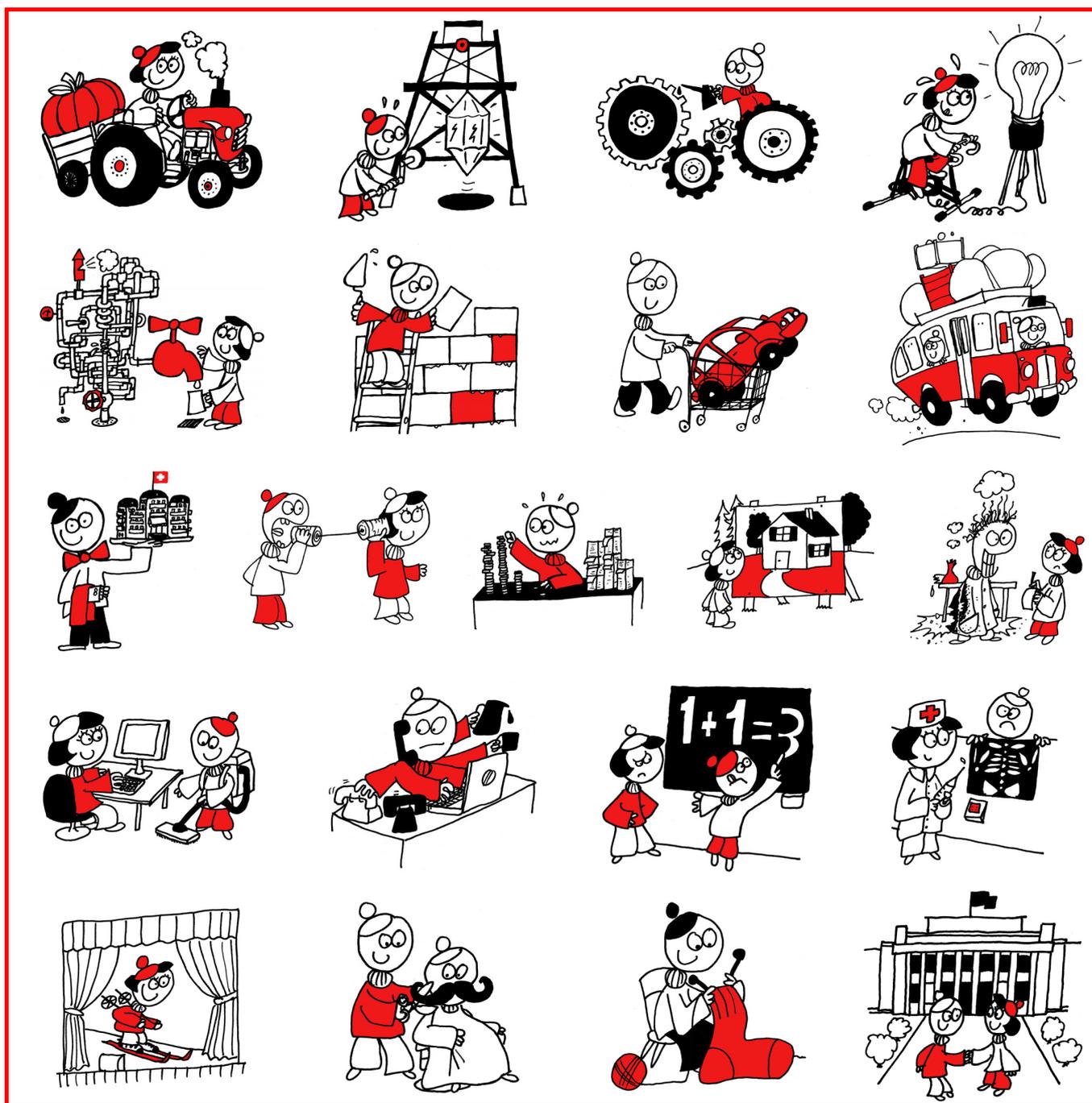


NOGA 2008

General Classification

of Economic Activities

Introduction



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List of abbreviations

BEC	Classification by Broad Economic Categories of the United Nations
CN	Combined Nomenclature – European Classification of Goods
CPA	European Classification of Products by Activity
CPC	Central Product Classification of the United Nations
EEC	European Economic Community
EP/C	European Parliament and Council
ESA	European System of National and Regional Accounts
EU	European Union
HS	Harmonised Commodity Description and Coding System of the World Customs Organisation
ISIC	International Standard Industrial Classification of all Economic Activities of the United Nations
KAU	Kind of Activity Unit
NACE	European Classification of Economic Activities
PRODCOM	European System of production statistics for mining and manufacturing
RAMON	Eurostat's online server for metadata http://ec.europa.eu/eurostat/ramon/index.cfm?TargetUrl=DSP_PUB_WELC
SITC	Standard International Trade Classification of the United Nations
SNA	System of National Accounts
SPC	Statistical Programme Committee
UN	United Nations
NOGA	General Classification of Economic Activities
BC	Business Census
BUR	Business Register
SOGC	Swiss Official Gazette of Commerce (aka Swiss Official Trade Journal)
ERST	Survey to update the Business and Enterprise Register

1. Introduction and background

The present publication "Introduction to NOGA 2008" aims to present the classification of economic activity (NOGA) and to explain how NOGA relates to other European and international classifications in order to demonstrate that using this classification for the coding of businesses and local units in the Business Register (BUR) allows the whole of Swiss economic statistics to be compatible and comparable at the national and international levels.

The following text deals with the structure of NACE and NOGA (Chapter 1), definitions of statistical units and what is meant by economic activity (Chapter 2), the rules of classification of activities and statistical units (Chapter 3), relations between NACE (and therefore with NOGA for levels 1-4) and other European and international classification systems (Chapter 4) as well as the main changes between NACE Rev. 1.1 (NOGA 2002) and NACE Rev. 2 (NOGA 2008) (Chapter 5).

1.1 NOGA: INTRODUCTION AND BACKGROUND

The general classification of economic activities (NOGA) is a basic working tool for structuring, analysing and presenting statistical information. It allows classification of the statistical units' 'businesses' and 'local units' according to their economic activity and to aggregate them in coherent groups. It is used to reproduce reality as faithfully as possible, in an exhaustive and sufficiently detailed way to fulfil different objectives.

The first Swiss classification of economic activities was elaborated for the Business Census of 1905. During the Business Censuses of 1929, 1939, 1955, 1965, 1975 and 1985 new classifications were elaborated to take account of structural changes and newly emerged economic sectors.

In 1995, the Federal Statistical Office decided to adopt the European NACE¹ Rev. 1 classification and to adapt it to Swiss conditions under the form of "NOGA 95". **Therefore, both classifications are identical up to level 4 and the Swiss classification conforms to international definitions.** In 2002, NACE Rev. 1 underwent a slight revision (NACE Rev. 1.1), which resulted in NOGA 2002.

Subsequent to this work, substantial revisions were made to NACE Rev. 1.1² which were incorporated in NOGA 2008. At the same time, elements that are specific to Switzerland were added to the 5th level of NOGA (the 5th level of NOGA consists of two digits).

Thus, NOGA 2008 takes account both of modifications to the classification of economic branches of the European Community (NACE Rev. 2) and of the needs of various stakeholders that participated in the revision of NOGA here in Switzerland.

In view of the close connection between NACE and NOGA, some passages in this theoretical note have been quoted in their entirety from the introduction to NACE Rev. 2³. *These passages are indicated in corresponding footnotes throughout the text.*

¹ NACE is derived from the French title "Nomenclature générale des Activités économiques dans les Communautés Européennes" (Statistical classification of economic activities in the European Communities).

² See Chapter 5: Changes from NACE Rev. 1.1 to NACE Rev. 2

³ <http://circa.europa.eu/irc/dsis/nacecpacon/info/data/en/introductoryguidelinesEN.pdf>

1.2⁴ NACE (NOGA LEVELS 1-4): INTRODUCTION AND BACKGROUND

NACE is the acronym used to designate the various statistical classifications of economic activities developed since 1970 in the European Union. NACE provides the framework for collecting and presenting a large range of statistical data according to economic activity in the fields of economic statistics (e.g. production, employment, national accounts) and in other statistical domains.

Statistics produced on the basis of NACE are comparable at European and, in general, at world level. The use of NACE is mandatory within the European Statistical System.

NACE is the European standard classification of productive economic activities. It presents the universe of economic activities partitioned in such a way that a NACE code can be associated with a statistical unit carrying them out.

An economic activity takes place when resources such as capital goods, labour, manufacturing techniques or intermediary products are combined to produce specific goods or services. Thus, an economic activity is characterised by an input of resources, a production process and an output of products (goods or services).

An activity as defined here may consist of one simple process (for example weaving), but may also cover a whole range of sub-processes, each mentioned in different categories of the classification (for example, the manufacturing of a car consists of specific activities such as casting, forging, welding, assembling, painting, etc.). If the production process is organised as an integrated series of elementary activities within the same statistical unit, the whole combination is regarded as one activity.

NACE does not per se provide categories for specific types of statistical units: units may perform several economic activities, and can be defined in different ways according to specific characteristics (related e.g. to location, see the section on "statistical units" below).

1.2.1 Statistical classifications

All observations that are to be described in terms of statistics require systematic classification. Classifications partition the universe of statistical observations according to sets that are as homogeneous as possible with respect to the characteristics of the object of the statistical survey.

Statistical classifications are characterised by:

- a) exhaustive coverage of the observed universe;
- b) mutually exclusive categories: each element should be classified in only one category of the classification;
- c) methodological principles which allow the consistent allocation of the elements to the various categories of the classification.

More specifically, hierarchical classifications are characterised by finer and finer partition of categories, which makes it possible to collect and present the information at various levels of aggregation.

1.2.2 Scope and limitations of NACE (NOGA levels 1-4)

NACE does not draw distinctions according to the kind of ownership of a production unit or its type of legal organisation or mode of operation, because such criteria do not relate to the characteristics of the activity itself. Units engaged in the same kind of economic activity are classified in the same category of NACE, irrespective of whether they are (part of) incorporated enterprises, individual proprietors or government, whether or not the parent enterprise is a foreign entity and whether or not the unit consists of more than one establishment. Therefore, there is no link between NACE and the Classification of Institutional Units in the System of National Accounts (SNA) or in the European System of Accounts (ESA).

The manufacturing activities are described independently of whether the work is performed by power-driven machinery or by hand, or whether it is done in a factory or in a household. Modern versus traditional is not a criterion for NACE.

NACE does not distinguish between formal and informal or between legal and illegal production. Classifications according to kind of legal ownership, kind of organisation or mode of operation may be constructed independently. Cross-classification with NACE could provide useful extra information.

In general, NACE does not differentiate between market and non-market activities, as defined in the SNA/ESA, even if this distinction is an important feature of the SNA/ESA. A breakdown of economic activities according to this principle is useful in any case where data are collected for activities that take place on both a market and a non

⁴ The text in section 1.2 is quoted in its entirety from the introduction to NACE Rev. 2.

market basis. This criterion should then be cross-classified with the categories of NACE. Non-market services in NACE are only provided by government organisations or non-profit institutions serving households, mostly in the field of education, health, social work, etc.

NACE includes categories for the undifferentiated production of goods and services by households for their own use. These categories may refer, however, to only a portion of households' economic activities, as clearly identifiable household activities are classified in other parts of NACE.

1.2.3 Structure and coding of NACE (NOGA levels 1-4)

NACE consists of a hierarchical structure (as established in the NACE Regulation), the introductory guidelines and the explanatory notes. The structure of NACE is described in the NACE Regulation as follows:

- i. a first level consisting of headings identified by an alphabetical code (sections),
- ii. a second level consisting of headings identified by a two-digit numerical code (divisions),
- iii. a third level consisting of headings identified by a three-digit numerical code (groups),
- iv. a fourth level consisting of headings identified by a four-digit numerical code (classes).

The code for the section level is not integrated in the NACE code that identifies the division, the group and the class describing a specific activity. For example, the activity "Manufacture of glues" is identified by the code 2052, where 20 is the code for the division, 205 is the code for the group and 2052 is the code of the class; section C, to which this class belongs, does not appear in the code itself.

The divisions are coded consecutively. However, some "gaps" have been provided to allow the introduction of additional divisions without a complete change of the NACE coding. These gaps have been introduced in sections that are most likely to prompt the need for additional divisions. For this purpose, the following division code numbers have been left unused in NACE Rev. 2: 04, 34, 40, 44, 48, 54, 57, 67, 76, 83 and 89.

In cases where a given level of the classification is not divided further down in the classification, "0" is used in the code position for the next more detailed level. For example, the code for the class "Veterinary activities" is 7500 because the division "Veterinary activities" (code 75) is divided neither into groups nor into classes. The class "Manufacture of beer" is coded as 1105 since the division "Manufacture of beverages" (code 11) is not divided into several groups but the group "Manufacture of beverages" (code 110) is divided into classes.

Whenever possible, residual groups or classes of the type "others" and/or "n.e.c. (not elsewhere classified)" are characterised by the digit 9 (for instance group 089 "Mining and quarrying n.e.c." and class 0899 "Other mining and quarrying n.e.c.").

1.3 SPECIFIC STRUCTURE OF NOGA

La NOGA 2008 comprises the following levels:

Level	Identification	Description	Number
1 st level	1 capital letter	Section	21
2 nd level	2 digits	Division	88
3 rd level	3 digits	Group	272
4 th level	4 digits	Class	615
5 th level	6 digits	Type	794

The first level is not utilised directly for coding activities. It permits the subdivision of economic activities into 21 sections. In this way, a rough structure is obtained which makes it possible to present and communicate statistical results in the form of overviews that provide a clear representation of reality. Levels 2 to 5 (divisions, groups, classes and types) are used directly or indirectly to identify the economic activity and divide enterprises and establishments accordingly. NOGA is compatible with NACE up to level 4. Level 5 (type), consisting of two digits, takes account of Swiss specificities.

To draw a clear distinction between NOGA 2002 and NOGA 2008, the dot between the division and the group has been abandoned and the letter that represented the type in NOGA 2002 has been replaced by two digits in NOGA 2008.

When a given class of the classification has no subdivisions at the Swiss level, the "00" is used at the type level. When a given class of the classification has subdivisions at the Swiss level, the types end in "01", "02", etc. For example, the code for the "veterinary activities" type is 750000 because class 7500, "Veterinary Activities", is not subdivided into several types. The "Operation of dairies and cheese making" class (class 1051) has been subdivided into three types: "Manufacture of fresh dairy products" (type 105101), "Manufacture of cheese" (type 105102) and "Other milk processing" (type 105103).

The code given in the Business and Enterprise Register is a six-digit code (type level). However, most statistical offices publish their results at more aggregated classification levels. (e.g. level 2 and 3).

2. Definitions

2.1 STATISTICAL UNITS⁵

In order to draw a complete statistical picture of the economy, a wide range of information is required, and the organisational level at which it is feasible to collect the information varies depending on the type of data. For example, profits data for a company may be available from only one geographically central location referring to several different locations, whereas product sales data may be available for each of the separate locations. To observe and analyse the data satisfactorily, it is therefore necessary to define a system of statistical units. These form the reference building blocks in respect of which data can be collected and classified according to NACE.

Different types of statistical units meet different needs, but each unit is a specific entity, which is defined in such a way that it can be recognised and identified and not confused with any other unit. It may be an identifiable legal or physical entity or, as for example in the case of the unit of homogeneous production, a statistical construct.

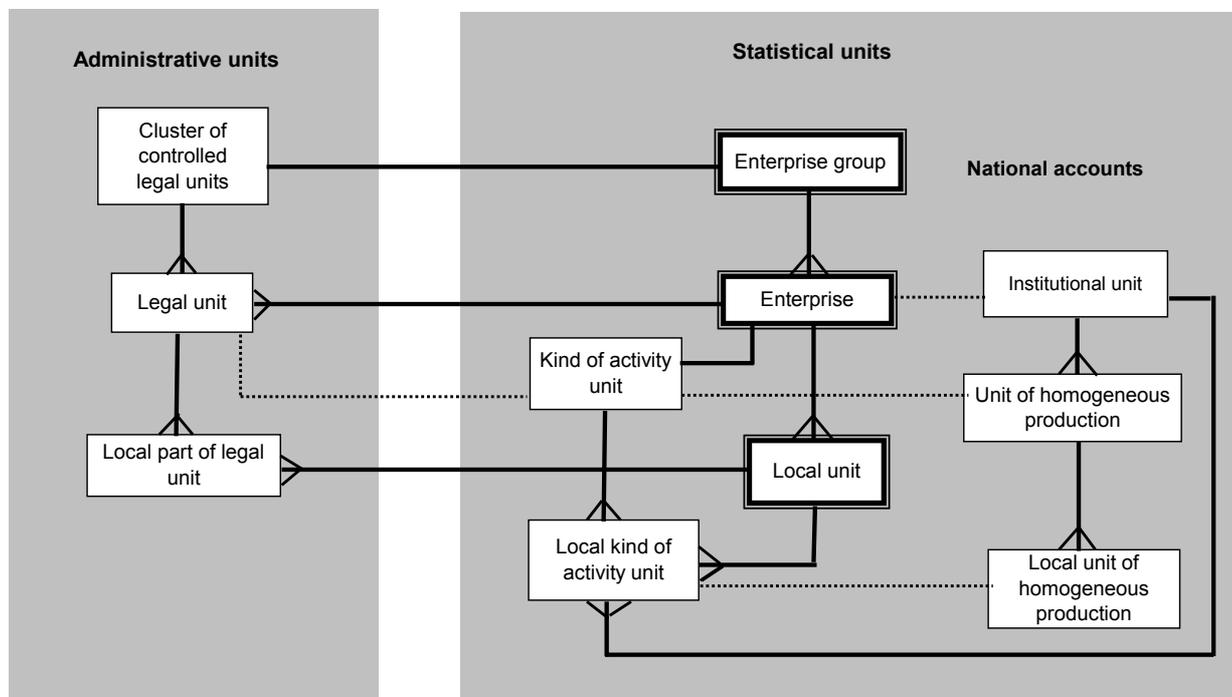
The following are the units that are described in the Council Regulation on statistical units:

- a) the enterprise group;
- b) the enterprise;
- c) the kind-of-activity unit (KAU);
- d) the local unit;
- e) the local kind-of-activity unit (local KAU);
- f) the institutional unit;
- g) the unit of homogeneous production (UHP);
- h) the local unit of homogeneous production (local UHP).

The relationship between the different types of statistical units is illustrated in the following table:

	One or more locations	A single location
One or more activities	Enterprise Institutional unit	Local unit
One single activity	KAU UHP	Local KAU Local UHP

The system of administrative and statistical units can be illustrated as follows:



⁵ The text in section 2.1 is quoted from the introduction to NACE Rev. 2.

2.2 STATISTICAL UNITS IN SWITZERLAND

2.2.1 Statistical units present and available in the Business Register

The definitions used in Switzerland for the Business Census and the Business Register (BUR) conform to the definitions established by Eurostat. In order to apply them, these definitions are adapted to the Swiss economic and administrative system. The three statistical units available in the BUR are the enterprise group, the enterprise and the local unit. These definitions are explained below, beginning in each case with Eurostat's definition, followed by the definition adapted to the Swiss economic and administrative system:

An **enterprise group**⁶ 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 profits. It may centralise certain aspects of financial management and taxation. It constitutes an economic entity which is empowered to make choices, particularly concerning the units which it comprises.

In Switzerland, enterprise groups are registered in accordance with the recommendations of the OECD Economic Globalisation Indicators manual (2004)⁷ and the Business Registers Recommendations Manual published by Eurostat (2003)⁸.

The enterprise⁹ 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. An enterprise may be a sole legal unit.

In conformity with the Business Census, in Switzerland the enterprises included in the Business and Enterprise Register (BUR) are comprised of one or several local units (main office and branch offices that may or may not be registered in the Swiss Official Gazette of Commerce (SOGC)). Several legal units may form part of one enterprise, but an enterprise can only be controlled by one legal unit (which is responsible for the enterprise). Consequently, an enterprise can only have a single principal legal unit but several secondary legal units. Thus, each enterprise included in the BUR has at least one legal unit and at least one local unit. A distinction is made between enterprises with multiple establishments (several local operating units) and simple enterprises (a single local operating unit).

To constitute the enterprise unit, use is made of **legal units**¹⁰ that exercise, wholly or partially, a productive activity. Legal units include:

- legal persons whose existence is recognised by law independently of the individuals or institutions which may own them or are members of them,
- 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".

In Switzerland, the legal unit is represented either by a unit that has a legal personality with rights and obligations, or by natural persons who are engaged in an economic activity in their own right, or by a public institution.

Consequently, each enterprise has a legal unit. In the BUR, the ID number for legal units registered in the Commercial Register (CR) is a 13-digit number preceded by the letters "CH". This ID number is assigned by the CR. Enterprises that are not registered in the CR are directly assigned an ID number, preceded by the letters "XY", by the BUR. Legal units comprise principal legal units and secondary legal units (also known as branches).

The local unit¹¹ 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.

In Switzerland, the local unit corresponds to an establishment that is clearly situated in a geographically identified place in which an activity is carried out. Establishments of different enterprises that operate in the same building are considered separately. Building sites are only considered to be establishments if they have been in existence for a considerable period of time and employ a sizeable workforce. Among local units, a distinction is made between the main establishment (principal place of business), the branch registered with the SOGC and the branch that is not

⁶ 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.

⁷ Measuring Globalisation: OECD Economic Globalisation Indicators (2004 edition), http://www.oecd.org/document/44/0,3343,en_2649_34443_34957420_1_1_1_37461,00.html

⁸ Business Registers Recommendations Manual (2003 edition), http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1073,46587259&_dad=portal&_schema=PORTAL&p_product_code=KS-BG-03-001

⁹ 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

¹⁰ Ibid.

¹¹ Ibid.

registered with the SOGC. While the first two have corresponding legal units, the branch that is not registered with the SOGC does not have a legal unit.

2.2.2 Other Statistical Units that are not included directly in the BUR

The other statistical units that are defined by the annex to Eurostat regulation are at present not included as such in the BUR. These “other statistical units” are the following: kind of activity unit (KAU), local kind of activity unit (local KAU), institutional unit, unit of homogenous production (UHP), local unit of homogenous production (local UHP). These units are nevertheless defined below because they can be used in certain economic statistics and it is important to know the context in which they are used.

The kind of activity unit (KAU)¹² groups all the parts of an enterprise contributing to the performance of an activity at class level (four digits) of NACE Rev. 1 and corresponds to one or more operational subdivisions of the enterprise. The enterprise's information system must be capable of indicating or calculating for each KAU at least the value of production, intermediate consumption, manpower costs, the operating surplus and employment and gross fixed capital formation.

The local kind of activity unit (local KAU)¹³ is the part of a KAU which corresponds to a local unit. In Switzerland, local kind of activity units are registered in the Business and Enterprise Register (BUR) depending on the information received from them (local kind of activity units are very rarely registered in the BUR). Consequently, the BUR can contain both local units and local kind of activity units. At present, no distinction can be made between these two kinds of units within the framework of the BUR; it has therefore been decided to consider them as being equivalent (local kind of activity units are absorbed into local units, which are synonymous with establishments). Because certain surveys (ERST¹⁴, Business Census, etc.) use the BUR as a survey basis (addresses), local kind of activity units can also be queried and coded within the framework such surveys.

The institutional unit¹⁵ is an elementary economic decision-making centre characterised by uniformity of behaviour and decision-making autonomy in the exercise of its principal function. A unit is regarded as constituting an institutional unit if it has decision-making autonomy in respect of its principal function and keeps a complete set of accounts.

- In order to be said to have autonomy of decision in respect of its principal function, a unit must be responsible and accountable for the decisions and actions it takes.
- In order to be said to keep a complete set of accounts, a unit must keep accounting records covering all its economic and financial transactions carried out during the accounting period, as well as a balance sheet of assets and liabilities.

The unit of homogeneous production (UHP)¹⁶ is characterised by a single activity which is identified by its homogeneous inputs, production process and outputs. The products which constitute the inputs and outputs are themselves distinguished by their physical characteristics and the extent to which they have been processed as well by the production technique used, by reference to a product classification. The unit of homogeneous production may correspond to an institutional unit or a part thereof; on the other hand, it can never belong to two different institutional units.

The local unit of homogeneous production (local UHP)¹⁷ is the part of a unit of homogeneous production which corresponds to a local unit.

2.3. DEFINITION OF ACTIVITIES¹⁸

A unit may perform one or more economic activities described in one or more categories of NACE.

The **principal activity** of a statistical unit is the activity which contributes most to the total value added of that unit. The principal activity is identified according to the topdown method (see section 3.2) and does not necessarily account for 50% or more of the unit's total value added. If there is no information available on the value added of a unit, the principal activity is identified according to substitute criteria which are described in section 3.1 of this publication.

¹² Ibid.

¹³ Ibid.

¹⁴ ERST: Survey to update Business and Enterprise Register.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ The text in section 2.3 is quoted in its entirety from the introduction to NACE Rev. 2.

A **secondary activity** is any other activity of the unit, whose outputs are goods or services which are suitable for delivery to third parties. The value added of a secondary activity must be less than that of the principal activity.

A distinction should be made between principal and secondary activities, on the one hand, and **ancillary activities**, on the other. 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 is ancillary if it fulfils all the following conditions:

- a) it serves only the unit or units referred to;
- b) the inputs contribute to the costs of the unit;
- c) the outputs (usually services, seldom goods) are not part of the unit's final product and do not generate gross fixed capital formation;
- d) a comparable activity on a similar scale is performed in similar production units.

For instance the following are not to be regarded as ancillary activities:

- a) production of goods and services that are part of capital formation; for example, construction work for own account, which would be classified separately from construction if data are available, and software production;
- b) production of outputs, a significant part of which is sold on the market, even if part of it is consumed in connection with the principal activities;
- c) production of goods or services which subsequently become an integral part of the output of the principal or secondary activity (e.g. production of boxes by a department of an enterprise for packing its products);
- d) production of energy (an integrated power station or coking plant), even if the whole output is consumed by the parent unit;
- e) purchase of goods for resale in an unaltered state;
- f) research and development, as these activities do not provide a service that is consumed in the course of current production.

In all these cases, where separate data are available, separate units should be distinguished and recognised as kind-of activity units and then classified according to their activity.

3. Basic Classification Rules¹⁹

3.1 BASIC CLASSIFICATION RULES

One NACE code is assigned to each unit recorded in statistical business registers, according to its principal economic activity. The principal activity is the activity which contributes most to the value added of the unit or to the substitute criteria. The assignment of the NOGA code is helped by: the explanatory notes of NOGA, correspondence tables and reference to other classification systems such as the ISIC, CPA, HS, CN, etc.

In the simple case where a unit performs only one economic activity, the principal activity of that unit is determined by the NOGA category which describes that activity. If the unit performs several economic activities (other than ancillary activities, cf. section 3.2), the principal activity is determined on the basis of the value added or the substitute criteria associated to each activity, according to the rules presented below.

Value added is the basic concept for determining the classification of a unit according to economic activities. The gross value added is defined as the difference between output and intermediate consumption. Value added is an additive measure of the contribution of each economic unit to gross domestic product (GDP).

3.1.1 Value-added substitutes

In order to determine the principal activity of a unit, the activities carried out by the unit and the corresponding share of value added have to be known. Sometimes it is not possible to obtain the information on value added associated with the different activities carried out, and the activity classification has to be determined by using substitute criteria. Such criteria could be:

a) Substitutes based on output:

- gross output of the unit that is attributable to the goods or services associated with each activity;
- value of sales or turnover of those groups of products falling within each activity;

b) Substitutes based on input:

- wages and salaries attributable to the different activities (or income of self-employed);
- number of staff involved in the different economic activities of the unit;
- time worked by staff attributable to the different activities of the unit.

Such substitute criteria should be used as proxies for the unknown value-added data, to obtain the best approximation possible to the result which would have been obtained on the basis of the value-added data. The use of substitute criteria does not change the methods used to determine the principal activity, as they are only operational approximations of value-added data.

However, simple use of the substitute criteria listed above may be misleading. This will always be the case when the structure of the substitute criteria is not directly proportional to the (unknown) value added.

When using sales (turnover) as a proxy for value added, it should be taken into account that in certain cases turnover and value added are not proportional. For example, turnover in trade usually has a much lower share of value added than turnover in manufacturing. Even within manufacturing the relation between sales and the resulting value added may vary between and within activities. For some activities turnover is defined in a specific way which makes comparison with other activities not useful, e.g. financial intermediation activities or insurance activities. The same considerations should be borne in mind when using gross output data as substitute criteria.

Many units perform trade and other activities. In such cases trade turnover figures are the most unsuitable indicators for the unknown value added share of the trade activity. A much better indicator is the gross margin (difference between the trade turnover and purchases of goods for resale adjusted by changes in stocks). However, the trade margins may vary within a single wholesale and retail trade and also between trade activities.

Similar precautions have to be considered when input-based substitute criteria are applied. The proportionality between wages and salaries or employment, on the one hand, and value added on the other is not reliable if the labour intensity of the various activities is different. Labour intensity may vary substantially between different economic activities and also between activities of the same NOGA class. Example: production of a good by hand vs. production of a good using a mechanised process.

¹⁹ The text in section 3 is quoted almost in its entirety from the introduction to NACE Rev. 2.

3.1.2 Value added substitute criteria used in Switzerland

If the information on the value added produced by the unit under consideration is unavailable in the Business and Enterprise Register, the first step to determine the unit's principal activity is to identify the number of employees.

In Switzerland, most enterprises are simple enterprises (enterprises with a single local unit) of the SME (small and medium-sized enterprises) type. They generally do not have detailed information about value added broken down by activity. That is why for the Business Census, enterprises are asked to determine their principal activity based on their number of employees. The activity that involves the largest number of employees is considered to be the principal activity.

The BUR is increasingly updated by means of administrative registers. It is possible that in the future, the principal activity will be determined by indicators other than the number of employees.

3.2 MULTIPLE AND INTEGRATED ACTIVITIES

Instances may arise where considerable proportions of the activities of a unit are included in more than one "type" of NOGA. These cases may result from the vertical integration of activities (for example, tree felling combined with sawmilling, or activities in a clay pit combined with brick-works), or the horizontal integration of activities (for example, manufacture of bakery products combined with manufacture of chocolate confectionery), or any combination of activities within a statistical unit. In these situations, the unit should be classified according to the rules set out in this section.

If a unit performs activities falling in only two different NOGA categories, there will always be one activity that accounts for more than 50% of value added or the substitute criteria, except in the highly unlikely case that both activities in the different categories have equal shares of 50%. The activity that represents more than 50% of the value added or the substitute criteria is the principal activity and determines the NOGA classification of the unit.

In the complex case where a unit performs more than two activities falling into more than two different NOGA categories, with none of them accounting for more than 50% of value added, the activity classification of that unit has to be determined by using the "top-down" method, as described below.

3.2.1 The top-down method

The top-down method follows a hierarchical principle: the classification of a unit at the lowest level of the classification must be consistent with the classification of the unit at the higher levels of the structure. To satisfy this condition the process starts with identification of the relevant highest level and progresses down through the levels of the classification in the following way:

- Identify the section which has the highest share of the chosen indicator.
- Within this section identify the division which has the highest share of the chosen indicator.
- Within this division identify the group which has the highest share of the chosen indicator.
- Within this group identify the class which has the highest share of the chosen indicator.
- Within this class identify the type which has the highest share of the chosen indicator.

Example: a unit carries out the following activities (shares in terms of value added or substitute criteria):

Section	Division	Group	Class	Type	Title	Share
C	25	259	2591	259100	Manufacture of steel drums and similar containers	10%
	28	281	2811	281100	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines	6%
		282	2824	282400	Manufacture of power-driven hand tools	5%
		289	2893	289300	Manufacture of machinery for food, beverages and tobacco processing	23%
			2895	289500	Manufacture of machinery for paper and paperboard production	8%
G	46	461	4614	461400	Agents involved in the sale of machinery, industrial equipment, ships and aircraft	7%
		466	4661	466100	Wholesale of agricultural machinery, equipment and supplies	28%
M	71	711	7112	711203	Other engineering activities	13%

Determining this enterprise's economic type by means of the top-down method involves the following five stages:

1st stage: Identify the main Section among

	Description	Share
Section C	Manufacturing	52%
Section G	Wholesale and retail trade; repair of motor vehicles and motorcycles	35%
Section M	Professional, scientific and technical activities	13%

2nd stage: Identify the main Division within main Section C:

Division 25	Manufacture of fabricated metal products, except machinery and equipment	10%
Division 28	Manufacture of machinery and equipment n.e.c.	42%

3rd stage: Identify the main Group within the main Division 28:

Group 281	Manufacture of general-purpose machinery	6%
Group 282	Manufacture of other general-purpose machinery	20%
Group 289	Manufacture of other special-purpose machinery	31%

4th stage: Identify the main Class within the main Group 289:

Class 2893	Manufacture of machinery for food, beverages and tobacco processing	23%
Class 2895	Manufacture of machinery for paper and paperboard production	8%

5th stage: Identify the main Type within class 2893:

Type 289300	Manufacture of machinery for food, beverages and tobacco processing	100%
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Therefore the correct type is 289300 Manufacture of machinery for food, beverages and tobacco processing, although the type with the biggest share of value added is type 466100 "Wholesale of agricultural machinery, equipment and supplies".

3.2.2 Changes of the principal activity of the unit

Units may change their principal activity, either at once or gradually over a period of time, either because of seasonal factors or because of a management decision to vary the pattern of output. While all these cases call for the classification of the unit to be changed, too frequent changes could result in inconsistencies between short-term (monthly and quarterly) and longer-term statistics, making their interpretation extremely difficult.

Whenever a unit performs two activities both contributing to around 50% of the value added, a stability rule has been established in order to avoid frequent changes not reflecting a substantial change in the economic reality. According to this rule, the change of principal activity should be made when the current one has been accounting for less than 50% of the value added for at least two years.

In Switzerland, this rule is applied as follows in the Business and Enterprise Register: when the enterprise announces a change of activity, it is necessary to determine which of these two distinct cases applies:

- 1) There is a real change of activity, in which case NOGA has to be adjusted to the new activity.
- 2) There is no real change of activity. The activity has either been expanded but remains essentially the same, or it has been interpreted differently, in which case there should be no change of code either.

Examples:

1. Real change of activity:

Old objective	Retail sale of musical instruments	NOGA: 475901
New objective	Manufacture of musical instruments	NOGA: 322000

In this case, the enterprise has clearly changed its activity. Its new code is 322000, "Manufacture of musical instruments".

2. No real change of activity:

Old objective	Import and sale of bicycles in Switzerland	NOGA: 464903
New objective	Import and export as well as own manufacture of bicycles and bicycle parts	NOGA: 464903

The old NOGA code is "Wholesale of sports goods". The introduction of own manufacture should not result in a change of code because this is a case in which the principal activity has been expanded. Own manufacture must be considered a secondary activity.

3.2.3 Treatment of vertically integrated activities

Vertical integration of activities occurs where the different stages of production are carried out in succession by the same unit and where the output of one process serves as input to the next. Examples of common vertical integration include tree felling and subsequent sawmilling, a clay pit combined with brickworks, or production of apparel in a textile mill.

When applying NOGA 2008, vertical integration should be treated like any other form of multiple activities, i.e. the principal activity of the unit is the activity accounting for the largest share of value added or the substitute criteria, as determined according to the top-down method. For vertical integration of specific situations in agriculture, see paragraph 3.4.

If value added or substitutes cannot be determined for the individual steps in a vertically integrated process directly from accounts compiled by the unit itself, comparisons with similar units could be used. Alternatively, valuation of intermediate or final products could be based on market prices.

3.2.4 Treatment of horizontally integrated activities

Horizontal integration of activities occurs when activities are carried out simultaneously using the same factors of production. The principle of value added or the substitute criteria has to be applied, following the top-down method.

3.3 RULES FOR SPECIFIC ACTIVITIES

3.3.1 Activities undertaken on a free or contract basis and outsourcing of activities

In this section, the following terminology is applied:

- a) Principal = Unit that enters into a contractual relationship with another unit (called contractor) for that other unit to carry out specific tasks, such as parts of a production process or even the full production process, employment services or support functions.
- b) Contractor = Unit that carries out specific tasks, such as parts of a production process or even the full production process, employment services or support functions on a contractual relationship with a principal. The term sub-contractor is also used. In NOGA the activities performed by the contractor are denominated "on a fee or contract basis".
- c) Outsourcing = Contractual agreement according to which the principal requires the contractor to carry out specific tasks, such as parts of a production process or even the full production process, employment services or support functions.

Examples of parts of the production process that can be outsourced are: manufacturing activities, employment services, support functions, etc. The principal and the contractor may be located within the same economic territory or in different economic territories. The actual location does not affect the classification of either one of these unit.

Contractors, i.e. units carrying out an activity on a fee or contract basis, are usually classified with units producing the same goods or services for their own account, except in trade. In construction, in the case of outsourcing of construction activities, the principal should be classified in 4110 and the contractor in 4120.

In manufacturing, the principal provides the contractor with the technical specifications for the manufacturing activity to be carried out on the input material. The input material (raw or intermediate good) can either be provided (owned) by the principal or not. Examples of such activities are: metal manufacturing (forging, casting, cutting, stamping and foundry works), processing of metals (e.g. chrome plating), manufacturing of apparel, finishing of apparel and similar elementary parts of the production process.

A principal who completely outsources the transformation process should be classified under manufacturing only if it owns the raw material used as input to the production process (and therefore owns the final output). A principal who outsources only part of the transformation process is to be classified under manufacturing. In all other cases, the principals should be classified in accordance with the value added principle or the substitute criteria: this might be in Section G "Wholesale and retail trade" or in other Sections, e.g. M "Professional, scientific and technical activities" or N "Administrative and support service activities".

3.3.2 On-site installation

Units principally engaged in the installation or assembly of items or equipment in buildings for their functioning are classified in the construction section (division 43).

Installation of machinery and other equipment other than those linked to the functioning of buildings (or civil engineering works) is classified in group 332 "Installation of industrial machinery and equipment".

3.3.3 Repair and maintenance

Units that repair or maintain goods are classified in one of the following categories, depending on the types of goods:

- a) group 331 "Repair of fabricated metal products, machinery and equipment"
- b) division 43 "Specialised construction activities"
- c) group 452 "Maintenance and repair of motor vehicles"
- d) division 95 "Repair of computers and personal and household goods"

Units that overhaul aircraft, locomotives and ships are classified in the same class as the units that manufacture them.

3.4 SECTION-SPECIFIC RULES AND DEFINITIONS

This section presents rules and definitions to be taken into account when classifying units in specific sections. General descriptions, definitions and characteristics of sections are presented in the corresponding explanatory notes.

3.4.1 Section A: Agriculture, forestry and fishing

In agriculture, one frequent situation where the breakdown of the value added presents difficulties is when the unit produces grapes and manufactures wine from the own-produced grapes, or when it produces olives and manufactures oil from the own-produced olives. In these cases the most suitable proxy variable is the "number of

hours worked" and applying it to these vertically integrated activities would generally lead to classification of the units under agriculture. In the same case for other agricultural products, units will be classified in agriculture by convention, in order to guarantee harmonised treatment.

3.4.2 Section K: Financial and insurance activities, and M: Professional, scientific and technical activities

In section K, two classes have been introduced that go beyond the traditional scope of NOGA in covering economic production, namely class 6420 "Activities of holding companies" and 6430 "Trusts, funds and similar financial entities". Units classified in these two classes do not have any revenue from the sale of products, and usually do not employ staff (except possibly one or a few persons acting as legal representatives). Sometimes these units are called "brass plates", or "post boxes" or "empty boxes", or "special purpose entities - SPE", as they just have a name and an address. They are numerous in some countries because of tax advantages.

When classifying a unit according to these two classes, attention should be paid also to other classes (two of them in section M, division 70, namely classes 7010 "Activities of head offices" and 7022 "Business and other management consultancy activities").

More specifically:

- a) class 6420 "Activities of holding companies" refers to activities of holding companies, whose principal activity is owning the group, and that do not administer or manage the group;
- b) class 6430 "Trusts, funds and similar financial entities" is very particular in NOGA, as it does not refer to an economic activity, but to units;
- c) class 6630 "Fund management activities" includes activities carried out on a fee or contract basis;
- d) class 7010 "Activities of head offices" includes overseeing and managing the related units, exercising operational control and day-to-day management;
- e) class 7022 "Business and other management consultancy activities" includes consultancy activities related to issues like corporate strategic and organisational planning, marketing objectives and policies, human resources policies, etc.

The principal activity of a unit performing several activities among those just mentioned should be identified, as usual, on the basis of the value added principle. It should be taken into account that capital gains do not constitute value added or the substitute criteria, and therefore should not be considered. The introduction of the above mentioned classes marks a major change from NOGA 2002.

3.4.3 Section O: Public administration

The activities of public administration, be it national, cantonal or local, come mainly under section O (public administration, defence and compulsory social security). But units whose activities come under other NOGA headings are classified under the corresponding types (e.g. a cantonal hospital is classified under type 861001 and a local nursery school under type 851000).

3.5 CODING PROCESS IN THE BUSINESS AND ENTERPRISE REGISTER

Several surveys (administrative records, Business Census, ERST, etc.) provide information that facilitates the coding of units included in the Business Register (BUR).

As is explained in section 2.2, the conceptual data model in this register is organised as follows: a local unit runs an enterprise that carries out its activity in one or several local units.

In the case of simple enterprises, the legal unit corresponds to the enterprise that carries out its activity in a single local unit. In this case the code assigned to the local unit corresponds to its principal activity (which is, in fact, the enterprise's principal activity).

In the case of multiple enterprises, the legal unit corresponds to the enterprise that carries out its activity in several local units. In this case each local unit is assigned a code that corresponds to its principal activity. The code for the enterprise is then automatically calculated by means of the top-down method (c.f. section 3.2).

The code assigned for the first entry in the BUR is considered to be temporary. It is finalised by means of the ERST survey and the Business Census and, if necessary, also by means of administrative records or the profiling process,²⁰ which make it possible to assign the definitive code.

²⁰ Profiling is a method in which several means, particularly direct contact with the enterprise, are used to analyse the legal, operational and accounting structure of a group of enterprises or large enterprise at a national and international level. The goal is to establish the statistical units within the group of enterprises, the links between these units and the most efficient procedures to collect statistical data.

The same process is used when new branches or subsidiaries (additional local units) are registered for the first time in the BUR. For the first temporary coding, the assigned code corresponds to the enterprise's principal activity. During the ERST survey and the Business Census, the branches or subsidiaries are then assigned a definitive code that corresponds to their actual principal activity.

3.5.1 Tool for coding and problem cases

A coding assistance tool, named "KUBB 2008", is available free of charge. This tool, which allows users to quickly find NOGA 2008 codes by entering keywords in a search engine, can be publicly accessed on the internet at the following address:

<http://www.bfs.admin.ch/bfs/portal/en/index/infothek/nomenklaturen/blank/blank/noga0/programme.html>

A coding manual, which can be downloaded from the same KUBB 2008 website, explains how to handle concrete coding problem cases. Like the evolving KUBB 2008 tool, the manual is improved and complemented based on needs and problem cases.

3.5.2 Partners

Some statistical offices and institutions are themselves responsible for coding and/or monitoring the enterprises that are active in their field of research. In such cases, close collaboration is necessary between the BUER section (Betriebs- und Unternehmensregister/Registre des entreprises et des établissements) and the sections/institutions concerned to modify the assigned codes or to revise NOGA. This applies to the following areas:

- Agriculture: NOGA division 01. FSO department responsible: Environment, Sustainable Development, Agriculture.
- Accommodation: NOGA division 55. FSO department responsible: Tourism.
- Banks: NOGA 641901 to 641911 and 649201. In these cases, the coding is carried out directly by the Swiss National Bank.
- Health: NOGA divisions 86 and 87. FSO department responsible: Health.
- Pension funds: NOGA code 653000. FSO department responsible: Occupational Benefits Provision.

4. Relations between NACE Rev. 2 (NOGA 2008 levels. 1-4) and other classifications²¹

Given the close relationship between NACE and NOGA (identical classifications up to level 4), this chapter is quoted in its entirety from the introduction to NACE Rev. 2. The description of the links between NACE Rev. 2 and other classifications also applies, analogously, to the links between NOGA 2008 (levels 1-4) and the other classifications mentioned in this chapter.

This chapter presents the relationships between NACE and other linked classifications. The main reference is the diagram below in this document. First the relationships with international classifications based on the UN system are described in some detail, as NACE and many EU classifications mirror, in various ways, the corresponding world classifications. Then the relations with the other EU classifications are shown. Finally the relations with other multinational classifications are described, together with the aggregated structures used in the context of national accounts.

RAMON, Eurostat's online server for metadata, provides information and detailed structures on international, regional and national statistical classifications developed for many statistical areas: economic analysis, environment, education, occupations, national accounts, etc. The information covers various aspects, including general descriptions, structure of the classifications (i.e. codes and headings), explanatory notes, correspondence tables between classifications, methodological documents and other general information relating to classifications.

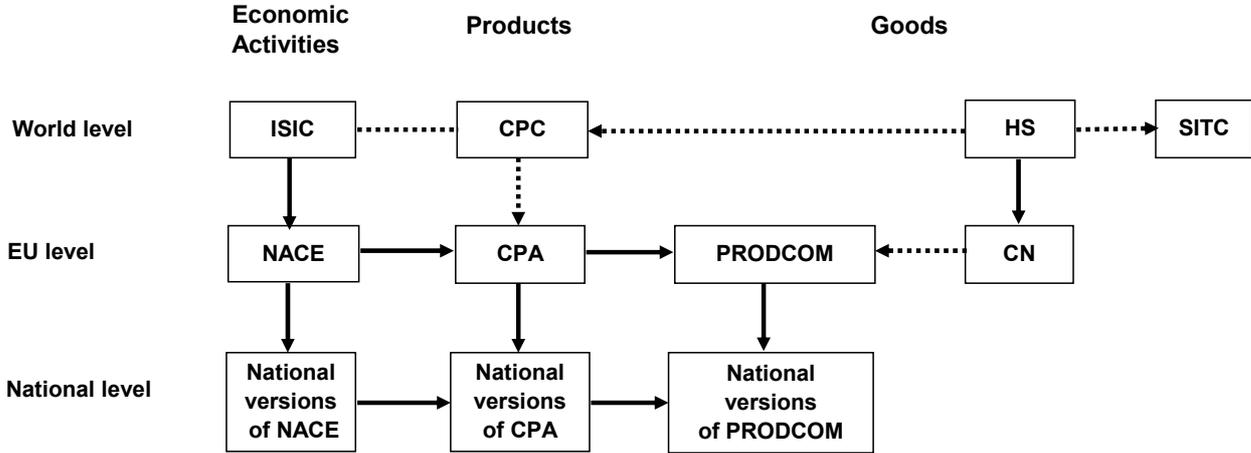
Whenever available, the information is presented in all official EU languages. The RAMON server can be publicly accessed on the web at the following address:

http://ec.europa.eu/eurostat/ramon/index.cfm?TargetUrl=DSP_PUB_WELC.

4.1 LINKS TO INTERNATIONAL CLASSIFICATIONS

4.1.1 The international system of economic classifications

The comparability at world level of statistics produced on the basis of NACE is due to the fact that NACE is part of an integrated system of statistical classifications, developed mainly under the auspices of the United Nations Statistical Division. From the European point of view, this system can be represented as follows:



- ↓ is the reference classification. Classifications are linked by the structure
- ⋮ is the reference classification. Classifications are linked by conversion tables
- ⋮ Classifications are linked by conversion tables

Where:

- ISIC²² is the United Nations' International Standard Industrial Classification of all Economic Activities.
- CPC²³ is the United Nations' Central Product Classification.

²¹ The text in section 4 is quoted in its entirety from the introduction to NACE Rev. 2.

²² <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27&Lg=1>

- HS²⁴ is the Harmonised Commodity Description and Coding System, managed by the World Customs Organisation.
- CPA²⁵ is the European Classification of Products by Activity.
- Prodcom²⁶ is the classification of goods used for statistics on industrial production in the EU.
- CN²⁷ stands for the Combined Nomenclature, a European classification of goods used for foreign trade statistics.

Such an integrated system allows the comparability of statistics produced in different statistical domains. As a consequence, for instance, statistics on the production of goods (reported in the EU according to Prodcom surveys) could be compared with statistics on trade (in the EU produced according to CN).

NACE is derived from ISIC, in the sense that it is more detailed than ISIC. ISIC and NACE have exactly the same items at the highest levels, where NACE is more detailed at lower levels.

In order to ensure international comparability, the definitions and the guidelines established for use of NACE within the EU are consistent with those published in the introduction to ISIC.

4.1.2 The international family of economic and social classifications

The international family of economic and social classifications is made up of classifications registered in the United Nations Inventory of Classifications, reviewed and approved as guidelines by the United Nations Statistical Commission or other competent intergovernmental boards on such matters as economics, demographics, labour, health, education, social welfare, geography, environment, time use and tourism. It also includes classifications on similar subjects that are registered in the Inventory and are derived or related to the international classifications and are primarily, but not solely, used for regional or national purposes (such as NACE and the CPA).

The international family of economic and social classifications is made up of three major types: reference, derived and related classifications.

Reference classifications are economic and social classifications that are a product of international agreements approved by the United Nations Statistical Commission or another competent intergovernmental board, such as that of the International Labour Organisation (ILO), the International Monetary Fund (IMF), the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the World Health Organisation (WHO), or the World Customs Organisation (WCO) depending on the subject-matter. Thus reference classifications have achieved broad acceptance and official agreement and are approved and recommended as guidelines for the preparation of derived classifications. They may be used as models for the development or revision of other classifications, both with respect to the structure and with respect to the character and definition of the categories. ISIC is the reference classification of economic activities.

Derived classifications are based on reference classifications. Derived classifications may be prepared either by adopting the reference classification structure and categories, and then possibly providing additional detail beyond that provided by the reference classification, or they may be prepared by rearranging or aggregating items from one or more reference classifications. Derived classifications are often tailored to use at national or multi-national level. NACE is a derived classification of ISIC.

Related classifications are those that partially refer to reference classifications, and for which correspondence tables (sometimes called concordance tables) are necessary in order to compare statistics. NAICS (see below) is a related classification of ISIC.

4.1.3 The UN integrated system of classifications of activities and products

In 1989 the UN Statistical Commission proposed a set of classifications that together form an integrated system for classifying activities, goods and services and that could be used in different kinds of economic statistics at world level. ISIC, CPC, SITC and BECs are the main components of this system and are closely interrelated:

- ISIC represents the activity side of the system,
- CPC is the central instrument for classifying goods and services,

²³ <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=16&Top=2&Lg=2>

²⁴ Harmonised Commodity Description and Coding System, managed by the World Customs Organisation (founded in 1952 under the name of Customs Co-operation Council - CCD).

²⁵ <http://circa.europa.eu/irc/dsis/nacecpacon/info/data/en/index.htm>

²⁶ http://ec.europa.eu/eurostat/ramon/index.cfm?TargetUrl=DSP_PUB_WELC

²⁷ Combined classification, a system that is based on the harmonised system but which also has additional subdivisions (http://ec.europa.eu/taxation_customs/customs/customs_duties/tariff_aspects/combined_nomenclature/index_fr.htm).

- SITC is the aggregated classification of transportable goods for international trade statistics for comparison purposes,
- BEC²⁸ is the classification of goods according to Broad Economic Categories for purposes of economic analysis.

When referring to goods, both CPC and SITC use the headings and subheadings of the Harmonised Commodity Description and Coding System (HS) as building blocks for their categories, i.e. each heading at the lowest level of the CPC corresponds exactly to at least one heading of the HS or to an aggregation of two or more HS headings or subheadings. There are some situations, especially in agriculture, where an HS heading is split over several CPC items.

HS is the international customs product classification drawn up by the World Customs Organisation for foreign trade. HS is used for both customs tariff and foreign trade statistics purposes. HS is hierarchically structured and provides the detailed definitions and characteristics of about 5000 goods. It is structured into 96 chapters, each identified by a two-digit numerical code; chapters are subdivided into headings, which are in turn subdivided into subheadings. The headings are identified by means of a four-digit numerical code and the subheadings by a six-digit numerical code. Although the HS basically covers goods, i.e. products which have a physical dimension, it also encompasses electricity. HS does not cover services, but does include the physical "manifestations" of services (e.g. architects' plans, diskettes with software, even art originals and antiques more than 100 years old, etc.). It also includes goods which are not produced, such as used equipment. The latest revision of HS was implemented in 2007; HS is revised each year.

CPC arranges products according to the physical characteristics and intrinsic nature of goods or the nature of the services rendered. This criterion includes, for example, the type of raw material used, the production process involved, the purpose for which the goods are intended, etc. Although this criterion is often the same as the one used for the classifications of economic activities, the CPC is not a product classification depending on the classification of economic activities. For this reason, the CPC coding system is independent of ISIC.

Despite this specific approach, however, the CPC has also taken into consideration the criterion of economic origin. According to this criterion (adopted in the EU for NACE and CPA), a product classification combines in one category goods or services that are the output of only one economic activity. Thus efforts were made to define headings at the lowest level of the CPC in such a way that as many products as possible, at this level, can be allocated to a single category of ISIC: the CPC publication includes the correspondences between CPC subclasses and the relevant ISIC class. However, application of the origin criterion is not always practicable, even using the most detailed level of HS.

A revised version of CPC, CPC Ver. 2, was adopted by the UN Statistical Commission in March 2006.

SITC follows a traditional order in which the materials used, the stage of processing and the end use are the main considerations.

BEC is designed to serve as a means for converting data compiled on the basis of SITC into meaningful aggregates for purposes of economic analysis, based on the SNA distinction between capital goods, intermediate goods and durable/non-durable consumer goods. There is no direct relationship between ISIC and BEC, as it rearranges the SITC categories in 19 BEC categories. BEC was revised in 1986, based on the third revision of SITC, and the definition of BEC categories in terms of HS subheadings has subsequently been changed to reflect changes made to the HS in 2002 and 2007.

4.1.4 NACE (NOGA levels 1-4) link to ISIC

NACE is a derived classification of ISIC: categories at all levels of NACE are defined either to be identical to, or to form subsets of, single ISIC categories. The first level and the second level of ISIC Rev. 4 (sections and divisions) are identical to sections and divisions of NACE Rev. 2. The third and fourth levels (groups and classes) of ISIC Rev. 4 are subdivided in NACE Rev. 2 according to European requirements. However, groups and classes of NACE Rev. 2 can always be aggregated into the groups and classes of ISIC Rev. 4 from which they were derived. The aim of the further breakdowns in NACE Rev. 2, as compared with ISIC Rev. 4, is to obtain a classification more suited to the structures of the European economies.

Also the coding systems used in ISIC and NACE are, as far as possible, the same: to distinguish easily between the two, NACE places a dot between the first two digits (division level) and the last two (groups and classes). Since some groups and classes in ISIC Rev. 4 are disaggregated into NACE groups and classes, without introducing additional hierarchical levels, some ISIC codes differ from the corresponding NACE codes. An activity at group or class level may therefore have a numerical code in NACE Rev. 2, which differs from that in ISIC Rev. 4.

²⁸ Classification by Broad Economic Categories: Defined in Terms of SITC, Rév. 3, Statistical Papers, No. 53/Rev.3 and corrigendum (United Nations publication, Sales No. E.86.XVII.4 and Corr.1).

4.1.5 NACE (NOGA levels 1-4) links to other international classifications

There are other classifications developed by the United Nations, or other intergovernmental organs, that have some relationship with ISIC or that make use of parts of ISIC in defining their own scope or categories. As a consequence, they have relations with NACE.

These classifications have been developed for statistics on occupations, employment, expenditure, education, tourism and the environment. The main ones are listed below. Detailed information can be found on the UN Statistical Division's website (<http://unstats.un.org/unsd/cr/registry>):

The Classifications of the Functions of Government (COFOG);

- The International Standard Classification of Education (ISCED)²⁹;
- The International Standard Classification of Occupations (ISCO)³⁰;
- The Tourism Satellite Account (TSA)³¹;
- The Information and Communication Technology Sector Classification (ICT)³²;
- The Content and media industries sector definition.

4.2 RELATIONS WITH EU CLASSIFICATIONS

4.2.1 Classification of Products by Activity – CPA

CPA³³ is the European version of the CPC, and the purposes it serves are in line with those of the CPC. In the EU, classifications for specific statistical domains are linked to the CPA unless the CPA is itself used as a survey classification. Although the CPA is the European counterpart of the CPC, it differs from the latter not only in that it is usually more detailed, but also as regards its structure. The EU adopted the criterion of economic origin for its development, with NACE as the reference framework. Therefore, up to the fourth level (classes) the structure of CPA corresponds to NACE. In general, CPC subclasses are re-arranged according to their economic origin. The link between the CPA and NACE Rev. 2 is evident in the CPA code: at all levels of the CPA, the coding of the first four digits is identical with that used in NACE Rev. 2, with very few exceptions. As a tool in practical everyday statistical work, CPA, like the other product classifications, can be used in delineating the characteristic products of the individual activities. It has to be noted, however, that in certain cases the activity-product link is a convention: this happens when the same products are outcomes of different activities, with different production processes. National versions of the CPA exist just as there are national versions of NACE Rev. 2.

4.2.2 Combined Nomenclature – CN

CN, the Combined Nomenclature³⁴ is the classification used within the EU for the purposes of foreign trade custom tariffs and statistics and provides a degree of detail going beyond that in the HS. The CN was introduced in 1988. Headings in the CN are identified by means of an eight-digit numerical code, adding two digits to the relevant HS code. The CN is revised every year and, as a Council Regulation, is binding on the Member States.

4.2.3 PRODCOM

"PRODCOM"³⁵ is the abbreviation for the EU system of production statistics for mining and manufacturing (i.e. excluding services, other than "industrial services"). The product classification (PRODCOM list), upon which production statistics are based, is drawn up each year by the PRODCOM committee. The headings of the PRODCOM list are derived from the CN, but their code is a further breakdown of the CPA code. PRODCOM headings are coded using an eight-digit numerical code, the first six digits of which are identical to those of the CPA code. The PRODCOM list is therefore linked to, and therefore consistent with, CPA. The link with CPA emphasises the link with NACE, enabling the enterprises producing the products to be identified, while the link with the CN allows comparisons between production statistics and foreign trade statistics.

²⁹ International Standard Classification of Education (ISCED 1997) (Paris, UNESCO, 1997).

³⁰ International Standard Classification of Occupations (ISCO 1988) (Genève, OIT, 1988)

³¹ Commission of the European Communities, Organisation for Economic Cooperation and Development, United Nations and World Tourism Organization, Tourism Satellite Account: Recommended Methodological Framework, Statistical Papers, NO 80 (United Nations publication, Sales No E.01.XVII.9).

³² www.oecd.org

³³ Council Regulation (EEC) No 3696/93 of 29 October 1993 on the statistical classification of products by activity (CPA) in the European Economic Community, OJ L 342 of 31 December 1993.

³⁴ Combined Nomenclature – a further breakdown of the Harmonized System

http://ec.europa.eu/taxation_customs/customs/customs_duties/tariff_aspects/combined_nomenclature/index_en.htm

³⁵ <http://europa.eu.int/eurlex/>

http://europa.eu.int/eurlex/lex/Result.do?arg0=prodcom&arg1=&arg2=&titre=titre&chlang=en&RechType=RECH_mot&idRoot=2&refinecode=LEG*T1%3DV111%3BT2%3DV1%3BT3%3DV1&Submit=Search

4.2.4 Main Industrial Groupings – MIGs

MIGs³⁶ is the acronym for Main Industrial Groupings, a European classification which groups industries in terms of demand-based products: capital goods, intermediate goods, consumer durable goods, consumer non-durable goods and energy. MIGs are used for several indicators, among them the index of industrial production (expressed in terms of value added and principle based on KAU) and the index of producer prices.

4.2.5 Balance of payments: classification for foreign direct investment statistics

Balance of payments³⁷ use an aggregation of NACE categories for reporting data on foreign direct investment (FDI): the activity breakdown levels are mainly expressed in terms of NACE divisions.

4.3 RELATIONS WITH OTHER MULTINATIONAL CLASSIFICATIONS

4.3.1 NAICS

NAICS is the North American Industry Classification System. NAICS was developed in the mid-1990s to provide common industry definitions for Canada, Mexico, and the United States, to facilitate economic analyses of the economies of the three North American countries. NAICS is developed on the basis of a production-oriented conceptual framework and classifies units, not activities. As a result, the structures of ISIC and NAICS are substantially different. However, statistical data collected according to NAICS can be aggregated into the two-digit divisions of ISIC Rev. 4/NACE Rev. 2, ensuring comparability of data. In many cases, more detailed links are possible. A detailed concordance between NAICS and ISIC is published on the NAICS website (USA: <http://www.census.gov/naics>, Canada: <http://www.statcan.ca/>).

4.3.2 ANZSIC

The Australian and New Zealand Standard Industrial Classification (ANZSIC) was developed for use in both countries for the production and analysis of industry statistics. In the development of ANZSIC great emphasis has been placed on alignment with the international standards. ISIC Rev. 3 had been used as the international standard for reference purposes. Broad concordances between ANZSIC and ISIC can be found on the ABS website: <http://www.statistics.gov.au/>. ANZSIC is much closer to ISIC/NACE than NAICS, as its structure broadly follows ISIC, where categories at the division and more detailed levels can be aggregated into the two-digit categories of ISIC. Therefore, conversion of ANZSIC data into ISIC/NACE is possible at a fairly detailed level.

4.3.3 Other classifications

In addition to the EU Member States, Norway and Switzerland are committed to using a national version derived from NACE. Moreover, about ten other countries outside the EU, or candidate countries like Croatia and Turkey, refer to NACE for their classification of economic activities. More than 150 countries in the world are using classifications of economic activities based either on NACE or ISIC.

4.4 AGGREGATED STRUCTURES FOR NATIONAL ACCOUNTS

National accountants have identified a need for two standard aggregations of ISIC/NACE categories to be used for reporting SNA data from a wide range of countries. The first, known as "high-level aggregation", aggregates the ISIC/NACE sections into 10 or 11 categories; the second, called "intermediate aggregation", aggregates divisions and is composed of 38 categories. The two aggregated structures are not an integral part of ISIC/NACE, but are fully integrated into their hierarchical structure (high-level aggregation, sections, intermediate aggregation, divisions, groups and classes).

³⁶ Règlement de la Commission (CE) n° 586/2001 (http://eur-lex.europa.eu/pri/fr/oj/dat/2001/l_086/l_08620010327fr00110014.pdf).

³⁷

http://europa.eu.int/eurlex/lex/Result.do?arg0=184%2F2005&arg1=&arg2=&titre=titre&chlang=en&RechType=RECH_mot&idRoot=2&refinocode=LEG*T1%3DV111%3BT2%3DV1%3BT3%3DV1&Submit=Search

The following table presents the "high-level SNA/ISIC aggregation A*10/11":

	ISIC Rev. 4/ NACE Rev. 2 sections	Description
1	A	Agriculture, forestry and fishing
2	B, C, D et E	Manufacturing, mining and quarrying and other industry
2A	C	Of which: manufacturing
3	F	Construction
4	G, H et I	Wholesale and retail trade, transportation and storage, accommodation and food service activities
	J	Information and communication
6	K	Financial and insurance activities
7	L	Real estate activities*
8	M et N	Professional, scientific, technical, administration and support service activities
9	O, P et Q	Public administration, defence, education, human health and social work activities
10	R, S, T et U	Other services

* which includes imputed rents of owner-occupied dwellings.

The table below presents the "intermediate SNA/ISIC aggregation A*38":

	A*38 code	ISIC Rev. 4/ NACE Rev. 2	Divisions
1	A	Agriculture, forestry and fishing	01 to 03
2	B	Mining and quarrying	05 to 09
3	CA	Manufacture of food products, beverages and tobacco products	10 to 12
4	CB	Manufacture of textiles, apparel, leather and related products	13 to 15
5	CC	Manufacture of wood and paper products, and printing	16 to 18
6	CD	Manufacture of coke, and refined petroleum products	19
7	CE	Manufacture of chemicals and chemical products	20
8	CF	Manufacture of pharmaceuticals, medicinal chemical and botanical products	21
9	CG	Manufacture of rubber and plastics products, and other non-metallic mineral products	22 + 23
10	CH	Manufacture of basic metals and fabricated metal products, except machinery and equipment	24 + 25
11	CI	Manufacture of computer, electronic and optical products	26
12	CJ	Manufacture of electrical equipment	27
13	CK	Manufacture of machinery and equipment n.e.c.	28
14	CL	Manufacture of transport equipment	29 + 30
15	CM	Other manufacturing, and repair and installation of machinery and equipment	31 to 33
16	D	Electricity, gas, steam and air-conditioning supply	35
17	E	Water supply, sewerage, waste management and remediation	36 to 39
18	F	Construction	41 to 43
19	G	Wholesale and retail trade, repair of motor vehicles and motorcycles	45 to 47
20	H	Transportation and storage	49 to 53
21	I	Accommodation and food service activities	55 + 56
22	JA	Publishing, audiovisual and broadcasting activities	58 to 60
23	JB	Telecommunications	61
24	JC	IT and other information services	62 + 63
25	K	Financial and insurance activities	64 to 66
26	L	Real estate activities*	68
27	MA	Legal, accounting, management, architecture, engineering, technical testing and analysis activities	69 to 71
28	MB	Scientific research and development	72
29	MC	Other professional, scientific and technical activities	73 to 75
30	N	Administrative and support service activities	77 to 82
31	O	Public administration and defence, compulsory social security	84
32	P	Education	85
33	QA	Human health services	86
34	QB	Residential care and social work activities	87 + 88
35	R	Arts, entertainment and recreation	90 to 93
36	S	Other services	94 to 96
37	T**	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	97 + 98*
38	U**	Activities of extra-territorial organisations and bodies	99*

* including imputed rents of owner-occupied dwellings.

**All of U and part of T (division 98) are outside the SNA production boundary, and will be empty for SNA data reporting, but are included for completeness.

5. Changes from NACE Rev. 1.1 (NOGA 2002 levels 1-4) to NACE Rev. 2 (NOGA 2008 levels 1-4)³⁸

Given the close relationship between NACE and NOGA (identical classifications up to level 4), this chapter is quoted in its entirety from the introduction to NACE Rev. 2. The description of the changes between NACE Rev. 1.1 and NACE Rev. 2 also applies, analogously, to the changes between NOGA 2002 (levels 1-4) and NOGA 2008 (levels 1-4).

5.1 NACE REVISIONS

Changes in economic structures and organisations, as well as technological developments, give rise to new activities and products, which may supersede existing activities and products. Such changes imply a constant challenge for the compilation of statistical classifications. The intervals between revisions must not be too long, since the relevance of the classification diminishes with time, nor must they be too short, since otherwise the comparability of the data over time is adversely affected. Any revision of a classification, particularly if it includes structural changes, leads to breaks in the time series.

A major revision of international and European classifications of economic activities and products, known as "Operation 2007", took place between 2000 and 2007. The revision concerned all the classifications of the integrated system of economic classifications, as described in section 4. The main criteria driving the revision were:

- relevance to the actual world economy,
- better comparability with other national and international classifications and
- continuity with their previous versions.

Several consultations have been organised since 2002, with all stakeholders, including Commission departments and National statistical institutes, as well as European business and trade associations, asking for proposals and modifications of NACE Rev. 1.1.

The overall characteristics of NACE remained unchanged. NACE Rev. 2 strikes a balance between the level of detail requested by the main users and the workload in the statistical institutes.

5.2 STRUCTURAL LEVEL CHANGES

While some of the rules for application of NACE have been changed, and criteria for construction of the classification, as well as the formulation of explanatory notes, have been reviewed, the overall characteristics of NACE remain unchanged.

New concepts at the highest level of the classification have been introduced, and new detail has been created to reflect different forms of production and emerging new industries. At the same time, efforts have been made to maintain the structure of the classification in all areas that do not explicitly require change based on new concepts.

The detail of the classification has substantially increased (from 514 to 615 classes). For service-producing activities, this increase is visible at all levels, including the highest one, while for other activities, such as agriculture, the increase in detail affected mostly the lower level of the classification.

NACE Rev. 1.1 had 17 sections and 62 divisions; NACE Rev. 2 has 21 sections and 88 divisions. At the highest level of NACE, some sections can be easily compared with the previous version of the classification. However, the introduction of some new concepts at the section level, e.g. the Information section or the grouping of activities linked to environment, makes easy overall comparison between NACE Rev. 2 and its previous version impossible.

³⁸ The text in section 5 is quoted in its entirety from the introduction to NACE Rev. 2.

The table set out below presents the broad correspondence between the sections of NACE Rev. 1.1 and NACE Rev. 2. Please note that this table presents only the rough one-to-one correspondence between the sections: further additional details are necessary to establish the complete correspondence.

NACE Rev. 1.1		NACE Rev. 2	
Section	Description	Section	Description
A	Agriculture, hunting and forestry	A	Agriculture, forestry and fishing
B	Fishing		
C	Mining and quarrying	B	Mining and quarrying
D	Manufacturing	C	Manufacturing
E	Electricity, gas and water supply	D	Electricity, gas, steam and air conditioning supply
		E	Water supply, sewerage, waste management and remediation activities
F	Construction	F	Construction
G	Wholesale and retail trade: repair of motor vehicles, motorcycles and personal and household goods	G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Hotels and restaurants	I	Accommodation and food service activities
I	Transport, storage and communications	H	Transportation and storage
		J	Information and communication
J	Financial intermediation	K	Financial and insurance activities
K	Real estate, renting and business activities	L	Real estate activities
		M	Professional, scientific and technical activities
		N	Administrative and support service activities
L	Public administration and defence; compulsory social security	O	Public administration and defence; compulsory social security
M	Education	P	Education
N	Health and social work	Q	Human health and social work activities
O	Other community, social and personal services activities	R	Arts, entertainment and recreation
		S	Other service activities
P	Activities of private households as employers and undifferentiated production activities of private households	T	Activities of households as employers; undifferentiated goods- and services producing activities of households for own use
Q	Extraterritorial organisations and bodies	U	Activities of extraterritorial organisations and bodies

The following table presents the changes, in numerical terms, between NACE Rev. 1.1 (NOGA 2002) and NACE Rev. 2 (NOGA 2008):

	NACE Rev. 1.1 (NOGA 2002)	NACE Rev. 2 (NOGA 2008)	Difference
Sections	17	21	+4
Divisions	62	88	+26
Groups	224	272	+48
Classes	514	615	+101
NOGA Types	724	794	+70
<i>Manufacturing section</i>			
Sections	1	1	0
Divisions	23	24	+1
Groups	103	95	-8
Classes	242	230	-12
NOGA Types	336	338	+2
<i>Other sections</i>			
Sections	16	20	+4
Divisions	39	64	+25
Groups	121	177	+56
Classes	272	385	+113
NOGA Types	458	456	-2

In order to have an idea of the impact of changes on official statistics due to the implementation of NACE Rev. 2, it is useful to distinguish the following types of correspondences between NACE Rev. 1.1 and NACE Rev. 2:

- 1-to-1 correspondences: 195 classes in NACE Rev. 1.1 correspond exactly to one class in NACE Rev. 2 and vice-versa;
- n-to-1 correspondences: 86 cases, where two or more classes in NACE Rev. 1.1 correspond to one class in NACE Rev. 2;
- 1-to-m correspondences: 18 cases, where one NACE Rev. 1.1 class is split into two or more classes in NACE Rev. 2;
- n-to-m correspondences: 215 cases, where two or more classes in NACE Rev. 1.1 correspond to two or more classes in NACE Rev. 2.

In Switzerland, the levels of correspondence between NOGA 2002 and NOGA 2008 are as follows:

- 1/1 correspondences: 358 cases, where one type in NOGA 2002 corresponds exactly to one type in NOGA 2008 and vice versa;
- n-to-1 correspondences: 102 cases, where at least two types in NOGA 2002 correspond to one type in NOGA 2008;
- 1-to-m correspondences: 20 cases, where one NOGA 2002 type is split into two or more types in NOGA 2008;
- n-to-m correspondences: 244 cases, where two or more types in NOGA 2002 correspond to two or more types in NOGA 2008.

Units classified in classes (types) associated with 1-to-1 and n-to-1 correspondence can be automatically re-coded when implementing NACE Rev. 2 (NOGA 2008) in business registers. This statement should be adapted, for each country, according to the national version of NACE.

The substantial changes between NACE Rev. 1.1 and NACE Rev. 2 are too numerous to be listed here in their entirety. Nonetheless, the most prominent ones are listed below.

The NACE Rev. 1.1 sections for agriculture and fishing have been combined. However, the detail under this new section A (Agriculture, forestry and fishing) has been substantially increased. This is in response to continuing requests for more detail in ISIC, mostly due to the fact that agriculture is an important part of the economic structure in many developing countries.

New divisions in manufacturing, representing important new industries or old industries that have increased their economic or social relevance, have been created, such as division 21 (Manufacture of basic pharmaceutical products and pharmaceutical preparations) and division 26 (Manufacture of computer, electronic and optical products). The scope of the latter differs from division 30 (Manufacture of office machinery and computers) in NACE Rev. 1.1, making it a better tool for statistics on high-tech activities. Other new divisions, such as division 11 (Manufacture of beverages) and 31 (Manufacture of furniture) have resulted from 37 splitting existing divisions and therefore raising their components from group level, as before, to division level.

Most of the remaining divisions in section C (Manufacturing) are unchanged, except NACE Rev. 1.1 divisions 22 (Publishing, printing and reproduction of recorded media) and 37 (Recycling), of which substantial portions have been moved to other sections (see below).

Repair and installation of machinery and equipment, which was formerly classified under manufacturing of the corresponding type of equipment, is now identified separately in division 33 (Repair and installation of machinery and equipment). All specialised repair activities are now classifiable separately in NACE, although no high-level aggregate for "Repair" has been created.

A new section E (Water supply; sewerage, waste management and remediation activities) has been created, which includes the "sanitation" activities in NACE Rev. 1.1 division 90, water collection and distribution activities in NACE Rev. 1.1 division 41 and materials recovery activities, which largely correspond to NACE Rev. 1.1 division 37. This section now groups activities of common policy interest, but is also based on the actual organisation of these activities in a large number of countries. The detail on these activities has been substantially increased.

The concept of "specialised construction activities" (also known as "special trades") has been introduced in NACE Rev. 2, replacing the division structure of the previous version, which was based largely on the stage of the construction process.

Repair of household goods has been removed from section G (Wholesale and retail trade; repair of motor vehicles and motorcycles) of NACE Rev. 1.1. However, the exception for classifying trade and repair of motor vehicles and motorcycles in division 45 of NACE Rev. 2 (corresponding to division 50 in NACE Rev. 1.1) has been retained for comparability and continuity reasons.

The detail in section I (Accommodation and food service activities) has been increased to reflect the different nature and specialisation of activities carried out.

A new section J (Information and communication) has been created, combining activities involving production and distribution of information and cultural products, provision of the means to transmit or distribute these products, as well as data or communications, information technology activities and the processing of data and other information service activities.

The main components of this section are publishing activities, including software publishing (division 58), motion picture and sound recording activities (division 59), radio and TV broadcasting and programming activities (division 60), telecommunications activities (division 61) and information technology activities (division 62) and other information service activities (division 63). These activities were included in NACE Rev. 1.1 sections D (Manufacturing), I (Transport, storage and communications), K (Real estate, renting and business activities) and O (Other community, social and personal service activities), therefore having a strong impact on comparability with the previous NACE version. However, this new treatment of information and communication activities provides a more consistent approach than the previous version of NACE, based on the character of the activities carried out.

In section K (Finance and insurance activities), two classes have been introduced that go beyond the traditional scope of NACE in covering economic production, namely class 6420 (Activities of holding companies) and 6430 (Trusts, funds and similar financial entities).

The NACE Rev. 1.1 section for Real estate, renting and business activities has been split up into three sections in NACE Rev. 2. Real estate is now represented as a stand-alone section (section L) due to its size and importance in the System of National Accounts. The remaining activities have been separated into section M (Professional, scientific and technical activities), covering activities that require a high degree of training and make specialised knowledge and skills available to users and section N (Administrative and support service activities), covering activities that support general business operations and do not focus on the transfer of specialised knowledge. Computer and related activities (NACE Rev. 1.1 division 72) are no longer part of this section. Computer repair activities have been grouped with repair of household goods in section S, while software publishing and IT activities have been grouped in the new section J.

The scope of education (section P) has been changed explicitly to include specialised sport, cultural and other educational services and also specialised support services.

More detail has been added under section Q (Human health and social work activities), creating three divisions instead of one, as in the previous version of NACE. In addition, the focus has been narrowed and includes only "human health" activities, providing a better tool for measuring this important part of the economy. As a result, veterinary activities have been removed from this section and put in a division in section M (Professional, scientific and technical activities).

Substantial components of NACE Rev. 1.1 section O (Other community, social and personal service activities) have been moved to NACE Rev. 2 sections E (Water supply; sewerage, waste management and remediation activities) and J (Information and communication), as described above. The remaining activities have been regrouped in two new sections for Arts, entertainment and recreation (section R) and Other service activities (section S). As a result, activities such as creative arts, library activities and gambling activities have been raised to the division level. Repair of computers and personal and household goods is now included in this new section S.

5.3 CORRESPONDENCE TABLES: SCOPE AND USE

Correspondence tables are important tools for comparing statistical data collected and presented using different classifications. They become necessary when the classification changes over time, or when different underlying frameworks do not allow classifications to be closely related. Correspondence tables between different versions of the same classification are used to describe the detailed changes that have taken place in the revision process.

Since NACE is used for collection and presentation of statistics in many areas, there has been a strong need for correspondence tables between the current NACE and its previous version. Complete detailed correspondences between NACE Rev. 2 and NACE Rev. 1.1, and vice versa, are available electronically, but not included in this publication.

When drafting NACE Rev. 2 and simultaneously CPA 2008, a strong link was established between the two classifications. By defining the goods in CPA in terms of the CN whenever possible, a detailed correspondence table between CN, CPC, ISIC and NACE was established.

All correspondence tables are available in electronic form only either at RAMON (http://ec.europa.eu/eurostat/ramon/index.cfm?TargetUrl=DSP_PUB_WELC) or at the United Nations Statistics Division website (<http://unstats.un.org/unsd/class>).

At the Swiss level, a correspondence table has been established between NOGA 2002 and NOGA 2008, which is available as an Excel table from the Swiss Statistics Portal:

http://www.bfs.admin.ch/bfs/portal/en/index/infothek/nomenklaturen/blank/blank/noga0/revision_noga_2007.html

A coding assistance tool named "KUBB 2008", which is available free of charge, allows users to go from NOGA 2008 to NOGA 2002 and vice versa: <http://www.kubb2008.bfs.admin.ch/?lang=en>

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