic analysis and setting tariffs. In addition, it was designed to serve as a means of converting external trade data compiled using SITC into end-use categories that are meaningful within the framework of the SNA, namely categories approximating the three basic classes of goods in the SNA (capital goods, intermediate goods and consumption goods). Specifically, the subcategories of the BEC can be aggregated to approximate these three classes of goods. This aggregation enables external trade statistics to be considered jointly with other sets of general economic statistics, such as national accounts and industrial statistics, for national, regional or world-wide economic analysis. The BEC consists, at level 1, of 7 main categories identified

by one-digit numerical codes, at level 2, of 14 categories identified by two-digit numerical codes, at level 3, of 8 sub-categories identified by three-digit numerical codes.

- 1 - Food and beverages;
- 2 - Industrial supplies not elsewhere specified;
- 3 - Fuels and lubricants;
- 4 - Capital goods (except transport equipment), and parts and accessories thereof;
- 5 - Transport equipment and parts and accessories thereof;
- 6 - Consumer goods not elsewhere specified;
- 7 - Goods not elsewhere specified.

Figure 12: Top Level of BEC - Source: Classification by Broad Economic Categories

(e) Classifications of expenditure according to purpose

The SNA uses special classifications to analyse consumption, or more generally outlays, by different sectors depending on the purpose for which the expenditure is undertaken. Such classifications are referred to as functional classifications or as Classifications of expenditure according to purpose. They are:

- [Classification of individual consumption according to purpose \(COICOP\)](#) includes categories such as: food, health, education services, etc. COICOP has 14 main categories, the first 12 refer to individual consumption expenditure of households and the last two identify those parts of consumption expenditure by [non-profit institutions serving households \(NPISHs\)](#) and general government that are treated as social transfers in kind.

Once the consumption expenditures of NPISHs and general government have been classified according to COPNI and [COFOG](#) (see below), individual consumption expenditures in these two classifications can be transferred directly into Divisions 13 and 14 of COICOP. In COICOP, classes are divided into services, non-durables, semi-durables and durables.

- The Classification of the functions of government (COFOG) is consistent with that proposed in the [Government finance statistics manual 2001 \(GFSM 2001\)](#), e.g.: government expenditure. The units of classification are, in principle, individual transactions. This means that a COFOG code should be assigned to each purchase, wage payment, transfer, loan disbursement or other outlay according to the function the transaction serves. A major use of COFOG is to identify consumption expenditures that benefit individual households and which are transferred to Division 14 of COICOP to derive the [2008 SNA](#) aggregate of actual final consumption of households. COFOG is also used to distinguish between individual and collective services provided by general government. Expenditures on individual services are treated as social transfers in kind. They are deducted from total final government consumption expenditure to obtain actual final government consumption and added to the final consumption expenditures of households and NPISHs to obtain actual final consumption of households.
- [Classification of the purposes of non-profit institutions, serving households \(COPNI\)](#) classifies individual outlays of NPISHs according to the purpose they serve. These outlays could be from health, education services, religious associations, etc. The same outlays as for COFOG can, in principle, be classified according to COPNI. The main emphasis should be on the classification of final consumption expenditure since this is to be transferred to COICOP Division 13 to obtain actual final consumption of households. NPISHs produce goods and services, but typically services, which are provided to individual households, so the consumption expenditures are treated as individual consumption.
- [Classification of the outlays of producers, according to purpose \(COPP\)](#) applies to all producers, whether market or non-market, although in practice, market transactions are the most interesting. COPP may provide information on 'outsourcing' business services, that is, on the extent to which producers buy catering, cleaning, transport, auditing and other services that were previously carried out as ancillary

activities within the enterprise. It has to be borne in mind that this classification is mainly used to classify production cost, capital formation and other production-related data that are identified by establishments. The COPP categories can be easily identified with ISIC, and CPC categories.

1. Food and non-alcoholic beverages;
2. Alcoholic beverages, tobacco and narcotics;
3. Clothing and footwear;
4. Housing, water, electricity, gas and other fuels;
5. Furnishings, household equipment and routine household maintenance;
6. Health;
7. Transport;
8. Communication;
9. Recreation and culture;
10. Education;
11. Restaurants and hotels;
12. Miscellaneous goods and services;
13. Individual consumption expenditure of NPISHs;
14. Individual consumption expenditure of general government.

Figure 13: COICOP main categories - Source: Classifications of expenditure according to purpose, Statistical papers, SERIES M No. 84, UN, 2000

1. General public services;
2. Defence;
3. Public order and safety;
4. Economic affairs;
5. Environmental protection;
6. Housing and community amenities;
7. Health;
8. Recreation, culture and religion;
9. Education;
10. Social protection.

Figure 14: COFOG main categories - Source: Classifications of expenditure according to purpose, Statistical papers, SERIES M No. 84, UN, 2000

1. Housing;
2. Health;
3. Recreation and culture;
4. Education;
5. Social protection;
6. Religion;
7. Political parties, labour and professional organizations;
8. Environmental protection;
9. Services n.e.c

Figure 15: COPNI main categories - Source: Classifications of expenditure according to purpose, Statistical papers, SERIES M No. 84, UN, 2000

1. Outlays on infrastructure;
2. Outlays on research and development;
3. Outlays on environmental protection;
4. Outlays on marketing;
5. Outlays on human resource development;
6. Outlays on current production programmes, administration and management.

Figure 16: COPP main categories - Source: Classification of the Outlays of Producers According to Purpose

Questions for practitioners

Within a business register, classifications represent the essential elements for building the statistical system, including national accounts. As part of the central framework of the national accounts compilation strategy, the main classifications used in the statistical system are adopted and/or developed according to the answers to the following questions addressed in a systematic way:

- Are international classifications implemented in the statistical system and are they used for the collection, compilation and dissemination of statistical data sources?
- What are the classifications used in the administrative system? Are they in line with the statistical classifications and can they be used for national accounts purposes?
- Are there correspondence tables between the different classifications to ensure system consistency?

If these issues are respected then this will contribute significantly to ensuring compatibility and comparability of statistics and national accounts indicators.

Other articles

- [Building the System of National Accounts](#) (online publication, overview of all articles)

Dedicated section

- [International statistical cooperation](#)

Publications

- [Business registers - recommendations manual](#)
- [Essential SNA - Building the basics](#)
- [Eurostat-OECD Manual on Business Demography Statistics](#)

Legislation

- [Regulation 177/2008](#) of 20 February 2008 on establishing a common framework for business registers for statistical purposes and repealing Council Regulation (EEC) No 2186/93
- [Summaries of EU legislation: Business registers for statistical purposes](#)

External links

- [Afristat - Guide méthodologique pour l'élaboration des comptes nationaux dans les états membres d'Afristat](#) , Serie Méthodes No.4, 2001
- [Fritz B., MPRA - Uses of National Accounts; History, International Standardization and Applications in the Netherlands](#) , Eagle Economic & Statistics, Working paper 2008-1; Chapter II: The early estimates (1660-1930); Chapter III: Revolutionary decades (1930-1950); Chapter IV: The era of the international guidelines (1950-)
- [IMF](#)

[Government Finance Statistics Manual 2001 \(GFSM2001\)](#) , 1998

[Harmonized Commodity Description and Coding System \(HS07\)](#)

- [OECD](#)

[Policy Uses of National Accounts: An OECD Perspective](#) , paper presented to the joint ECE/Eurostat/OECD Meeting on national accounts, 2002

[Understanding National Accounts](#) , Lequiller F., Blades D., OECD 2006

- [Sturm, R. - A motivational model for running a statistical business register](#) , Paper presented to the European Establishment Statistics Workshop – EESW09, Stockholm, 2009.
- [United Nations](#)

[2008 SNA](#) , European Commission, IMF, OECD, UN, World Bank, 2009; Chapter I: Introduction; annex 3: Changes from the 1993 System of National Accounts

[National Accounts: A practical introduction](#) , Studies in Methods, Series F, No.85, UN 2003; Chapter VIII: SNA framework for the total economy

[A Systems Approach to National Accounts Compilation](#) , Studies in Methods, Series F, No.77, UN 1999; Introduction

[Use of Macro Accounts in Policy Analysis](#) , Studies in Methods, Series F, No.81, UN 2002; Chapter II: The role of macroeconomic and social accounting in policy analysis; Chapter III: Uses of National Accounts in economic analysis

[International Standard Industrial Classification of All Economic Activities - Revision 4](#) , Statistical papers, Series M No. 4/Rev.4, UN 2008

[Central Product Classification \(CPC\) – Version 2](#) , UN 2008

[Standard International Trade Classification - Revision 4](#) , Statistical papers, Series M No. 34/Rev. 4. UN 2006

[International merchandise trade statistics: Concepts and definitions](#) , Studies in Methods, Series M, No.52, Rev.2, 1998

[Classifications of Expenditure According to Purpose: Classification of the Functions of Government \(COFOG\) - Classification of Individual Consumption - According to Purpose \(COICOP\) - Classification of the Purposes of Non-Profit Institutions - Serving Households \(COPNI\) - Classification of the Outlays of Producers - According to Purpose \(COPP\)](#) , Statistical paper, Series M, No.84., UN 2000

[Statistical business registers based on administrative records](#) , paper presented to the Second meeting of the Statistical Conference of the Americas of the Economic Commission for Latin America and Caribbean, June 2003; Chapter II: 'Objectives and uses of the statistical business register'

[Statistical Business Register in countries of Eastern Europe, Caucasus and Central Asia: 2008 Questionnaire Survey results](#) , paper presented to the Conference of European Statisticians, 2009