



This module is part of the

# Memobust Handbook

on Methodology of Modern Business Statistics

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# Theme: The Statistical Units and the Business Register

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## General section

### 1. Summary

This module provides a systematic review of *Statistical Units* and serves as guidance for the construction of Statistical Units which are key elements of the whole statistical production system at the field of Business Statistics. The author makes use of the operationalisations from the national practices in order to make the document more understandable.

The content of this module was divided into two main chapters. The first main chapter is the more theoretical part aiming to give a general insight of the theme from the legal aspect. This chapter is the ‘Concepts and types of Statistical Units’ which lists and details the statistical units, the criteria used, types of Statistical Units and the implementations explanatory notes.

The second main chapter is more practical aiming to explain the common issues of the implementation. This chapter is ‘The practical statistical use of Statistical Units’ which deals with uses of the Statistical Units in the different European systems, Statistical Units in the *Business Register* (BR), the ‘*Satellite registers*’ of the BR and finally the topic ‘Profiling’ of the Statistical Units.

### 2. General description

This module of the document was compiled based on:

- a) 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 (SUR)
- b) Regulation (EC) No 177/2008 of the European Parliament and of the Council of 20 February 2008 establishing a common framework for *business registers for statistical purposes* and repealing Council Regulation (EEC) No 2186/93 (BRR)
- c) Business registers - Recommendations manual; 2010 (Manual)
- d) Eurostat document: The treatment of large and complex enterprises (Complex).

Statistical units play a prominent role in the European system of business statistics. Indeed, the SUR explicitly states that: “*only if the member states use common definitions of statistical units will it be possible to provide integrated statistical information with the reliability, speed, flexibility and degree of detail required for the management of the internal market*”.

There is actually no Community regulation referring to business statistics which does not make mention of statistical units. This is fully justified, because statistical units are *corner stones* of the statistical system; *building blocks* of statistical aggregates; *linking pins* between the statistics to be harmonised.

The SUR deals with the conceptual aspects of statistical units. It lists and defines eight statistical units and can be considered as the methodological reservoir out of which the various regulations like ESA’95<sup>1</sup>, Structural Business Statistics (SBS), Short Term Indicators (STI) and Business Registers (BR) take the unit of their choice. Of the eight units mentioned, the observation units Enterprise and

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<sup>1</sup> European System of Accounts 1995 set up by Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community

Kind of activity unit (KAU), with their regional counterparts, Local unit (LU) and Local KAU (LKAU) are the most relevant for business statistics: notice that the *legal unit* is not listed as a statistical unit (SU). Indeed, the legal unit is, in its own right, not relevant as an *output* unit in the system of economic statistics (which does not question that it is an important *input* unit).

This module provides a systematic review of SUs and serves as guidance for the construction of SUs.

## 2.1 *Concepts and types of SUs*

### 2.1.1 *List of statistical units*

The list of SUs of the production system is as follows:

- A. the *enterprise* (ENT);
- B. the *institutional unit*;
- C. the *enterprise group* (EG);
  - the multinational EG
  - the truncated EG
- D. the *kind-of-activity unit* (KAU);
- E. the *unit of homogeneous production* (UHP);
- F. the *local unit*;
- G. the *local kind-of-activity unit* (LKAU);
- H. the *local unit of homogeneous production* (local UHP).

### 2.1.2 *Criteria used*

The SUs in the regulation are defined on the basis of three criteria. The relative importance of these criteria depends on the type of unit concerned.

#### 2.1.2.1 *Legal, accounting, or organisational criteria*

In order to define units that are recognizable and identifiable in the economy, legal or institutional criteria must be applied. In some cases, legally separate units must be grouped together as they are not sufficiently autonomous in their organisation. In order to define some types of unit, accounting or financial criteria also have to be applied.

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

Legal units include:

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

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

The 'legal unit' category is widely used in the practice at the statistical production of the EU Member States' (MS) but the definition is not explicitly laid down in the SUR. In addition, the BRR links to the SUR regarding the definition of 'legal unit'. Practically the usage of 'legal unit' is a temporary solution following the current practice of the most EU MS. The national statistical authorities are not able to exclude the level of 'legal unit' in their statistical production. Therefore a new SUR is foreseen in the future to define the units to be used in community statistics in a way that the MS should be able to implement the new definitions into their national statistical production system.

#### *2.1.2.2 Geographical criteria*

A unit can be geographically identified. A distinction is made between local, regional, national, Community and worldwide areas.

The local level here means the territory corresponding to the 'smallest administrative area'. The regional levels are defined by the nomenclature of territorial units for statistics (NUTS), which distinguishes three levels (I, II, III).

The observation and analytical units are defined in such a way as to permit data first to be determined for each MS and these data to be combined to give figures for the Community as a whole or for larger areas.

The rules regarding geographical criteria are needed to permit consolidation and avoid double counting and omissions.

#### *2.1.2.3 Activity criteria*

The economic *activity* of production - hereinafter referred to as 'activity' - can be said to take place when resources such as equipment, labour, manufacturing techniques, information networks or products are combined, leading to the creation of specific goods or services. An activity is characterised by an input of products (goods or services), a production process and an output of products.

Activities are determined by reference to a specific level of *NACE* (EUROSTAT, 2008).

If a unit carries out more than one activity, all the activities which are not ancillary activities are ranked according to the gross value added at factor cost which they generate. A distinction is made between *principal activity* and secondary activities.

If no value-added figures are available, other criteria must be used, such as, for example, employment, payroll, turnover and assets, with a view to obtaining the closest possible approximation of the classification which would have been obtained on the basis of value added.

Units are classified in terms of their activities. If one activity accounts for over 50 % of the value added this determines the classification of the unit. In all other cases, classification rules must be observed. Classification is carried out in stages from the highest level of aggregation which is the section (one letter), down to the class (four digits) via the division (two digits) and the group (three digits). The classification at each level must be compatible with the previous level.

Principal and secondary activities are backed up by ancillary activities, such as, for example, administration, accounts, data processing, process monitoring, purchasing, sales and marketing, warehousing, repairs, transport and renovation.

The treatment of the ancillary activities is elaborated later on in SU. 2.4.2. paragraph.

### 2.1.3 Types of SU

#### A. Enterprise<sup>2</sup>

*Definition: “The enterprise (ENT) 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.”*

The EG is made up of ENTs. However, the latter are bound to national borders they represent more or less independently operating decision centres within the EG. It is possible that an EG has several ENTs within a certain country.

The definition does not contain reference to homogeneity according to activity or location.

The enterprise thus defined is an economic entity which can therefore correspond to a grouping of several legal units. Some legal units perform activities exclusively for other legal units and their existence can only be explained by administrative factors (e.g., tax reasons), without them being of any economic significance. A large proportion of the legal units with no persons employed also belong to this category. In many cases, the activities of these legal units should be seen as ancillary activities of the parent legal unit they serve, to which they belong and to which they must be attached to form an enterprise used for economic analysis.

The Enterprise corresponds to the *institutional unit* as mentioned in ESA'95.

The definition of ‘enterprise’ is the most problematic part of the current SUR in the sense of practical implementation. The MS have difficulties to classify the exact topology of a given enterprise if it has a very complex structure. Moreover, the real life situation is very complicated due to the fast and continuous change of the living economic structures. Therefore the European Commission and the MS are investigating the possibility of the combination of two different views: ‘legal view’ and the ‘economical view’ in order to prepare a new regulation with definitions that are easier implementable at the MS level which can only be based on thoroughly elaborated methodological guidelines.

It is important to keep in mind that an enterprise *can* consist of several legal units (LUs). Combining legal units which belong to one ownership applies when only the combination meets the requirement of “autonomy in decision making”.

The question remains when to combine LUs in one Enterprise and how far to go. This question has been answered by EUROSTAT in the Complex document. We will follow this document by illustrating two possible situations:

- a) LUs organised according to vertical integration;
- b) LUs organised according to horizontal integration.

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<sup>2</sup> The source of the definitions in point from A to H in the Types of SU part is the SUR.

**Example: Vertical integration**

An EG has an oil upstream (exploration & production) division and an oil downstream (refining & distribution) division, both put in separate LUs. All upstream products are refined & distributed by the downstream division; all refined oil products are extracted by the upstream division.

*The two Legal Units together make one Enterprise.*

The two processes are not independent; only when combined they constitute one autonomous decision making unit. The fact that the upstream unit, whose complete output is consumed by the downstream unit, is not market oriented, is an important indication for non-autonomy.

**Example: Horizontal integration**

Suppose an EG is made up of three legal units: one for the production of laundry & home care chemicals, one for beauty & personal care cosmetic products and one for adhesives, sealants & surface treatment.

The operations are technically and economically strongly interwoven: there is one management, the resources are shared, inputs are combined and marketing is done for the business as a whole.

*The three Legal Units together make one Enterprise.*

It would be highly artificial to consider them as independent decision centres, even if data were available at the level of LUs.

Notice that, in the last example, the “wholeness” of the decision making transactor is considered important enough to resist the temptation of splitting for the sake of homogeneity. This “holistic view” is fully justified, not only because the Enterprise definition demands it, but also because it is unlikely that *meaningful* and *realistic* data at the level of the three legal units would be available.

**B. Institutional Unit**

*Definition: “The institutional unit 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.

In the corporate enterprises sector, the enterprise corresponds to the institutional unit used in the ESA. Similar institutional units also exist in the general government and private non-profit institutions

sectors. The institutional unit in the households sector covers all the activities of households, while the term 'enterprise' is reserved exclusively for their production activities.

Applying these rules leads to the following solutions for entities which do not clearly possess both characteristics of an institutional unit.

- a) Households always enjoy autonomy of decision and must therefore be institutional units, even though they do not keep a complete set of accounts.
- b) Entities which do not keep a complete set of accounts are combined with the institutional units in whose accounts their partial accounts are integrated.
- c) Entities which, while keeping a complete set of accounts, have no autonomy of decision in the exercise of their principal function are combined with the units which control them.
- d) Entities which satisfy the definition of an institutional unit are treated as such even if they do not publish their accounts.
- e) Entities forming part of a group of enterprises and keeping a complete set of accounts are deemed to be institutional units even if they have surrendered, in fact if not in law, part of their autonomy of decision to the central body (the holding company) responsible for the group's general management. The holding company itself is deemed to be an institutional unit distinct from the units which it controls.

The following are deemed to be institutional units:

- *units which have a complete set of accounts and autonomy of decision:* private and public companies, public corporations; cooperatives or partnerships recognised as independent legal entities; public enterprises which by virtue of special legislation are recognised as independent legal entities; non-profit institutions recognised as independent legal entities; agencies of general government.

- *units which have a complete set of accounts and which, by convention, are deemed to have autonomy of decision:* quasi-corporate enterprises: sole proprietorships, partnerships and public enterprises, other than those referred to in points (a), (b) and (c) in so far as their economic and financial behaviour can be separated from that of their owners and resembles that of corporate enterprises;

- *units which do not necessarily keep a complete set of accounts, but which by convention are deemed to have autonomy of decision:* households.

### **C. Enterprise Group**

*Definition: "An enterprise group (EG) 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."*

The highest unit in the hierarchy is the EG. It is defined in terms of (groups of) enterprises.



This unit is gaining importance with increasing globalisation. Where all other units are confined to national borders, the EG has no restrictions at all; it simply combines all legal units with common ownership and control. Indeed, legal units form its most elementary building blocks.

It is necessary to study the links between certain enterprises and to group together those which have strong ties with each other.

A group is presumed to exist where majority of the capital or voting rights are held or controlled by another enterprise. Provisions regarding the control of the power to appoint directors must be taken into account. Behind financial (majority) control, the aim is to take into account where the control really is.

This definition is not suitable for statistical analysis because 'accounting groups' do not constitute mutually exclusive, additive groups of enterprises. A SU known as 'EG' based on the 'accounting group' concept must be defined by applying the following amendments:

- consider accounting groups at the highest consolidation level (group head),
- include in EG units whose accounts are entirely integrated in those of the consolidating company,
- add majority-controlled units whose accounts are not included in the overall consolidating by virtue of application of one of the criteria allowed by the seventh Directive, i.e., difference in the type of activity or small relative size,
- discount temporary links of less than a year.

An EG is a set of ENTs controlled by the group head. The group head is a parent legal unit which is not controlled either directly or indirectly by any other legal unit. The subsidiary enterprises of a subsidiary enterprise are considered to be subsidiaries of the parent enterprise. However, there are some forms of cooperative or mutual associations where the parent enterprise is actually owned by the units of the group.

EGs are often bound together by various types of links such as ownership, controlling interest and management. These units are often linked with units of the same family from several different generations. The EG unit often corresponds to a conglomerate bound together by a network of complex relationships and frequently covers a very wide range of activities. Subgroups can be identified within EGs.

It is useful to recognise all links between the group head and the controlled enterprise via the network of subsidiaries and sub-subsidiaries. This allows the group's entire organisation to be depicted.

In view of the implications of the different accounting directives and standards (i.e., IFRS<sup>3</sup> versus U.S.GAAP<sup>4</sup>), an attempt should always be made to distinguish between basic units of the group that belong to non-financial enterprises and those which must be classified as financial institutions. In the case of the latter, a distinction must be drawn between units that are credit institutions and those that

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<sup>3</sup> International Financial Reporting Standards are principles-based standards, interpretations and the framework (1989) adopted by the International Accounting Standards Board (IASB).

<sup>4</sup> Generally Accepted Accounting Principles in the U.S.

are insurance enterprises. Some EGs span the whole world, but need to be analysed for the economic territory of the Community and for that of each MS.

The EG unit is particularly useful for financial analyses and for studying company strategies, but it is too varied in nature and unstable to be adopted as the central unit for observation and analysis, which remains the enterprise. It is used for compiling and presenting certain information.

***Example: Multinational Enterprise Group (MNE)***

Legal units 'a', 'b' and 'c' are located in countries 'A', 'B' and 'C'. Units b and c are owned (for more than 50 %) or controlled by unit a. This constitutes one EG which is a so called MNE.

Notice that a legal unit owned by "itself", constitutes an EG too, however small and simple it may be.

From a geographical point of view there are two types of EG. The first one is the 'multinational enterprise group' which shall mean an EG which has at least two enterprises or legal units located in different countries. The second one is the 'truncated EG' which shall mean the enterprises and the legal units of a MNE resident in the same country. It may comprise only one unit, if the other units are non-resident. An enterprise may be the truncated EG or part thereof.

***D. Kind of Activity Unit (KAU)***

*Definition: "The kind of activity unit (KAU) groups all the parts of an enterprise contributing to the performance of an activity at class level (four digits) of NACE 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 KAU is meant to reduce the heterogeneity according to activity which is inherent to the Enterprise. At the same time, it avoids devaluating to an artificial construct.

For a proper understanding of the KAU concept it is important to realise that the second part of the definition together overrules the first part of the first sentence: secondary activities are indeed allowed. Taking this into account, one might argue that the *naming* of the KAU is somewhat misleading. The KAU is, indeed, a true *observation* unit for which, *by definition*, data on operation surplus and other production items are available. It is actually the transactor in the production process<sup>5</sup>.

The KAU was devised as an observation unit in order to improve the homogeneity of the results of statistical surveys by activity and hence the international comparability of these results, since at the level of the enterprise different types of horizontal and vertical integration can be observed at both national and international level. An entity which only carries out ancillary activities for the enterprise to which it belongs cannot be considered as a separate KAU. In fact the KAU corresponds to the operational definition given in ISIC<sup>6</sup>.

<sup>5</sup> The KAU might fairly well correspond to the *business unit*, a term from modern business parlance

<sup>6</sup> The International Standard Industrial Classification (ISIC) of All Economic Activities is a United Nations system for classifying economic data.

The KAUs falling within a particular heading in the NACE classification system can produce products outside the homogeneous group, on account of secondary activities connected with them which cannot be separately identified from available accounting documents. Conversely, the KAUs classified under a particular heading in the classification system on the basis of a principal activity do not produce the entire output of homogeneous groups of specific products because the same products can be produced in secondary activities of KAUs falling under some other classification heading.

The internal accounts of ENTs (e.g., profit or cost centres) have often been developed according to criteria that are close: the activity concept. They enable the supply of data at KAU level, so that these can be observed.

All the costs of ancillary activities of an enterprise must be allocated to the principal and secondary activities and thus to the KAUs observed within the enterprise.

***Example:***

- a) Suppose an ENT that produces tea and sugar. In the sense of the NACE, these are two different activities. It is clear that the production processes are very different. Consequently, it is likely that these processes are managed and marketed independently from each other, and that there is a need for separate accounts. In other words, distinguishing two KAUs would be a reflection of *economic reality*.
- b) Suppose another ENT that produces netbooks<sup>7</sup> and tablet<sup>8</sup> devices. These are also two activities in the sense of NACE. However, there is a fair chance for separate data on operation surplus etc. not being available from the company's accounts. Production processes of netbooks & tablets are likely to be interwoven in many respects. Splitting would be artificial, as would be the (undoubtedly painfully) collected data. In such cases, we would conclude to one KAU, classified according to its principal activity, while taking the secondary activities for granted.

Notice that a KAU *can* consist of more than one legal unit. This follows from the fact that the KAU is derived from the ENT without the legal structure being a discriminating criterion. The fact that a certain ENT may consist of more than one legal unit, can therefore never be sufficient justification for splitting the ENT into two or more KAUs.

The Complex document recommends considering splitting only when each of the following conditions is met:

In case of vertical integration:

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<sup>7</sup> compact sized version of notebook

<sup>8</sup> compact sized integrated multimedia capable device with touch screen

1. the integrated activity is not listed as a single NACE activity at the 4 digit class level;
2. the activities of the legal units themselves are listed in NACE at the 4 digit level;
3. accounts are available with input and output data at (approximate) market values.

In case of horizontal integration:

1. the legal units carry out different economic activities in terms of NACE at the 4 digit level;
2. accounts are available.

The SUR explicitly states that ancillary activities will by no means constitute KAUs.

### ***E. Unit of Homogeneous Production (UHP)***

*Definition: “The unit of homogeneous production (UHP) 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 UHP is perfectly homogeneous in terms of CPA-groupings, i.e., NACE 4 digit classes. It is, therefore, not an observation unit: the data have to be produced by manipulation by the statistician. Its definition justly indicates that the UHP is more an *activity* than a *unit*.

The ESA has adopted UHP that enable the technical/economic relationships to be studied. These analytical units are used particularly for Input-Output tables, and in practice are reconstituted from data collected for the observation units, since they cannot be directly observed.

If an observation unit carries out a principal activity as well as one or more secondary activities, it will be subdivided into the corresponding number of UHP.

The UHP is defined independently of the location of the activity. In ISIC, the unit of homogeneous production is defined in such a way as to correspond to the local UHP.

The UHP is artificial; it does not refer to any physical, accounting or economic reality. Therefore, it is not used in the current practice of the National Accounts statistics of the MS.

### ***F. Local Unit (LCU)***

*Definition: “The local unit is an enterprise or part thereof (e.g., a workshop, factory, warehouse, office, mine or depot) situated in a geographically identified place. At or from this place economic activity is carried out for which - save for certain exceptions - one or more persons work (even if only part-time) for one and the same enterprise.”*

Except for the EG, all units discussed so far were delineated according to national borders. These units do not apply for sub-national statistics. Therefore, the enterprise, KAU and UHP need a regional counterpart: Local unit, Local KAU (LKAU) and Local UHP (LUHP).

If a person works in more than one place (maintenance or surveillance) or at home, the local unit is taken to be place from which instructions emanate or from where the work is organised. It must be possible to specify the employment attached to any local unit. However, all legal units that serve as the legal basis for an enterprise or a part thereof must have a local unit which is the registered office, even if nobody works there. Moreover, a local unit can comprise only ancillary activities.

A geographically identified place must be interpreted on a strict basis: two units belonging to the same enterprise at different locations must be regarded as two local units. However, a single local unit may be spread over several adjacent administrative areas, in which case, by convention, the postal address is the determining factor.

The boundaries of the unit are determined by the boundaries of the site, which means for example that a public highway running through does not interrupt the continuity of the boundaries. In addition, the criterion of persons working in the unit is normally applied.

The ESA-REG (the regional application of the ESA) uses the same definition of local unit for regional accounts purposes. Like the other regional units, the Local Unit is a physically delimited unit; it is, therefore, independent of the regional classification applied;

- the Local Unit can consist of more than one Legal Unit;
- the Local Unit can comprise more than one activity, though in practice it will often be more homogeneous than the Enterprise.
- though a derivative from the Enterprise, the Local Unit does not inherit its main characteristics: it is not an autonomous decision making unit, and consequently data availability is limited.

#### ***G. Local Kind of Activity Unit (LKAU)***

*Definition: "The local kind-of-activity unit (local KAU) is the part of a KAU which corresponds to a local unit."*

Each KAU must have at least one local KAU; however, the KAU can be made up of a grouping of parts of one or more local units. On the other hand, a local unit may comprise solely a group of ancillary activities. In this instance, a supplementary classification of the local unit is possible. Furthermore, each enterprise should have at least one local KAU.

The local KAU corresponds to the operational definition of the *establishment* as given in ISIC.

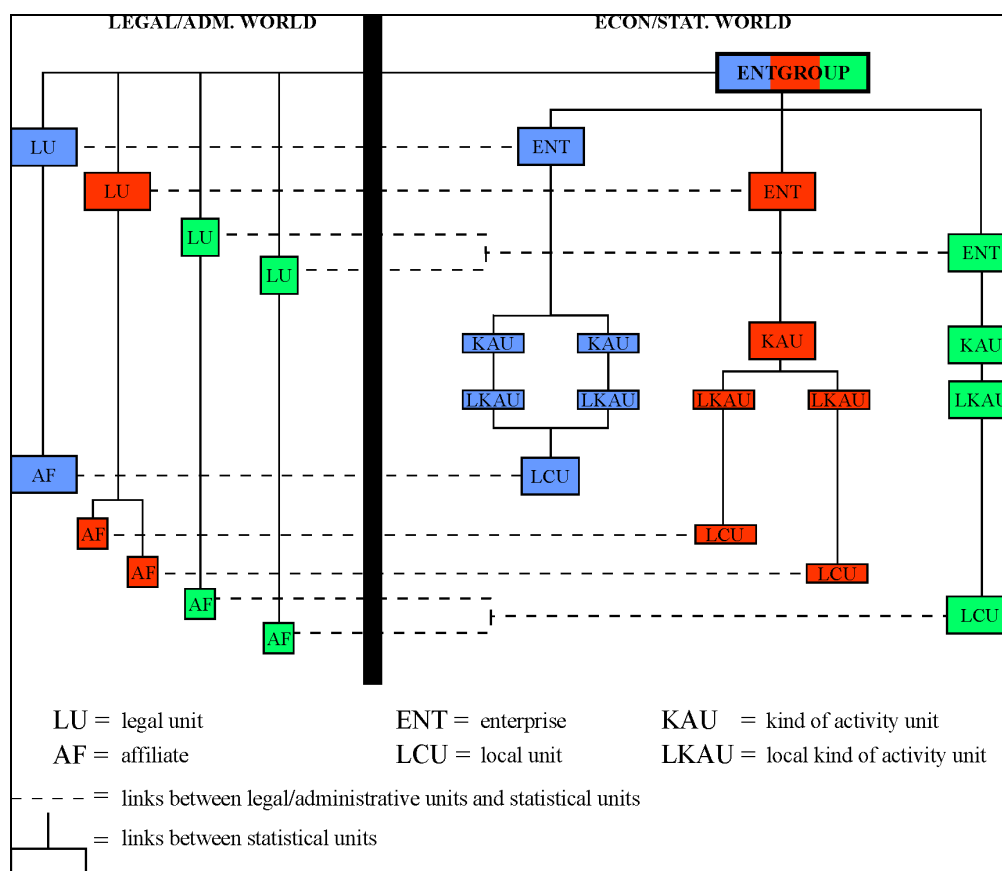
The LKAU can be looked upon both as a part of a KAU and as a part of a Local Unit. It is true that the LKAU is an *observation* unit; however, data availability is poor when compared with the KAU. Often, only data on employment and gross fixed capital formation can be obtained.

#### ***H. Local Unit of Homogeneous Production (LUHP)***

*Definition: "The local unit of homogeneous production (LUHP) is the part of a unit of homogeneous production which corresponds to a local unit."*

The figure below illustrates the unit structure of a particular EG, *constructed out of*:

- 4 LUs, which are made up of 5 affiliates (local parts of Legal Unit) and subsequently *divided into*:
- 3 Enterprises, 4 KAUs, 4 LCUs and 5 LKAUs.



## 2.1.4 Implementations, explanatory notes

### 2.1.4.1 Government and non-profit bodies

In the case of general government bodies, the appropriate SU for the collection and compilation of statistics is very variable (e.g., central government, social security administration, or local government of the region, province, department, county, municipality, metropolitan area, etc.). These various bodies collectively plan, supervise and administer the finances of their constituent bodies (which can be ministries, directorates-general, directorates, bureaus, agencies, offices, etc.). As regards the type of activity, however, some of these bodies, particularly local authorities, are likely to be much more heterogeneous than corporate enterprises.

When series of data on private-sector entities have to be combined with data on these general government and private non-profit institutions classified by type of economic activity, their identification and classification must be carried out using SUs corresponding to entities which are closest to the SUs defined in the private sector. This is why all the criteria used in the private sector are - by analogy - applied to general government bodies. The same applies to private non-profit institutions.

#### 2.1.4.2 Ancillary activities

An activity must be regarded as ancillary if it satisfies all the following conditions:

- a) it serves only the unit referred to: in other words, goods or services produced must not be sold on the market;
- b) a comparable activity on a similar scale is performed in similar production units;
- c) it produces services or, in exceptional cases, non-durable goods which do not form part of the unit's end product (e.g., small implements or scaffolding);
- d) it contributes to the current costs of the unit itself, i.e., does not generate gross fixed capital formation.

The distinction between ancillary, principal and secondary activity can be illustrated by a few examples, as follows:

- production of small implements for the unit's use is an ancillary activity (in accordance with all criteria),
- own-account transport is normally an ancillary activity (in accordance with all criteria),
- sales of own products are an ancillary activity because, as a general rule, it is not possible to produce without sales. However, if it is possible to identify a retail sales point within a production enterprise (direct sales to end-user) which may be, for example, a local unit, this sales point - exceptionally and for the purposes of certain analyses - may be regarded as a kind-of-activity unit. This observation unit then forms the subject of a twofold classification, i.e., in terms of the (principal or secondary) activity it performs within the enterprise and in terms of its own activity (retail sale).

The production processes are not usually viable without the support of ancillary activities, these ancillary activities should not be isolated to form distinct entities. Furthermore, the ancillary activity is not taken into account when classifying the activity of the entity by which the ancillary activities are carried out.

Having regard to the definition, the following activities must not be considered as ancillary activities:

- the production of goods or work carried out which forms part of fixed capital formation - in particular, construction work for own account. This is in line with the method used in NACE, where units carrying out construction work for own account are classified under the building industry if data are available;
- the production, a significant part of which is sold commercially, even if much is used as consumption in connection with the principal or secondary activities;
- the production of goods which subsequently become an integral part of the output of the principal or secondary activity - e.g., production of boxes, containers, etc. by a department of an enterprise for use in packing its products;
- the production of energy (integrated power station or integrated coking plant), even where this is consumed in its entirety in the principal or secondary activity of the parent unit;
- the purchase of goods for resale in unaltered state;

- research and development. These activities are not very widespread and do not produce services which are used in current production.

In all these cases, if separate data are available for these activities, they should be regarded as distinct activities and subsequently recognised as KAUs.

If ancillary activities are carried out for the benefit of a single entity, these activities and the resources they use will constitute an integral part of the activities and resources of that unit. However, if the activities of the SU and the corresponding ancillary activities are not carried out in the same geographical area (defined in terms of the zones delimited for the purposes of statistical surveys), it may be desirable to collect separate supplementary information on these units for the categories of data which have to be classified in terms of geographical areas, even if the units only carry out ancillary activities.

The cost of the ancillary activities must be spread over all the kind-of-activity units which they support and the costs should be broken down accordingly for their share. The cost of the ancillary activity should be broken down over the principal and secondary activities proportionately to the gross value added of the ancillary activities themselves or may simply be broken down proportionately to the value of output.

If ancillary activities serve two or more entities of a multi-unit enterprise, they may constitute a group of ancillary activities at a distinct location. In this case, in the same way as it would be desirable to cover certain activities completely even if they are carried out independently or by entities which are engaged exclusively in ancillary activities (such as computer services), it could be useful to allow for supplementary classifications. For this purpose these ancillary entities could then be classified according to their own activities as well as being classified under the activity of the unit to which they belong.

It is possible that an activity starts out as ancillary but subsequently begins to provide services for sale to other entities. An activity of this kind ceases to be an ancillary activity and must therefore be regarded as one of the principal or secondary activities of an entity. The only way of deciding whether a given activity should be regarded as an ancillary activity or a principal or secondary activity is to assess the role it plays in the enterprise as a whole.

#### *2.1.4.3 Balancing cost and benefit*

The fact that the SUs Enterprise and KAU do not follow directly, i.e., in a '1:1' relationship, from the legal unit, has considerable consequences for the maintenance of BRs. Therefore, decisions to implement conversion activities from legal units to Enterprises and subsequently to KAUs should only be taken after careful analysis of the benefits and the cost. EUROSTAT recommends to confine 'n:1' conversion from Legal Unit into Enterprise to EGs with 250 or more employees. Of course, such a recommendation does not take away that the operational rules as explained above fully apply, i.e., are in line with the SUR.



## 2.2 The practical statistical use of SU

### 2.2.1 Uses of the statistical units in the different European systems

The SUs discussed above provide the building blocks for the aggregates of business statistics. Therefore, each of the Regulations dealing with these statistics makes reference to one or more of the units dealt with. The following overview shows which regulations make use of which units.

Community Regulation	Statistical unit applying for:		
	financial data	production data	
		national level	regional level
Structural business statistics	<b>Enterprise</b>	<b>Enterprise</b>	open
Short term indicators	n.a.	<b>KAU</b>	n.a.
Labour market statistics	n.a.	<b>Local Unit</b>	<b>Local Unit</b>
ESA'95 financial accounts	<b>Enterprise</b>	n.a.	n.a.
supply and use tables	n.a.	<b>LKAU</b>	<b>LKAU</b>
symmetric i/o tables	n.a.	<b>UHP</b>	<b>LUHP</b>

From this overview it appears that the various regulations use different units. This is not only the case for different sub-systems within the total system, but also within sub-systems. E.g., for production data at the national level four unit-types occur. In the aggregation of production data according to NACE categories, the KAU is superior to the Enterprise for logical reasons. Although there may be some secondary activity within a KAU, it can by definition be expected to be more homogeneous than the Enterprise to which it belongs. The statistics compiled on the basis of KAUs will be less affected by changes in the activity pattern within an Enterprise. The aggregates compiled on a KAU basis will permit more valid comparisons of the activity associated with a process both between countries and over time.

In practice, however, it may take substantial cost and effort to identify the KAU in BRs. For this reason the BRR requires the maintenance of Enterprise and Local Unit instead of the KAU and the LKAU. Still, it stands to reason to aim at replacing the Enterprise/Local Unit by the KAU/LKAU in those cases where it really matters, i.e., in the case of large multi-activity enterprises. Of course, this goes for production data only; the Enterprise remains the appropriate unit for observation of financial data and aggregation to institutional sectors, as is explicitly stated in ESA'95.

### 2.2.2 Statistical units in the BR

To enable MS and international institutions to compare and integrate their statistics, they must have at their disposal a common set of SUs. SUR defined a set of eight units.

It is not practical for BRs to hold all eight units. The BRR selected three of four, as these are the main units envisaged for the purposes of collecting business statistics.

In accordance with the Council SUR and also with BRR the statistical units shall be compiled of:

**a) Legal units (LU)**

The legal units of which those enterprises consist;

BRs are required to hold information on the legal units underlying the enterprises.

**b) Local Units (LCU)**

The local unit is an enterprise or part thereof (e.g., a workshop, factory, warehouse, office, mine or depot) situated in a geographically identified place. At or from this place economic activity is carried out for which - save for certain exceptions - one or more persons work (even if only part-time) for one and the same enterprise.

**c) Enterprises (ENT)**

All enterprises carrying on economic activities contributing to the gross domestic product (GDP), and their local units;

Local units not constituting separate legal entities (branches), which are dependent on foreign enterprises, and classified as quasi-corporations in accordance with the ESA'95 shall be deemed to be enterprises for the purposes of the BRs.

**d) Enterprise groups (EG)**

There are two subcategories of EGs: the 'truncated EGs and MNEs'; and the 'all-resident EGs'.

EGs can be identified through the links of control between their legal units.

*2.2.2.1 Local units in the BR*

A local unit must normally have one or more persons working at least part-time to be included in a BR. An exception to this rule is where registered offices of legal units act as the legal basis for the enterprise and must be registered as local units even if they are merely domicile addresses with no real activity, and no-one working there. This exception means that the register can be maintained by recording addresses of local units only, the addresses of legal units and enterprises being those of their local units which are the registered offices. In reality, other addresses may also need to be stored, for example, mailing addresses may not coincide with any of the local unit addresses within the enterprise if forms are completed by an accountant or an EG head office.

All activities of each ENT are covered by its local units. The unstaffed substation does not form an additional local unit, and substations which run by a regional agency employing permanent staff corresponding to that regional agency. In this situation, a survey of investment per local unit will show up all fixed capital investments by enterprises, even those which are not situated at a location to which the enterprise has staff permanently allocated.

The definition of a local unit takes good account of the problems encountered in the case of activities that are not carried out in established premises.

Such activities may take place at the customer's address (e.g., door-to-door sales, visits by doctors), at fairs and markets and at working sites. The rule is that these locations where the enterprise carries out its activities on a transient basis are not local units. Statistically, such activities are handled as if they were carried out at the location from which they are organised.

However, there may be some demarcation problems in the case of major, long-term sites and activities carried out at the address of a customer under a long-term contract (office cleaning, surveillance). In such cases, it is useful to consider some basic pre-requisites for a local unit to exist:

- a) A local unit should be self-contained within a permanent or semi-permanent structure. This means that it should be possible to identify the physical location of the local unit at any time.
- b) A local unit must be capable of receiving deliveries and of storing products, materials or stock. This implies that the local unit should have a postal address.
- c) A local unit is taken to be a place from where the work is organised or from which the enterprise is controlling this local unit.

Consequently, the place of work for an office-cleaning enterprise does not exist as a local unit.

It is therefore necessary to determine the enterprise before its local units can be delimited. Local units may have more than one activity, and can, for statistical purposes, be seen to consist of one or several local kind-of-activity units (LKAUs). The LKAU is recorded in the BRs of several MS, because it is a valuable tool in the production of regional statistics, important for national accounts and that secondary activities can be better represented in business statistics. The LKAU can still consist of more than one activity, particularly where data on the activities is not available separately.

To estimate data on particular activities at a specific site it may be necessary to use the local unit of homogeneous production (LUHP). This unit is purely a statistical construct and is often unobservable in practice and would therefore not normally be recorded in a BR.

#### *2.2.2.2 Enterprises and legal units in the BR*

Enterprises and legal units have different purposes. The legal unit is a part of the legal and administrative world. Only a legal unit may enter into contracts or be an owner of property, rights or goods (i.e., factors of production). However, legal units are a construct of law and administration and thus do not always reflect economic reality. There may be legal or fiscal advantages to separating production factors into two or more different legal units. In the economic view, these individual legal units cannot act without the others.

To understand the relationship between enterprises and legal units, it is also necessary to consider the definition of the EG. An EG may be situated in more than one country. However, although this is not specified in the SUR, for purposes of BRs (e.g., national accounts has a similar restriction), enterprises have been restricted in the BRR to exist only within national boundaries.

An EG can be seen as a cluster of legal units which are linked by relationships of control and structured by a strict hierarchy. Inside that EG, several sub-clusters of legal units may exist which form (complex) enterprises. These enterprises have a certain economic autonomy and form organisational units. As the group head controls the legal units, it can determine the organisation of the group and thus the organisational units, which may form enterprises.

Control is secured according to the ESA'95 by owning more than half of the voting shares or otherwise controlling half of the shareholders' voting power (e.g., by controlling the shareholder or by a contract of control). This type of control can be registered as it has a legal basis. Informal control might be gained by one enterprise taking a high proportion of the output of another enterprise. This is

difficult to recognise and to define and thus a neutral judgement is difficult. Therefore informal control cannot serve as a criterion for constructing EGs or enterprises.

The cooperation of several independent legal units cannot be regarded as an enterprise. However, if these legal units set up a new legal unit with sufficient autonomy, then this legal unit may fulfil the enterprise definition. Also, in this case, the other legal units are not included in the same enterprise as this new legal unit and may form separate enterprises in their own right.

The SUs in BR are only those units which, wholly or partially, exercise an economic activity. Any activity comprising the offer of goods and services on a given market shall be regarded as an economic activity. In addition, non-market services contributing to the GDP, as well as direct and indirect holdings of active legal units shall be regarded as economic activities for the purposes of BRs. Economically inactive legal units are part of an enterprise only in combination with economically active legal units.

The regulatory procedure of BRR gives the base to decide the extent to which enterprises with less than half a person employed and all-resident EGs of no statistical importance to the MS and the definition of units consistent with those for agricultural statistics are to be included in the registers.

#### *2.2.2.3 Enterprise group units in the BR*

Since the BRR has been in force, the importance of EGs has rapidly increased. They are already included in the BRs of most MS and the inclusion in the rest of the countries is foreseen. Other SUs, mainly kind-of-activity units and local kind-of-activity units, are a matter of subsidiarity. They are included in some countries but can also be created in an analytical way.

The activities of EGs expand worldwide, since location of the units is a strategic consideration to gain comparative advantages over competitors because of possibility of centralising some particular functions within the group to benefit from economies of scale and scope. The main reasons why enterprises form a group are to cover a wider market and to increase productivity through more efficient business management.

Generally, the main economic advantages that an EG intends to achieve are integration economies. Integration economies mean the internalisation of external transactions. This can lead to reduced costs from a wider range of activities and to the formation of vertical groups, where an enterprise takes control over another enterprise either producing raw materials or semi-manufactured products (backward integration) or distributing and selling its final products (forward integration).

The demand for information on globalisation results in additional requirements for the BR to record information on EGs. To be a suitable tool for this purpose, the register must contain EG links. The following statistics are currently the most important in this respect: Statistics on foreign affiliates (FATS), Foreign direct investment (FDI) statistics, Intra-group trade statistics, Contributions of multinational groups to international trade, Balance of payments direct reporting and surveys, National accounts (NA), Science, technology and innovation, Structural business statistics (SBS).

In contrast to legal units, the enterprise is a statistical construct exclusively designed for economic analysis, hierarchical relations between enterprises are not defined.

The 'association of enterprises' as stated in the SUR therefore must be a two-level hierarchy with the EG on top and its constituent enterprises all on the second level.

Both the EG and its association with its constituent enterprises (the ‘economic view’ of the EG) must be recorded in the BR. This means that the object EG, the characteristics of EG, the relationship of EG with its constituent enterprises must be included in the register.

Two-level hierarchy of EG and its constituent enterprises:

- EG consists of enterprise(s)  
Each EG is always associated with one or more enterprises.
- Enterprise belongs to EG  
Each enterprise may belong to exactly one EG.

EGs must always consist of at least one enterprise. The phrase ‘may belong to’ reflects the fact that not every enterprise is part of a complex EG. This applies particularly to ‘simple’ enterprises, where the (sole) constituent legal unit has no links of control to any other legal unit.

Changes in the relationship should be recorded to reflect changes in the composition of an EG in terms of its constituent enterprises over time.

### 2.2.3 *The ‘Satellite registers’ of the BR*

The most efficient way of using administrative data in practice is to organise this data into specific registers linked to the BR. If these registers meet certain criteria, they can be referred to as satellite registers. Satellite registers are therefore defined as registers that are available to the national statistical system (in the national statistical institute or elsewhere), contain information about businesses and fulfil the following conditions:

- they are not an integral part of the BR as referred to in the BRR, but are capable of being linked to it;
- they are more limited in scope than the BR, e.g., in terms of NACE, but within that scope they may have more extensive coverage of units and/or variables;
- they contain one or more variables that are not found in the BR. Such variables are generally capable of being used for stratification purposes.

Thus associated registers can be constructed using information from *administrative sources*, statistical surveys or a combination of both. They may add, combine or otherwise transform variables, though in others they may be more or less identical to a particular source. To ensure that associated registers are sufficiently coherent with BRs, it may be useful to consider additional criteria, e.g., common unit identifiers, common definitions and classifications. The greater the coherence, the more useful an associated register is likely to be.

The scope of associated registers can be determined by:

- economic activity: they may contain businesses with similar activities, e.g., retail trade, accommodation, road haulage, etc;
- size: they may contain units with a certain number of employees or turnover over a certain level, e.g., they may contain the subset of ‘large enterprises’;

- characteristics: they may contain units with a common characteristic, e.g., those that engage in foreign trade (units in the register of intra-Community operators).

Variables specific to a particular sector of economic activity may be made available by using associated registers, e.g., the variable ‘sales space’ for businesses in the retail trade; or the variables ‘category/number of stars’ or ‘number of beds’ for hotels. Associated registers can add value to BRs by adding a wider range of variables both for stratification and analysis purposes.

The associated registers exist, but they are of no real use if the legal and technical means to link them to the BR are not in place.

The use of associated registers can increase sampling efficiency (i.e., a reduction in the number of units sampled, whilst still retaining the same level of accuracy of survey results) in two ways:

- the BR includes links to additional stratification variables via associated registers;
- the BR benefits from the improved quality of variables due to the ability to cross-check this register with external sources.

The use of associated registers can reduce the response burden on businesses either through increased sampling efficiency or by removing the need to conduct a survey altogether. They may also include additional units not present in the BR, thus extending the coverage of the *population of interest*.

#### 2.2.4 The ‘Profiling’ of the Statistical Units

A definition of profiling is included in the Manual: (EUROSTAT, 2010)

*Profiling is a method to analyse the legal, operational and accounting structure of an enterprise group in order to establish the statistical units within that group and their links and the most efficient structures for the collection of statistical data.*

The objective is pragmatic and operational, not academic: it consists in defining the most efficient structure for the compilation of statistics, whatever the sources (surveys or administrative data) are; and valid for all European countries. The 1st step consists in analysing three types of structures, two of them being classical (legal and operational or managerial), the 3rd being new for many NSIs (the accounting structure). While it is not written, we can guess that the accounting structure is supposed highly related to the existence of reporting procedures. The deliverable is clear: establish the statistical units within each group.

### 3. Design issues

### 4. Available software tools

### 5. Decision tree of methods

## 6. Glossary

For definitions of terms used in this module, please refer to the separate “Glossary” provided as part of the handbook.

## 7. References

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## **Interconnections with other modules**

### **8. Related themes described in other modules**

1. User Needs – Specification of User Needs for Business Statistics
2. Overall Design – Overall Design
3. Repeated Surveys – Repeated Surveys
4. Statistical Registers and Frames – Main Module
5. Statistical Registers and Frames – The Populations, Frames, and Units of Business Surveys
6. Statistical Registers and Frames – Building and Maintaining Statistical Registers to Support Business Surveys
7. Statistical Registers and Frames – Survey Frames for Business Surveys
8. Statistical Registers and Frames – The Design of Statistical Registers and Survey Frames
9. Statistical Registers and Frames – Quality of Statistical Registers and Frames

### **9. Methods explicitly referred to in this module**

- 1.

### **10. Mathematical techniques explicitly referred to in this module**

- 1.

### **11. GSBPM phases explicitly referred to in this module**

1. All phases for register maintenance

### **12. Tools explicitly referred to in this module**

- 1.

### **13. Process steps explicitly referred to in this module**

- 1.



## Administrative section

### 14. Module code

Statistical Registers and Frames-T-Statistical Units and Business Register

### 15. Version history

Version	Date	Description of changes	Author	Institute
0.1	11-03-2012	first version	Miklós Juhász	HCSO
0.2	16-07-2012	second version	Miklós Juhász	HCSO
0.3	21-06-2013	change of template	Ildikó Györki	HCSO
0.4	03-10-2013	2 <sup>nd</sup> revision based on the proposals from the reviewers	Miklós Juhász	HCSO
0.4.1	11-12-2013	preliminary release		
0.5	28-01-2014	3 <sup>rd</sup> revision based on the proposals from the EB	Miklós Juhász	HCSO
1.0	26-03-2014	final version within the Memobust project		

### 16. Template version and print date

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