

# Business registers for statistical purposes, Volume 2

**Methodological recommendations**



EUROPEAN  
COMMISSION



THEME 4  
Industry,  
trade  
and services

4

A great deal of additional information on the European Union is available on the Internet.  
It can be accessed through the Europa server (<http://europa.eu.int>).

Cataloguing data can be found at the end of this publication.

Luxembourg: Office for Official Publications of the European Communities, 2000

ISBN 92-828-8498-8

© European Communities, 2000

*Printed in Luxembourg*

PRINTED ON WHITE CHLORINE-FREE PAPER



# **BUSINESS REGISTERS FOR STATISTICAL PURPOSES**

**- METHODOLOGICAL RECOMMENDATIONS -**

**Volume 2**

**Sections 11-16**

**THE TREATMENT OF CHANGES**

## CONTENTS

<b>SECTION 11 - THE GENERAL APPROACH TO THE TREATMENT OF CHANGES</b>	<b>5</b>
11.1. Introduction	6
11.2. Frames of reference and terminology	7
11.3. Recapitulation of the links between units	8
11.4. A structured approach to the treatment of changes	8
11.5. Summary	9
11.6. Relation to the BR Regulation	9
<b>SECTION 12 - A GENERAL OVERVIEW OF DEMOGRAPHIC EVENTS</b>	<b>11</b>
12.1. Introduction	11
12.2. Criteria for the identification of demographic events	11
12.3. A general typology of demographic events	12
12.4. Typologies of demographic events for specific statistical units	14
12.5. Summary	14
12.6. Relation to the BR Regulation	14
<b>SECTION 13 - DEMOGRAPHIC CHANGES CONCERNING THE ENTERPRISE</b>	<b>15</b>
13.1. Introduction	15
13.2. Typology of demographic events for the enterprise	15
13.3. Register movements reflecting demographic events	18
13.4. Summary	20
13.5. Relation to the BR Regulation	21
<b>SECTION 14 - CONTINUITY RULES FOR THE ENTERPRISE</b>	<b>23</b>
14.1. Introduction	23
14.2. Continuity in relation to the definition and use of the enterprise	23
14.3. Continuity in practice	24
14.4. Avoiding conflicting rules	26
14.5. Reactivations	26
14.6. Summary	27
14.7. Relation to the BR Regulation	27
<b>SECTION 15 - DEMOGRAPHIC CHANGES CONCERNING THE LOCAL UNIT</b>	<b>29</b>
15.1. Introduction	29
15.2. Possible demographic events concerning the local unit	29
15.3. Local unit events in relation to enterprise events	30
15.4. Register movements reflecting local unit demographic events	32
15.5. Summary	33
15.6. Relation to the BR Regulation	33
<b>SECTION 16 - CONTINUITY RULES FOR THE LOCAL UNIT</b>	<b>35</b>
16.1. Introduction	35
16.2. Continuity in relation to the definition and use of the local unit	35
16.3. Continuity in practice	36
16.4. The links between enterprise and local unit continuity	37
16.5. Summary	38
16.6. Relation to the BR Regulation	38

## SECTION 11

### THE GENERAL APPROACH TO THE TREATMENT OF CHANGES

#### 11.1. INTRODUCTION

The preceding sections concentrated mainly on statistical business registers as they exist at any point in time. The next eight sections focus on changes in statistical business registers, that is, the dimension of time is added. This time dimension is important for many reasons. To mention just a few:

- There is a large demand for information on business-demographic changes, such as the number of births, the number of mergers, etc. and their economic impact.
- Many economic statistics based on populations of units from statistical business registers also have a time dimension. The treatment of changes in statistical business registers clearly has an impact on all these statistics.
- The treatment of changes affects the consistency, at least compatibility, of register based statistics. For instance, it influences how short term statistics are related to long term statistics. If the sampling frames of different statistics with the same reference moment or period are established at different dates, the treatment of changes occurring - or detected - in between these dates may have an effect on the mutual consistency of these statistics.
- Survey statisticians are confronted with changes in survey populations, for instance enterprise panels. They are interested in how the statistical business register links survey units over time, what changes are reported by the statistical business register, what are the causes of changes, etc.

When describing how to deal with changes, it is important to avoid confusion in terminology. For instance, the word "birth" used in the first example above can have different meanings. It could mean the registration of a new legal unit in an administrative register that serves as a source of the statistical business register, or the addition of a new enterprise record in the statistical business register, or the emergence of a new business in economic reality, whether or not registered anywhere, etc. Subsection 11.2 deals with the different frames of reference involved and related terminology.

The treatment of changes is inevitably linked to what is registered in statistical business registers at any point in time, that is, units, characteristics and links between units. In other words, whatever events in the outside world are deemed relevant to consider, their consequences for registration in statistical business registers have to be described in terms of changes in units, changes in their characteristics and changes in links between units. Since dealing with changes in links between units tends to be complex, a recapitulation of the links between the units of statistical business registers is given in subsection 11.3 for reference purposes.

Subsection 11.4 explains how the discussion of changes in the sections 12 to 16 is structured. However, it should be noted that the scope of that discussion has been limited in three respects.

- The first has to do with the fact that the regulation on statistical business registers refers to two types of statistical units (enterprise and local unit), but these are not the only statistical units used in economic statistics. Other regulations mention for instance the enterprise group, the kind-of-activity unit (KAU) and the local KAU. These units could

also be relevant when discussing changes. Therefore, the discussion of the treatment of changes is framed by an identification of what types of changes are considered relevant in general, irrespective of what is mentioned in the regulation on statistical business registers. However, in order not to tackle everything at once, in later sections the treatment of changes has been worked out for the enterprise and the local unit only. An effort has been made to make these sections self-contained in the sense that if at a later stage other units are also to be worked out in this manual, the recommendations regarding the units presently mentioned in the regulation on statistical business registers will not be affected much (apart from possible extensions, of course).

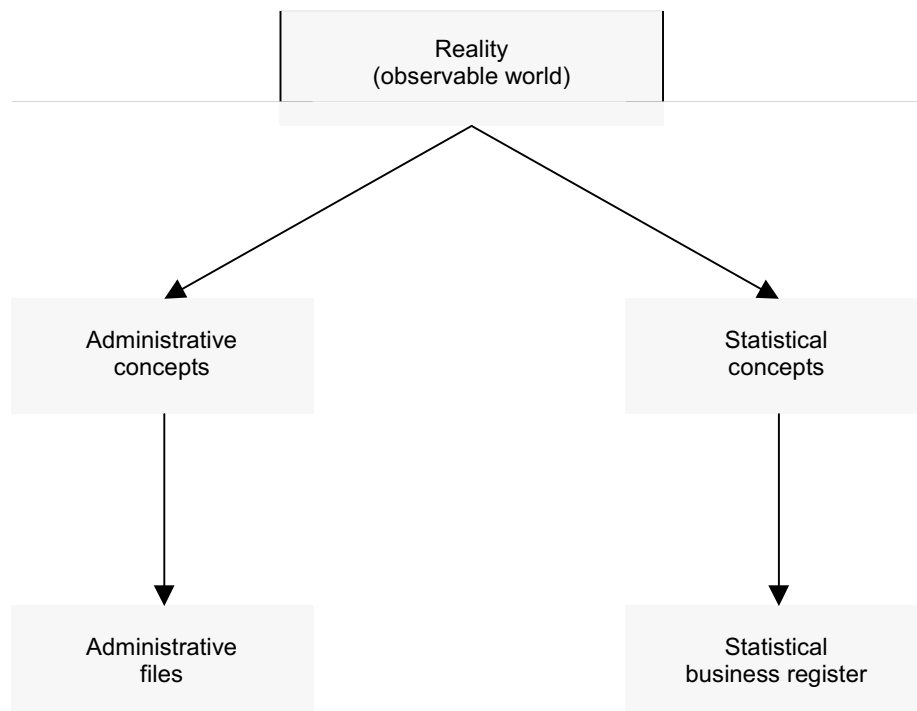
- The scope of the sections on the treatment of changes is also limited in terms of economic sectors. It focuses on market producers. The treatment of changes as presented for market producers can to a large extent also be used for units in the general government sector and for private non-profit institutions, but in some cases specific adaptations may be necessary.

- The third has to do with the fact that national statistical business registers cover only the national economic territory of the Member State. Enterprises and all lower level statistical units are therefore restricted to the national economic territory, although they may be part of a transnational group. In the following sections the international dimension has not been taken into account specifically. This has yet to be done.

## 11.2. FRAMES OF REFERENCE AND TERMINOLOGY

### FRAMES OF REFERENCE

To avoid the confusion referred to above, it is useful to make a distinction between the real, observable world and its reflections in administrative files and in statistical business registers. (It is assumed that in the context of this manual the real world is only relevant insofar as it is observable). Administrative files are based on the application of administrative concepts in observing the real world and statistical business registers on the application of statistical concepts to the real world. This can be depicted in a diagram:



Reality can not be observed or measured without applying an observation framework or model and concepts. These are to a large extent derived from the purposes of observation; in the case of statistical business registers that is primarily to produce a frame for economic statistics. The purposes of non-statistical administrations (social security boards, chambers of commerce, tax authorities, etc.) are different. A tax administration, for instance, has files of taxable units such as VAT-paying units or units subject to company taxation.

However, differences in purpose of observation do not necessarily result in incompatible measurements of reality. A business in reality, for instance, may very well be reflected in the statistical business register as an enterprise and at the same time in the files of the tax administration as a taxable unit. For this reason statistical business registers do not only observe reality directly by means of surveys (direct register surveys, "profiling" or "proving" of large business organisations and feedback from statistical surveys), but also indirectly by analysing administrative files. In practice such files are often much more important to the updating of the statistical business register than direct observation, at least for smaller units. The relevance of administrative files to statistical business registers is also clear from the fact that the legal unit - which is defined by other administrations than the statistical institute - is part of the statistical business register and is the "building block" of the enterprise. (In fact, in most cases it equals the latter.)

It is useful to bear in mind that even if the statistical business register and an administrative register happen to contain similar units, the correspondence does not necessarily carry over to changes. For example, if an administrative register replaces a legal unit equalling an enterprise by another legal unit, the enterprise could still be the same. If the distinction of the frames of reference depicted above is useful when discussing units, it is even more useful when discussing changes.

### TERMINOLOGY

If a distinction is made between different frames of reference, it may be wise to reflect this in the choice of terminology. In other words, statisticians should try to avoid using a term like "birth" without qualifying it or use different terms when referring to the different frames of reference. In this manual the following convention is applied:

- *Changes in the real, observable world are called "events".* Each event that is deemed important

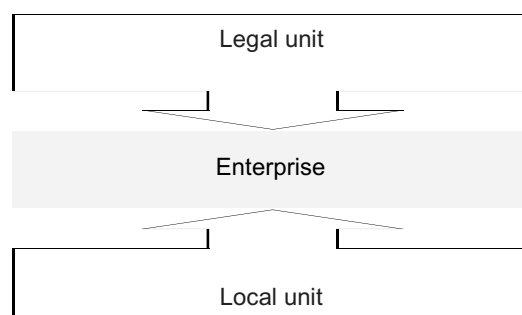
enough to make statistics about is identified as a statistical concept which will be given a name, where possible tuned to the terminology of the users of those statistics. An example would be "birth". (A complete terminology is presented in sections 12, 13 and 15, including definitions.) To emphasise that a statistical concept refers to the real, observable world, it may be preceded by the word "real" (e.g. "real birth").

- *Changes in statistical business registers are called "movements" (or "register movements").* The two most important movements are the addition of a new statistical unit record to the business register (e.g. following the real birth of an enterprise) and the removal of an existing record. These movements are called "creation" (or "register creation") and "deletion" (or "register deletion"), respectively. Where in the following the term "business register" is used, it refers to the statistical business register; this will also be evident from the context.
- *Changes in the administrative files are called "administrative changes".* The two most important administrative changes are the registration of a new administrative unit (e.g. the creation of a VAT unit in a VAT register) and its deregistration. These administrative changes are called "administrative birth" and "administrative death", respectively.

In some cases it is practical not to specify the frame of reference. The terms "business" and "changes" will be used in such cases, for instance when referring to "the treatment of changes" in general.

### 11.3. RECAPITULATION OF THE LINKS BETWEEN UNITS

As explained in earlier sections the legal unit, the enterprise and the local unit are linked to each other in a particular way. Their relationship can be depicted as follows:



This diagram represents the fact that each enterprise is linked to (i.e., consists of) one or more legal units and each enterprise is linked to (i.e., consists of) one or more local units. It is worth noting that some additional legal units, so-called dormant units, are not necessarily linked to any enterprise, but local units are always linked to an enterprise.

In addition to the links shown above, the regulation on business registers mentions the option to register links representing control between legal units. Such links are not restricted to legal units belonging to the same enterprise; in fact they may relate the legal units of the enterprise group. If such links are recorded for the legal units of the same enterprise, they allow to determine which legal unit has the ultimate control and in its absence the convention is to create a fictitious legal unit. For the following sections this means that the concept of "controlling legal unit" is applicable.

As stated in earlier sections, it is recommended that the business register contains separate records and identity numbers for the legal unit, the enterprise and the local unit, even if they coincide. However, it was stated as well that if separate records for different units are not explicitly recorded and this does not lead to any reduction of the information that can be provided by the business register, this would be acceptable. Therefore, it may be assumed for the purposes of the sections on the treatment of changes that the units and links of the diagram above are explicitly recorded in all cases.

#### **11.4. A STRUCTURED APPROACH TO THE TREATMENT OF CHANGES**

The purpose of a business register is to record statistical units, their links and their characteristics correctly at any point in time. By "correctly" is meant that the units, links and characteristics are as true as possible a reflection of the real, observable world as perceived by the statistician, who takes into account the demand for information, the available resources and effects of information collection on the response burden of respondents. If the dimension of time is added, a similar statement holds. Then the purpose is to record changes in the existence of statistical units, changes in links and changes in characteristics correctly over time. And similarly, these register changes should as truly as possible reflect the changes in the real, observable world in view of the considerations mentioned.

Therefore, if one wants to know the rules for carrying through movements in business registers, it is recommendable to start with an overview of events,

which is in line with the demand for information. A general overview is given in section 12. It primarily identifies events with an impact on the existence of statistical units and the links between them, that is, on so-called demographic events. An event may have an effect on one type of statistical unit only, but it may just as well affect different types of statistical units at the same time and their links. It may influence characteristics of statistical units as well.

It is useful to bear in mind that the phrase "with an impact on the existence of statistical units" is not self-evident. The question is not only whether or not the definition of a statistical unit is fulfilled at any point in time, but it is just as relevant to determine whether a unit has the same identity as before. That is, one has to consider what might be called the existential and the essential components of the statistical unit.

The overview of section 12 forms the basis of specific sections on enterprise changes (sections 13 and 14) and local unit changes (sections 15 and 16). In section 13 a typology of demographic events that may occur to the enterprise is derived, followed by a description of their consequences in terms of movements in business registers. The typology of events is justified in terms of information demand; the availability of information and the cost of information collection, both for the statistical institute and the respondent, are key considerations in the discussion of how to reflect events in business registers. Section 14 describes the identity continuity rules for the enterprise, both conceptually and in terms of register movements. The sections on local unit changes have a similar structure.

Although the sections 12 to 16 focus on demographic changes, the scope of these sections is somewhat wider. Demographic and non-demographic changes are entangled in several ways and too strict an application of the metaphor of human demography to the field of economic statistics would not be desirable. Therefore, where relevant, changes of characteristics of statistical units are taken into account as well. For instance, demographic events may have an impact on characteristics of units, such as their principal economic activity or size. Links between legal units are also relevant when discussing demographic changes, because they bear on the constitution of the enterprise group. And some of the users of business registers and statistics based on them may not be very interested whether changes in the population surveyed are called demographic or not. However, since some changes of characteristics do not have any clear connection with demography, a separate section on changes of characteristics complements the sections



12 to 16.

As stated above, in principle the register movements should as truly as possible reflect the changes in the real, observable world. Obviously the ideal of precisely and instantaneously reflecting all relevant events can never be reached, just as the ideal of truly representing all relevant real world units at any point in time can never be reached. (In fact, from the viewpoint of cost-efficiency and response burden it is not even desirable that the ideal is realised!) As a consequence, there will always be some false register information, some information will always be missing and some register movements will be false. This entails the need to carry through corrections in the business register if errors are detected. Since this is a major concern in the management of business registers, a separate section will be devoted to this.

Finally a remark on the time scale of events and register movements must be made. It is helpful to imagine the real world units to be represented in the form of a film. At certain moments the picture changes, meaning that events have occurred. But changes also occur gradually. For instance, the start-up of a business or a merger of businesses may take some time. Three problems relate to this issue :

- *First, there is a problem of dating changes.* At what moment is a new business that goes through a long start-up process considered to be existing, entailing a register creation? This problem is dealt with in the sections 13 and 15 on enterprise and local unit events, respectively.
- *The second problem consists of what changes to take into account at all.* In the metaphor of the film, certain events will or will not be perceived depending on the speed of the film. Comparing enterprises or local units after a number of years would in many cases lead to the conclusion that they have changed considerably, implying changes of identity. But if the same enterprises and local units are compared every week, it is very well conceivable that in no single week any change happened big enough to change identity. In this manual a pragmatic solution is chosen. Since most statistics using business registers have a frequency of at least once a year and register updating is often carried out continually or very frequently, only events taking place within the period of a year (not necessarily a calendar year) are taken into account. This implies that it is

possible that more than one event occurs during a year, in which case they are all taken into account.

- *The third problem is maintaining consistency between short term and long term statistics.* If within a year several changes occur concerning the same unit(s), the long-term change would be the "consolidation" of the short-term changes. It is even possible that the short-term changes cancel each other, for instance if a birth is followed by a death. This problem is not dealt with in the sections on the treatment of changes. The register movements can be carried through in accordance with real events, i.e. continuously; the resulting consistency problem is a matter of using the business register in such a manner that statistics are consistent, for instance by applying appropriate "consolidation rules". This is an issue treated in the sections on the uses of business registers.

## 11.5. SUMMARY

The sections on the treatment of changes have been worked out only for the enterprise and the local unit. They focus on market producers and are restricted to the national economic territory covered by each national business register. Only events that take place within the period of a year are taken into account. A distinction is proposed between different frames of reference: the real, observable world; administrative concepts; administrative files; statistical concepts and the statistical business register. The word "event" refers to reality, "administrative changes", "administrative birth" and "administrative death" refer to the administrative world and "(register) movements", "(register) creation" and "(register) deletion" refer to the business register. Register movements are changes in the existence of units, links between units and characteristics. It is assumed that every enterprise has a so-called controlling legal unit.

## 11.6. RELATION TO THE BR REGULATION

*Since this section merely prepares the ground for the sections 12 to 16, it is, as such, not considered an interpretation of the regulation on business registers. However, insofar as those parts of the following sections which do constitute an interpretation of the*

## SECTION 12

### A GENERAL OVERVIEW OF DEMOGRAPHIC EVENTS

#### 12.1. INTRODUCTION

This section describes the main demographic events to be distinguished from a user's point of view, without restriction to any specific types of statistical units and without making assumptions as to the actual or recommended structure, contents or updating procedures of business registers. The section serves as a general framework for other sections in which the demographic events occurring to specific statistical units are worked out, as well as their consequences in terms of register movements.

This section focuses on demographic events, that is, events with an impact on the existence of statistical units and links between them, the scope is slightly wider, since demographic events can not be treated entirely in isolation. In particular, taking the user's point of view into consideration implies that the relationship between demographic changes and changes of some characteristics of statistical units is taken account of as well.

#### 12.2. CRITERIA FOR THE IDENTIFICATION OF DEMOGRAPHIC EVENTS

A statistical business register reflects the businesses of the real, observable world insofar as they are considered relevant to the users of statistics. Such a projection of reality is necessarily limited in the sense that it is the result of a choice as to what aspects of the real, observable world are taken into account. A similar choice has to be made if one tries to reflect the dynamics of the real world. In principle these dynamics can be described in many ways, but it stands to reason to articulate such a "dynamic view" in this manual in a way which complements and is in line with the "static view" which is represented by the statistical business

register at any point in time. Therefore the criteria developed in this subsection focus on the dynamics of the combined populations of statistical units of different types and their relationships.

#### CATEGORIES OF USES

When formulating criteria it is important to take the uses to be served into account. One can distinguish between external and internal uses, that is, between the use for statistical output depending on the business register and the use within the statistical institute. The external uses, in turn, can be subdivided into business-demographic statistics and other statistics to which demographic categories are relevant. An example of the former are statistics on the birth and death of units an example of the latter are time-series for populations of statistical units such as enterprise panels, in which for example the number of births and deaths of units are specified and their impact on the variables measured possibly quantified.

Although in principle the criteria for the identification of demographic events are to be derived from the demand for information by external users, one should bear in mind that information on events is also important for survey statisticians. They want to know how surveyed units relate over time and what are the causes for inflow into and outflow from survey populations. They need this information for obvious practical reasons of data collection and processing, but also for the interpretation of the data collected.

#### CRITERIA

What demographic events are relevant? At a high level of abstraction, this question is not difficult to answer. By definition demographic events have an impact on the

existence of statistical units and links between them. The statistical units have been identified and defined in view of the observation and analysis of the production system, as stated in the regulation on statistical units. Therefore changes in the constituent factors of the production system, as well as in the structure of business organisations in terms of statistical units are relevant. But what factors exactly and what changes in structure are most relevant to take into account?

An important consideration must be that the enterprise is the central unit of the statistical system. All statistical units are defined in terms of the enterprise, at least insofar as they are observable. They are either a part of the enterprise in terms of economic activity or location (kind-of-activity unit or KAU and local unit, respectively) or a combination of enterprises bound together by legal and/or financial links (enterprise group). It stands to reason to identify and group demographic events in a way that reflects the central position of the enterprise in the statistical system.

The enterprise 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. Changes in the existence of such combinations of production factors must be important events to the users of statistics based on the units concerned. The same goes for changes in the existence of parts of those combinations of production factors, if these parts are distinct in respect of economic activity or location. Moreover, it would be relevant to distinguish whether a change in the existence of an enterprise also affects the existence of the group to which it belongs.

Apart from changes in the existence of production factors as combined in statistical units, changes in the distribution of existing production factors are relevant to the users of economic statistics. If it is assumed that such changes are demographic, they must result in changes in the existence of the statistical units involved or in the links between them. Again, distribution changes can be considered at several levels. If the enterprise level is taken as the level of reference, redistribution can take place within the enterprise and would involve changes at the KAU and/or local unit level.

A redistribution can also take place among enterprises, which may result in a decrease of the number of enterprises (concentration, for instance resulting from the merger of enterprises) or in an increase (deconcentration, for instance as a consequence of a split-off of an enterprise from an existing enterprise).

The number of enterprises may also remain the same; in which case the redistribution may take the form of a KAU or local unit transfer; in other cases it may be called a restructuring. If the group level is taken into account, redistribution among enterprises may or may not concern more than one group. And an enterprise may be transferred from one group to another.

The foregoing would serve all main internal and external uses concerning business demography. However, if uses connected with time-series were considered, the above approach would not be sufficient. If populations of statistical units are followed over time, the criteria mentioned would certainly be relevant, but their effect on unit characteristics, especially if they are used for frame definition or stratification, would also be very important. Examples of such characteristics are size class, economic activity and location. But changes of characteristics may also be caused by non-demographic events. From the user's point of view it seems logical not to separate the discussion of demographic and non-demographic changes for those characteristics that may be affected by demographic changes.

Finally one concept that deserves special mention is the entrepreneur of an enterprise. In demographic analyses this concept is often referred to. Although strictly speaking changes of entrepreneur are not demographic - the entrepreneur is as such not a statistical unit or a link between statistical units - the controlling legal unit can be seen as an approximation of the concept of entrepreneurship, especially if it is a natural person. For this reason changes in controlling legal unit could be considered relevant for uses closely related to business demography.

### 12.3. A GENERAL TYPOLOGY OF DEMOGRAPHIC EVENTS

#### **TYPOLGY**

Application of the criteria and considerations mentioned above results in the general typology of demographic events given below. The typology is followed by some explanatory remarks.

#### **1. Changes of existence of combinations of production factors**

##### **1.1. Emergence of combinations of production factors**

##### **1.1.1. Birth of an enterprise group (and all lower-level statistical units)**

1.1.2. Birth of an enterprise (and all lower-level statistical units)

1.1.3. Birth of a KAU or local unit

**1.2. Disappearance of combinations of production factors**

1.2.1. Death of an enterprise group (and all lower-level statistical units)

1.2.2. Death of an enterprise (and all lower-level statistical units)

1.2.3. Death of a KAU or local unit

**2. Changes in the distribution of production factors**

**2.1. Redistribution of the production factors within one enterprise**

2.1.1. Redistribution of production factors over KAUs and local units

2.1.2. Redistribution of production factors over KAUs only

2.1.3. Redistribution of production factors over local units only

**2.2. Redistribution of the production factors of more than one enterprise**

2.2.1. Concentration of enterprises

2.2.1.1. Concentration within an enterprise group

2.2.1.2. Concentration involving more than one enterprise group

2.2.2. Deconcentration of enterprises

2.2.2.1. Deconcentration within an enterprise group

2.2.2.2. Deconcentration involving more than one enterprise group

2.2.3. Transfer of production factors between enterprises

2.2.3.1. Transfer of a KAU or local unit within an enterprise group

2.2.3.2. Transfer of a KAU or local unit between enterprise groups

2.2.4. Restructuring

2.2.4.1. Restructuring within an enterprise group

2.2.4.2. Restructuring involving more than one enterprise group

**2.3. Transfer of an enterprise from one enterprise group to another**

**EXPLANATORY REMARKS**

For a proper understanding a couple of remarks have to be made. The categories of the typology are the main types of events distinguished. Each event has to be classified into one and only one category of the typology. However, a real life event may not match the definition of any category precisely. For instance, it is possible that a business organisation is restructured and at the same time some production factors disappear. As is the case with many other classifications, in such cases the best fitting category has to be determined.

Another remark concerns category 1, changes of existence of combinations of production factors. The subcategories should be applied top-down. For instance, if an enterprise and its local unit are born and the birth takes place within an existing enterprise group, the event is classified into category 1.1.2. The categories 1.1.3 and 1.2.3 apply only if within an existing enterprise a lower level statistical unit is born or dies.

The next remark concerns concentration and deconcentration. These terms are known to have a wider meaning. In daily usage they may be understood not only to refer to the enterprise level but also to the enterprise group level, meaning a reduction or increase of the number of controlling entities or groups. The use of the term in the typology above is a consequence of taking the enterprise as the unit of reference.

Finally it should be noted that the typology can only be applied if a precise interpretation is given for the (dis)continuation of the identity of each of the statistical units mentioned. Since this is an elaborate exercise, which is by definition unit-specific, this is done in the sections dealing with changes concerning the specific statistical units.

**POSSIBLE EXTENSIONS**

The above typology can be extended in several ways. For instance birth and death of a KAU or local unit can be subdivided according to the type of unit(s) involved: birth of a KAU which is a local unit; birth of a KAU which is not a local unit; birth of a local unit which is not a KAU; etc. A similar remark applies to transfer of production factors between enterprises. The categories of concentration and deconcentration can be subdivided by the various forms in which they may take place. If more than one enterprise group is

involved, the effect on the number of enterprise groups may be taken into account explicitly.

Another possible subdivision is by the effect of the event on characteristics of the statistical units concerned. For example, if an enterprise is split off (deconcentration), it would be very relevant for users to distinguish between the case where the split off unit carries out the same principal activity as the original enterprise and the situation where the principal activities are different. But strictly speaking such subdivisions would not be demographic subdivisions.

If non-demographic events are taken into account, the typology could be extended by different categories of changes of characteristics. One relevant change of characteristic, which is closely related to business demography, is the change of controlling legal unit.

#### 12.4. TYPOLOGIES OF DEMOGRAPHIC EVENTS FOR SPECIFIC STATISTICAL UNITS

The requirements for a statistical system to allow for the full application of the typology presented above would be extraordinary high. In practice in most cases not all statistical units are applied at the same time, even in business-demographic statistics. And since surveys are generally based on only one type of statistical unit, typologies of events applied to time-series tend to be restricted to events related to the unit concerned. This means that there is a need for a typology of demographic enterprise events, of demographic local unit events, etc.

The typology of subsection 12.3 forms a good starting point for such unit-specific typologies. It offers a coherent framework and allows for describing the relationship between the different unit-specific typologies. However, when working out a typology for a specific statistical unit, a couple of points have to be taken into account:

- The categories of the typology of the last subsection will have to be validated in terms of measured demand. A full picture of the demand for information on the specific categories that are deemed relevant to the statistical unit under consideration is still needed.
- The categories of the typology of the last subsection are not necessarily all that is relevant to the statistical unit under consideration. At the level of the specific statistical unit subdivisions
- are possible. And to some extent changes of characteristics may need attention.
- Considering the fact that each statistical unit is linked to a higher-level and/or a lower-level unit, a unit-specific typology could very well incorporate changes in the links with the next higher and/or lower level.
- Each unit-specific typology of demographic events must be complemented by a set of rules concerning the (dis)continuation of the statistical unit.
- For reasons of consistency and statistical co-ordination and in order to have the possibility to relate statistical information about different types of statistical units, it is important to describe the relationship between the different unit-specific typologies applied.

The last point may be complicated. One may note that even if very similar typologies are applied, the events occurring to the different types of statistical units may be classified differently. (Compare classifying enterprises and their local units according to the same classification of economic activities: the local units are not necessarily all classified into the same industry as the enterprise to which they belong.)

#### 12.5. SUMMARY

This section presents a typology of demographic events which is not restricted to any type of statistical unit, although the enterprise plays a central role in it. The typology is mainly based on changes in the existence of production factors and their distribution within and among business organisations, while taking into account their structure in terms of organisational units of production, economic activities, locations and legal/financial links. The typology can serve as an integrating framework for typologies of unit-specific events.

#### 12.6. RELATION TO THE BR REGULATION

*Since this section merely prepares the ground for the sections 13 to 16, it is, as such, not considered an interpretation of the regulation on business registers. However, insofar as those parts of the following sections, which do constitute an interpretation of the regulation, refer to section 12, explicitly or implicitly, section 12 is, of course, relevant to the interpretation of*

## SECTION 13

### DEMOGRAPHIC CHANGES CONCERNING THE ENTERPRISE

#### 13.1. INTRODUCTION

This section describes the demographic events concerning enterprises and the movements in business registers they entail. Where appropriate, changes of characteristics are taken into account as well. The demographic events described are those which are considered relevant to users of statistics which make use of business registers. These statistics comprise most economic statistics, notably business-demographic statistics themselves.

As to the relationship with other statistical units, changes in the links between enterprises and enterprise groups have been taken into account. However, no operational rules have been worked out, since the enterprise group itself is not yet properly covered in this manual. Changes in the links between enterprises and local units, relationship between the typologies of demographic events for the enterprise and the local unit are discussed in section 15. The relationship between enterprise identity and local unit identity is covered in section 16.

Business registers represent the existence of an enterprise by the attachment of a unique identity number to a record for the enterprise. The creation and deletion of records are logically linked to the creation and deletion of identity numbers and are meant to correspond to changes in the existence of enterprises. And the other way round: if there is no discontinuation of the enterprise, its identity number should not change. The specific continuity rules, which describe under which conditions to delete and create identity numbers are given in section 14. (This is done for reasons of transparency; the rules will be better understood after the explanation of their purpose and application in the present section.)

This section is structured as follows. A typology of demographic events is given in subsection 13.2, including explanatory notes and an indication of the relevance of the events. Subsection 13.3 translates these events into register movements, under the assumption that continuity rules are available.

#### 13.2. TYPOLOGY OF DEMOGRAPHIC EVENTS FOR THE ENTERPRISE

In the general typology of demographic events presented in section 12, the relevant classes were defined in terms of changes of specific statistical units. This section will concentrate on the effects of the events listed in the general typology on the enterprise, with subdivisions where relevant. Proceeding like this has several advantages:

- A "cross-section" of the general typology for a specific statistical unit is useful for those statistical institutes that do not use all statistical units mentioned in the general typology.
- For reasons of survey processing it is very useful to have a typology that applies specifically to the units of the survey.
- The typology can be worked out for particular needs related to specific statistical units. By using a separate, derived typology for the enterprise, the general typology does not become too intricate.

#### CRITERIA

The criteria for distinguishing demographic events presented in section 12, namely the existence and distribution of (combinations of) production factors have to be worked out for the enterprise in a

systematic way. This has to be done in accordance with the user needs. The demand does not only concern business-demographic statistics, but also other economic statistics that are affected by these events. And the demand does not only exist with users of statistics, but also with statistical staff, who need this information to manage surveys.

At the level of the enterprise, the categories of the general typology appear to be different in two respects:

- *The continuity of the enterprise*

For example, in case of a death of an enterprise, it loses its identity, whereas redistribution of production factors does not necessarily involve identity loss.

- *The number of enterprises involved in an event*

Both the numbers of enterprises before and after the event are relevant. For instance the birth of an enterprise (in the sense of the setting-up of a new business from scratch) and the concentration of two existing enterprises differ, among others, in the number of enterprises involved.

Application of these two criteria yields the categories of the general typology at the enterprise level plus some subcategories, as will appear below. It makes it also possible to derive and define all possible demographic events at the enterprise level in a systematic way. In particular, they allow treating the redistribution of production factors in a more precise and elaborate way.

If the continuity of the link between the enterprise and the enterprise group is taken into account as well, a corresponding criterion must be added.

### **DEMOGRAPHIC EVENTS**

Application of the criteria results in the events at the enterprise level as listed below. The events are followed by explanatory notes and an indication of the related demand for statistical information. The terminology chosen is intended to be in accordance with what is common among the users of the statistical information. The events listed are mutually exclusive. Since the list is also exhaustive, it is a typology of events indeed.

- *Existential changes (events involving only one enterprise after the event and none before or only one enterprise before and none after)*
  - birth;
  - death.

Birth and death of enterprises are not the same concepts as creation and deletion of identity numbers, for two reasons. First, birth and death are events (concerning the real, observable world) and the creation and deletion of identity numbers are register movements. Second, birth and death involve only one enterprise, whereas other events involving many enterprises may also result in the creation and deletion of identity numbers, for instance merger. The convention of this manual to restrict birth and death to one enterprise involved is very important, because the use of these terms is often confusing. The convention is chosen because it is in line with the terminology of users, who are interested in questions such as "How much employment is generated by enterprise birth?" If the term "birth" is used in the sense of these kinds of questions, enterprises emerging from for instance mergers or split-off are not to be included.

Thus the birth of an enterprise is the bringing into being of an enterprise where no enterprise existed before and no other enterprises are involved. The death of an enterprise is the opposite. Since the enterprise is an organisational unit producing goods or services (according to its definition), birth amounts to the creation of a combination of production factors and death to their dissolution, both with the restriction that no other enterprises are involved in the event.

A problem associated with birth and death is the date of occurrence of these events. From what moment on is an enterprise considered to be born, conceptually? In principle this question can be answered by referring to the definition of the enterprise: the birth takes place at the (first) moment the conditions of the definition are met, so the moment there is an organisational unit producing goods or services. The next subsection gives an operational answer to the question of the date of occurrence of birth and death. See the definitions of number of births of enterprises and number of deaths of enterprises in Commission Regulation (EC) No 2700/98.

- *Concentration (events involving more than one enterprise before and one enterprise after the event)*
  - merger;
  - take-over.

Enterprises may integrate to the extent that the number of existing enterprises is reduced, that is, concentration takes place. Such integration may take different shapes. Assume there are two enterprises that integrate entirely. Then the enterprises involved may either lose their identity because they are dissolved beyond recognition in the new organisation or one of

the enterprises may remain the same. In the latter case the other enterprise is generally much smaller; it is merely absorbed by the larger enterprise, which remains largely the same. *If both enterprises lose their identity, the event is called a merger; if one of them keeps its identity it is called a take-over.* In the case discussed it is not possible that both keep their identity, because then the number of enterprises would not change.

As will be clear from what was said in section 12, the term "concentration" is used here in a specific sense: it refers to events which reduce the number of enterprises. In other contexts the term is sometimes used to denote that the population of enterprises gets fewer owners or is spread over a reduced number of enterprise groups. However, since such phenomena relate to the enterprise group level, they are not treated in this section.

Although in the case of concentration the number of enterprises is reduced, mergers and take-overs do not comprise the death of units, as explained earlier. Death is a different event. But these events may all entail the deletion of records in the business register. Likewise the emergence of a new enterprise from a merger of enterprises is not considered a birth. It should also be pointed out that as a consequence of a take-over some characteristics of the enterprise that keeps its identity may change. For instance, it may enter a different size class or get a different principal economic activity. Such effects are very important, especially to survey statisticians.

The demand for information on concentration clearly exists; the integration of production capacity into a reduced number of units is a very relevant economic phenomenon. But it is less obvious that the distinction between merger and take-over has to be made for users of statistics, especially if the frequency of occurrence is taken into account. However, the distinction is anyway very relevant to statistical surveyors, since it bears on the question which units in samples and sample frames remain the same over time. And if concentration is represented in the business register, the distinction between the two events is easy to make, because for all enterprises an identity number is maintained.

- *Deconcentration (changes involving one enterprise before and more than one enterprise after the event)*
  - break-up;
  - split-off.

The events of deconcentration are exact mirror cases

of the events of concentration: the counterpart of the merger is the break-up and the counterpart of the take-over is the split-off. And a similar remark on the terminology applies.

- *Changes involving more than one enterprise before and more than one enterprise after the event*
  - creation of a joint venture;
  - restructuring.

These comprise all other possible events.

*A creation of a joint venture is the creation of an enterprise by two or more enterprises, none of which obtains a decisive say in the management of the new enterprise. The two or more original enterprises remain existing and keep their identity, so there is an increase of the number of enterprises by one.*

A restructuring is a change involving more than one enterprise before and more than one enterprise after the event, not being the creation of a joint venture. It affects the identity of at least one enterprise. But the total number of enterprises before and after the event may be the same. The category of *restructuring* comprises all cases not elsewhere classified in the typology of events.

An example of a restructuring is the complete reorganisation of the production capacity of a large enterprise group, involving many enterprises and possibly, but not necessarily, entailing a change in the number of enterprises of the group. Restructuring may affect characteristics of the units that keep their identity; their principal economic activity and size class may change, for instance. The transfer of a part of the production capacity of an enterprise to another enterprise within the same enterprise group is another example of restructuring.

If one looks at the amount of literature on joint ventures, the demand for data is clear. However, it should be mentioned that some joint ventures involve the transfer of considerable parts of production capacity to the new enterprise, while others involve the transfer of financial capital or know-how. As to restructuring, this event is indispensable as a rest category of the typology of demographic events. Since the economic interests involved may be considerable, restructuring is relevant both from an information demand point of view and for statistical staff, although its heterogeneous nature and infrequent occurrence make it a difficult phenomenon to cover in statistics.



- *Change of group : the enterprise remains the same but changes from one enterprise group to another.*

In this case the same combination of production factors exists before and after the event. After the event it belongs to another enterprise group than before. Whether the group of origin continues to exist and whether the group of destination is new, are questions that are not reflected in the typology of demographic enterprise events.

The phenomenon of change of group has been prominent in the economic and financial press for many years. There is certainly a high demand for information on it.

### **POSSIBLE EXTENSIONS**

There are several possibilities for extension. The category of creation of a joint venture could be split into the creation of joint ventures that obtain their production capacity from their parent enterprises and other joint ventures. Within the category of restructuring one could distinguish the transfer of a part of the production capacity of an enterprise to another enterprise within the same enterprise group. Whether such subdivisions are desirable depends on the demand of information, the frequency of occurrence, availability of information sources and cost considerations.

As was mentioned above, demographic events may alter characteristics of units that keep their identity. In this respect size class, principal economic activity and turnover class are particularly important. Of course changes in these characteristics may also occur without any demographic event taking place, that is, the (non-demographic) event would involve only one enterprise which is continued. If the typology of demographic events were to be extended with categories of non-demographic events, such changes of characteristics would be very relevant to identify. Changes of controlling legal unit would also be relevant to add.

The demand for information about changes in size class and in principal economic activity is clear, both as such and in relation to other statistical information. Changes in turnover class are important, if only because SMEs are defined in terms of turnover class. Changes of characteristics are also very important for survey management because they may lead to changes in the population of units covered by a survey

and they may be used for stratification. Actually, the way to deal with these changes of characteristics in statistics is not altogether simple; the nature of the complications is indicated in the sections on the uses of business registers. As to changes of controlling legal unit, the demand mainly results from the correlation of the controlling legal unit with entrepreneurship. But there is also interest from the side of survey management, because they need to know how enterprises relate to the administrative situation.

### **13.3. REGISTER MOVEMENTS REFLECTING DEMOGRAPHIC EVENTS**

In the following the translation of the events of the typology into the world of business registers is discussed one by one, followed by some remarks on information sources and on the reconstruction of events on the basis of register information. At first it is assumed that all enterprises involved in an event are within the scope of the business register. At the end of this subsection the consequences of dropping this assumption are briefly discussed.

#### **TRANSLATION OF EVENTS INTO REGISTER MOVEMENTS**

- *Birth and death*

The representation of birth and death in business registers is straightforward: it amounts to creating a new identity number and deleting an existing one, respectively. But a problem exists concerning the determination of the date of birth or the "date of commencement of activities of the enterprise" (variable 3 (f) of BR regulation). Is the date of the first investments the date of birth? Or is it the date on which the first product is sold? Or delivered? Or when labour is employed regularly? These dates do not necessarily equal the date of registration of a possible corresponding administrative unit at the administrative source.

The convention of this manual is that in principle the date on which the first financial commitments for investments are made should be taken. This may seem somewhat early, since actual production will take place afterwards, but this allows for the statistical coverage of all important variables, such as investments, from the beginning. And the date is not too early since serious commitments have been made. However, it is admitted that from the point of view of cost-efficiency and response burden it may not always be desirable to actually collect the date of birth

from the enterprise; in that case the registration date at the administrative source has to be taken. And, of course, the way of measuring the date of birth depends on the quality requirements of the statistics involved.

- *Merger and take-over*

In case of a merger all identity numbers of the enterprises existing before the event are deleted and an identity number for the emerging enterprise is created. In case of a take-over, the enterprise which takes over the other enterprise(s) keeps its identity number, so no register creation takes place and only the identity numbers of the enterprises which are taken over are deleted in the register. The date from which the change is considered to take effect is the date on which the autonomy of decision-making, mentioned in the definition of the enterprise, is lost by the merging enterprises or the enterprise which is taken over.

- *Break-up and split-off*

Since break-up and split-off are the counterparts of merger and take-over, respectively, their registration in business registers is analogous to the registration of mergers and take-overs. In case of a break-up all identity numbers of the enterprises after the event are created and the identity number of the original enterprise is deleted. In case of a split-off, a new identity number is only given to the split-off enterprise(s).

- *Creation of a joint venture and restructuring*

The creation of a joint venture is registered by the creation of a new identity number for the joint venture; no other creations or deletions are carried through. The starting date of the joint venture is the date on which it assumes its role as an autonomous decision-making unit. Restructuring may entail any number of register creations and deletions bigger than zero.

- *Change of group*

The way a change of group is registered depends on the way the enterprise group itself is registered. If it is explicitly registered in the sense that it has its own record, the link between the enterprise and the enterprise group of origin is deleted and a link between the enterprise and the

enterprise group of destination is added. If the enterprise group is not registered explicitly but only by means of links between legal units (or links between enterprises), the change of group will automatically be recorded implicitly as well.

## **INFORMATION SOURCES**

In practice most events are detected after reception of signals from the administrative source(s) of the business register. These signals concern administrative changes and depending on the quality, meaning and relevance of the administrative information, action may have to be undertaken to update the business register. Sometimes extra information is not needed for updating the business register, but in some cases additional data collection is necessary. However, in all cases cost-efficiency has to be considered. As a consequence, the policy of register updating may differentiate between small, medium and large enterprises.

Although administrative sources differ widely from country to country, a few observations may be useful, particularly concerning the birth and death of enterprises. Administrative births and deaths do not necessarily result in births and deaths of enterprises and enterprises may be born and may die without a change in the legal unit(s) of the enterprises. Nevertheless, in most cases information about administrative births can be a good start for updating the business register in respect of register creations.

However, there is one complicating factor, the existence of dormant administrative units, particularly dormant legal units. The administrative birth of a dormant legal unit should not result in the register creation of a record for an enterprise. But if a dormant unit starts activities later, the business register may not detect this. This may lead to undercoverage of enterprise births. The same is true for active legal units that become dormant and later resume activities. The issue of reactivations is discussed in subsection 14.5.

The situation regarding the detection of enterprise deaths is more difficult than for births. The signals received from administrative registers concerning administrative deaths are in many countries an insufficient source for updating the business register in respect of enterprise death, because there may not exist any incentive for the unit to deregister at the administrative source after ceasing activities. This is a main cause of register overcoverage, which can be solved by survey feedback and relatively costly data collection for updating purposes. Combining information from several sources can improve the situation.

### RECONSTRUCTION OF DEMOGRAPHIC EVENTS FROM BUSINESS REGISTER INFORMATION

If one knows how demographic events can be represented by business registers in terms of creations and deletions, the question arises how data on demographic events can be derived from business registers. Let us consider which events can cause a register creation and which a register deletion. The cause of a register creation can be a birth, a merger, a break-up, a split-off, a joint venture or a restructuring. The cause of a deletion can be a death, a merger, a take-over, a break-up or a restructuring. Therefore, mere registration of creations and deletions would not allow the register to derive data on the different demographic events; more is needed.

To reconstruct a demographic event, one needs to know which enterprises were involved in the event. For birth and death this is no problem, but for the cases of concentration and deconcentration, for the creation of a joint venture and for restructuring it is necessary to register a link over time between the enterprises involved, that is, insofar as enterprises are not continued. For instance, in case of a merger the original enterprises have to be linked (e.g. by pointers on the records) to the emerging enterprise and in case of a take-over the enterprise which is taken over has to be linked to the overtaking enterprise. If such time-links are recorded, all events can be reconstructed.

The foregoing implies that the business register is a historic register, that is, keeps track of the deleted enterprises. In fact, in a historic register no actual deletions are carried through. Rather, "deleted" records are kept and marked as historic. Unfortunately, there are two circumstances that complicate matters. The first is that a business register may have to correct past errors. This leads to "false" creations and deletions and substantially complicates the consistent use of business registers for statistical purposes. The

sections on uses of business registers will deal with this subject.

The second complication is caused by the fact that business registers may have some limitations in scope. For instance, according to the regulation on business registers, the registration of NACE Rev.1 sections A, B and L and group 70.2 of section K are not obligatory. Then what has to be done, for example, in case of a merger of an agricultural enterprise (outside the scope) with an enterprise in food processing (inside the scope)? For a start, it may be noted that the event itself is not affected: the event takes place independent from its possible registration in the business register. Further, the NACE Rev.1 code of the enterprise that emerges from the merger is relevant. If that enterprise is coded outside the scope of the business register, the effect on the register is the deletion of an enterprise in food processing. Since no link with the (historic) agricultural enterprise can be maintained, the only solution is to record the cause of the deletion of the enterprise from the register. If the emerging enterprise is classified into food processing, there will be a register deletion and a creation of an enterprise record. For correct interpretation their cause has to be registered all the same. This can be generalised for all changes involving enterprises outside the scope of the business register: the causes of register changes ideally have to be recorded if limitations in the register scope play a role. Again, some of the statistical consequences will be mentioned in the sections on the uses of business registers.

### 13.4. SUMMARY

The table below contains the main demographic events for which there is demand, the number of enterprises involved in the events and their consequences for business registers in terms of number of register creations and deletions.

Event	Real, observable world		Business register	
	Number of enterprises before the event	Number of enterprises after the event	Number of creations	Number of deletions
Birth	-	1	1	-
Death	1	-	-	1
Merger	$\geq 2$	1	1	$\geq 2$
Take-over	$\geq 2$	1	-	n-1
Break-up	1	$\geq 2$	$\geq 2$	1
Split-off	1	$\geq 2$	n-1	-
Creation of a joint venture	$\geq 2$	n+1	1	-
Restructuring	$\geq 2$	$\geq 2$	$\geq 0$	$\geq 0$
Change of group	1	1	-	-

note:  $n \geq 2$

### 13.5. RELATION TO THE BR REGULATION

*The rules given in this section about the creation and deletion of identity numbers in business registers, particularly how they relate to real world events, are considered an interpretation of the regulation on business registers, because they pertain to a characteristic of the regulation. The same goes for the*

*date of commencement of activities of the enterprise. The use of the typology of demographic events itself goes beyond the scope of the regulation on business registers. The same goes for the recommendations to record time-links between enterprises before and after events and to register the cause of register creations and deletions whether or not they are affected by limitations in the scope of the business register.*

## SECTION 14

### CONTINUITY RULES FOR THE ENTERPRISE

#### 14.1. INTRODUCTION

This section describes the continuity rules for the enterprise, that is, the conditions for keeping or changing an enterprise identity number in the business register. For instance, if the controlling legal unit of enterprise changes, should the identity number of the enterprise also change, that is, should the record of the enterprise be deleted and another one created in the business register? If so, this implies that this is interpreted as a death of an enterprise in the real, observable world, followed by the birth of another one, assuming no other enterprises are involved. If not, what are the necessary conditions for register deletion and creation?

The question of continuity does not only play a role in situations where only one enterprise is involved. In case of concentration, the distinction between merger and take-over depends on whether the unit after the event is considered the same as one of the enterprises before. Likewise, the distinction between break-up and split-off also depends on the question of continuity. For these cases the continuity rules must be chosen in such a way that consistency is maintained. In case of concentration of two enterprises, for example, the continuity rules must not lead to the conclusion that the enterprise after the event has the identity of each of the two enterprises before the event.

The question of continuity can be discussed in theory and practice. In theory, the continuity rules would be derived from the definition of the enterprise and its statistical uses. In practice, the continuity rules depend on considerations of cost-efficiency, notably availability of information, costs of additional information collection for the statistical institute and response burden effects. Theoretical considerations are given in subsection 14.2 and practical considerations in subsection 14.3.

The consistency issue is discussed in subsection 14.4. A particular problem of continuity in register practice is how to deal with reactivations of enterprises; this is treated in subsection 14.5.

When reading this section, it should be kept in mind that where the deletion of an enterprise record is mentioned, it is recommended that the business register keeps track of the deletions; by marking "deleted" records as historic, the business register greatly enhances its possible uses.

#### 14.2. CONTINUITY IN RELATION TO THE DEFINITION AND USE OF THE ENTERPRISE

That the use of the enterprise is relevant to the question of continuity can best be explained by an example. If the enterprise were used exclusively for employment statistics, continuity is bound to depend to a large extent on the continuity of employment. If it were used exclusively for financial statistics such as balance sheet items, the continuity of the assets would probably play an important role. In addition the definition of the enterprise is relevant, not only because of the fact that the use of the enterprise is related to its definition, but also because it gives an indication of the elements in which continuity can be expressed. Let us start with the definition and then look at the uses.

The regulation on statistical units defines the enterprise as follows: *"The enterprise is the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit."*

This definition is followed by an explanatory note, which explains why the enterprise does not always correspond to a single legal unit but sometimes to more than one.

As to the uses, in the system of European statistics the enterprise mainly serves statistics that relate to the production of goods and services. In addition, it plays a role in the financial accounts of ESA. The definition is in any case in line with its main use, in that the core of the definition states that it is an organisational unit producing goods and services.

Given the definition and uses, it is logical to define continuity of the enterprise in terms of continuity of its production factors. The production factors include management, so that the element of "a certain degree of autonomy in decision-making, especially for the allocation of its current resources" is covered. The definition would also allow for the legal units to be an element to consider, but the legal units are building blocks for the enterprise and belong to the administrative world; they do not, as such, bear on the use of the enterprise. Continuity of the legal units would be an element for the operational definition of continuity rather than the theoretical definition. In view of the fact that the controlling legal unit might be considered an approximation of entrepreneurship, special attention has to be paid to this unit.

The conclusion is that, in theory, an enterprise is considered to be continued if its production factors are continued. It is discontinued if its production factors are discontinued. Apparently the production factors have to be listed and weighted. The main production factors to look at, in view of their continuity, are employment, machines and equipment, land, buildings, management and immaterial assets such as goodwill. It is clear that measuring the continuity of all these factors and weighting them can be quite difficult and costly. This might be feasible for large units, but for the large number of small units there is a clear need for more practical criteria.

### 14.3. CONTINUITY IN PRACTICE

#### THREE PRACTICAL CRITERIA

What could be operational criteria that are easily applicable and approximate the production factors mentioned in the previous subsection? Considering what is available in business registers and can be updated to a large extent by using administrative sources, the following three criteria are very practical:

- *The controlling legal unit of the enterprise*

The controlling legal unit controls the production factors of the enterprise. The continuity of the management of the enterprise may be assumed to be positively correlated with the continuity of the controlling legal unit. The same may be assumed for some immaterial assets.

- *The economic activities carried out*

The economic activities are recorded in terms of NACE Rev.1 at the class level. Continuity of the four-digit NACE Rev.1 code of the principal activity may be assumed to be positively correlated with the continuity of the production factors, especially employment, machines and equipment, land and buildings. However, this criterion has to be used with care, especially for large enterprises, because a gradual shift in activities may occur that at a certain moment results in a reclassification of the enterprise. In such cases there is continuity of production factors and the change of activity has to be ignored when considering the question of continuity of the enterprise.

- *The locations where the activities are carried out*

The continuity of the locations where the activities are carried out is of course closely linked to the continuity of the land and buildings used by the enterprise. Since the clientele of an enterprise may very well depend on its locations, a positive correlation with the immaterial asset "goodwill" may be assumed. The criterion is very practical if there is only one location. In the case of a multi-location enterprise, it would be practical to look at the main location, that is, at the location of the local unit with the largest number of persons actually employed. In that case, however, the criterion has to be used with care. If a change of main location is the result of a small increase in size of the second largest location, there is continuity of production factors and the change of main location has to be ignored when considering the question of continuity of the enterprise.

#### APPLICATION OF THE CRITERIA

Since the three criteria cover all production factors, the question of continuity arises only if one or more of these factors change. It is clear that if all three factors change, discontinuity may be assumed. In other cases

the factors would have to be weighted in theory, but in practice one could formulate rules for each of the following six possible situations.

- *Change of controlling legal unit; (no other changes)*

This administrative change is for example very common for one-person enterprises, which have a natural person as their legal basis. That person may decide to set up a company, that is, a new legal person, to accompany the growth of the enterprise and protect his or her private assets. After retirement, the enterprise may be sold to another natural or legal person or be given to the heirs. More in general, a change of controlling legal unit may result from a decision by the legal person(s) operating an enterprise to pass or sell their enterprise to another existing or new legal unit. It depends on the rules of the administrative register concerned whether the legal unit gets a new administrative identity number.

The changes described may very well take place without other immediate changes; all the local units where the enterprise carried out its activity may be passed on and the same activities may be carried out.

The convention for the case described is that there is deemed to be continuity of the enterprise. Change of controlling legal units is in itself not enough to delete an existing enterprise record and create a new one in the business register.

It should be noted that in the case described the administrative address of the enterprise may change, since this variable is more closely connected with the controlling legal unit than with the enterprise itself. If the location where the persons employed actually work does not change, the change of administrative address does not have any consequence for the continuity of the enterprise.

- *Change of principal activity; (no other changes)*

Although a change of principal activity is reflected in the business register by the change of the NACE Rev.1 code at a certain date, in reality the change often takes place gradually, as mentioned above. In that case the production factors of the enterprise do not change abruptly, at least not all of them together, in particular not employment; if they do, this will often be accompanied by changes in the location(s) where the activities are

carried out and is frequently initiated by a change of controlling legal unit.

The convention for the case of an abrupt change of principal activity resulting in a change of the four-digit NACE Rev.1 code is that there is deemed to be continuity of the enterprise if the controlling legal unit and the main location remain the same. Change of principal activity of the enterprise is in itself not enough to delete an existing enterprise record and create a new one in the business register.

- *Change of main location; (no other changes)*

In the case of an enterprise ceasing its activities at its main location and resuming its activities at another location within the national territory, the answer to the continuity question is not obvious. If the activities do not move far, the probability that the production factors other than land and buildings are largely continued is high. However, if the move is over a long distance, the enterprise may lose its clientele and have to start again from scratch (loss of goodwill); it would probably also experience a change in employment. It may be noted that most moves are over short distances.

The convention for the change of main location is that there is deemed to be continuity of the enterprise. Change of main location is in itself not enough to delete an existing enterprise record and create a new one in the business register.

- *Change of controlling legal unit and principal activity; same main location*

If the principal activity changes, that is, the NACE Rev.1 code at the four-digit level changes and the controlling legal unit changes as well, the activity change may be interpreted as being caused by the new controlling legal unit rather than by a gradual shift in production factors.

The convention is that the combination of a change of controlling legal unit and a change of the principal activity entails discontinuity of the enterprise. There will be a deletion of an existing enterprise record and a creation of a new one.

- *Change of controlling legal unit and main location; same principal activity*

In general the combined change of the controlling legal unit and the main location of the enterprise can be interpreted as indicating a major

discontinuity of the production factors of the enterprise. Therefore, the convention is that in such cases there is deemed to be discontinuity, that is, there will be a deletion of an existing enterprise record and a creation of a new one.

However, there is one important exception. If a one-person enterprise expands and moves to new premises, it may very well decide to change its legal form, that is, set up a company, at the same time. In this case the convention is to consider the enterprise to be continued.

- *Change of principal activity and main location; same controlling legal unit*

A change of principal activity and main location rarely takes place without a change of the controlling legal unit. If it does, the convention is to consider the enterprise to be discontinued, that is, there will be a deletion of an existing enterprise record and a creation of a new one.

#### 14.4. AVOIDING CONFLICTING RULES

It is conceivable that the continuity rules of previous subsection lead to contradictions if they are applied in case of take-over and split-off. These are the events involving more than one enterprise, where according to the definition of the event one enterprise is continued. That is, one of the identity numbers is continued in the business register. In the case of a take-over, a contradiction emerges if the application of the continuity rules to each of the two enterprises that exist before the take-over lead in both cases to the conclusion that the identity number has to be maintained. How precisely may this happen?

Suppose one enterprise, E1, takes over another enterprise, E2. In addition, suppose that E1 keeps the same controlling legal unit and continues its principal activity, but moves to another main location, the main location of E2. Then, according to previous subsection, enterprise E1 is deemed to be continued. If E2 already had the same principal activity as E1, its principal activity and location will not change, and it is also deemed to be continued. Such a contradiction may also arise if it is E2 that keeps the same controlling legal unit and the main location of E1 is also the main location after the event.

The case of a split-off, the mirror-case of the take-over in respect of time, may result in analogous contradictions. Then the case consists of an enterprise splitting

into two enterprises, of which one keeps the controlling legal unit and the other the main location, whereas both have the same principal activity.

The cause of the contradictions is that the principal activity code remains the same for the enterprises involved in the event. However, the criterion of continuation of the principal activity code was chosen as an approximation of continuation of (part of) the production factors. In the cases of contradiction the principal activity code is apparently not a good approximation of the production factors, at least for one of the enterprises involved.

Therefore, in theory the solution of the contradictions is simple. In case of a take-over the enterprise which exists after the event can be considered to be the continuation of the enterprise which existed before the event and whose production factors constitute the larger part of the production factors of the enterprise after the event. In case of a split-off the enterprise which exists after the event and which keeps the larger part of the production factors of the enterprise which existed before the event can be considered to be its continuation.

In practice in most situations it is clear what is "the larger part", but where this is not the case, the enterprise which has the highest continuity of employment will by convention be deemed to be continued.

#### 14.5. REACTIVATIONS

One of the most difficult problems in the maintenance of business registers is that of temporary cessations of enterprises. If a business register receives information on the cessation of an enterprise and at some later date it receives information of the resumption of activity, should the enterprise after resumption be considered the continuation of the old enterprise? The problem is all the more awkward in that the information received often does not specify that the cessation is temporary; and on resumption it does not specify that the activities are being resumed rather than started for the first time.

Three situations need to be distinguished.

- *Enterprises carrying out seasonal activities*

An enterprise has seasonal activities if it produces for only part of the year, in the same period of each year. This is very common, for instance in tourist areas. In order to avoid paying



taxes, social security contributions and the like, the enterprise may declare a cessation of activities and a resumption of activities at the administrative register(s) each year. Such cases may represent an important part of the administrative births and deaths of a country.

For enterprises, which carry out seasonal activities the convention is that such enterprises retain their old identity after resumption of activities. Since possible seasonal activities can be readily identified in terms NACE Rev.1, business registers have to take special care as to whether administrative births with these activities correspond to real births or to resumption of activities.

- *Temporary suspension of activity*

An entrepreneur may suspend the activity of an enterprise because of sickness, an accident, military service, etc. Depending on the tax and social security laws, the entrepreneur may declare a suspension of activities at the administrative register(s) and make a new declaration after resumption.

The convention in these cases is that the enterprise is deemed to retain its old identity number after resumption of its activities, unless the resumption takes place after 18 months. In that case the original enterprise is considered to have died and a new one is born.

- *Paralysis of production for external reasons*

Paralysis of production may occur because of, for instance, the destruction of a production plant following an accident such as fire. Production is ceased and in most cases resumed after some time, but the suspension of activities may take a long time. During the period of suspension of activities the enterprise will retain some of the staff. These cases are rare.

The convention in suchlike cases is that the enterprise is deemed to retain its old identity number after resumption of its activities, unless the resumption takes place after 18 months. In that case the original enterprise is considered to have died and a new one is born.

If it is known in advance that one of the three situations applies, the enterprise record will of course not be deleted. In such cases a variable could be recorded indicating the nature of the suspension of activities.

Except for a suspension of activities which lasts longer than 18 months, in none of the cases a birth and a death occur. However, because of the difficulty to obtain accurate information and the fact that it would not be acceptable to wait 18 months to see whether a unit is reactivated, many false births and deaths may be recorded. The way to correct these errors in business registers and the consequences will be dealt with in section 18 on the treatment of errors.

## 14.6. SUMMARY

In theory the continuity of an enterprise depends on the continuity of its production factors: employment, machines and equipment, land, buildings, management and immaterial assets. The continuity of these factors has to be measured and weighted to decide upon the continuity of the enterprise.

In practice an enterprise may be deemed not to be continued if two or all of the following three factors change: the controlling legal unit, the principal activity carried out in terms of NACE Rev.1, four-digit level and the main location of the enterprise. There is one exception to this rule. If a one-person enterprise expands and moves to new premises and changes its legal form, the enterprise is considered to retain its identity.

In case the continuity rules result in an inconsistency, continuation of employment determines which enterprise keeps its identity.

An enterprise is deemed to be continued with its old identity number in case it carries out seasonal activities or resumes its activities within 18 months after temporary suspension of activities because of paralysis of production for external reasons or sickness, accident, military service of the entrepreneur, etc.

## 14.7. RELATION TO THE BR REGULATION

*This section concerns the interpretation of a characteristic (the identity number of the enterprise) which has to be recorded according to the regulation on business registers. Therefore this section is considered an interpretation of that regulation.*

## SECTION 15

### DEMOGRAPHIC CHANGES CONCERNING THE LOCAL UNIT

#### 15.1. INTRODUCTION

This section describes the demographic events involving local units and the movements in business registers they entail. Where appropriate, changes of characteristics are taken into account as well. The demographic events described are those which are considered relevant to users of statistics which make use of business registers. These statistics comprise most economic statistics, notably business-demographic statistics themselves.

As to the relationship with other statistical units, changes in the links between local units and enterprises are also covered in this section. In addition, the relationship between the demographic events at the level of the local unit and those at the enterprise level is discussed as well.

As was the case for enterprises, business registers represent the existence of a local unit by the attachment of a unique identity number to a record for the local unit. The creation and deletion of records are logically linked to the creation and deletion of identity numbers and are meant to correspond to changes in the existence of local units. And the other way round, if there is no discontinuation of the local unit, its identity number should not change. The specific continuity rules, which describe under what conditions to delete and create identity numbers are given in section 16. (Again, this is done for reasons of transparency; the rules will be better understood after the explanation of their purpose and application in the present section.)

This section is structured as follows. The possible demographic events in which the local unit is involved are described in subsection 15.2. In subsection 15.3 these events are related to the typology of enterprise

events given in section 13. Subsection 15.4 translates the events involving local units into register movements, under the assumption that the continuity rules are available.

#### 15.2. POSSIBLE DEMOGRAPHIC EVENTS CONCERNING THE LOCAL UNIT

##### CONSIDERATIONS

In the general typology of demographic events, the relevant classes were defined in terms of changes of specific statistical units. This section will concentrate on the effects of the events listed in the general typology on the local unit.

The main distinction of the general typology of demographic events of section 12 was one between changes in existence and changes in the distribution of (combinations of) production factors. Clearly changes in existence can be applied directly at the level of the local unit, but changes in distribution are another matter.

In theory concentration can occur to adjacent local units if they belong to different enterprises which merge (or if one enterprise takes over the other). In principle, deconcentration can happen to a local unit if the enterprise to which it belongs experiences a deconcentration. But these cases are rare, there may not be enough demand to justify the distinction of the corresponding categories of local unit events. If these rare cases are not distinguished, cases of concentration and deconcentration of adjacent local units are treated by counting a local unit death if the number of local units decreases and counting a local unit birth if the number of local units increases. The statistical effect of this may be considered acceptable.

## DEMOGRAPHIC EVENTS

The above mentioned considerations lead to the following very short list of demographic events involving the local unit.

- *Existential changes*
  - Birth;
  - Death.

The birth of a local unit is the emergence of a local unit, which did not exist before, and the death is the opposite of the birth. Since the local unit is a part of an enterprise, situated in a geographically identified place and the enterprise is a combination of production factors, the birth of a local unit amounts to the creation of a (partial) combination of production factors at a geographically identified place. A death is their dissolution.

As is the case with the birth and death of enterprises, a problem associated with birth and death of local units is the date of occurrence of these events. From what moment on is a local unit considered to be born? In principle this question can be answered by referring to the definition of the local unit: the birth takes place at the (first) moment the conditions of the definition are met, so the moment there are production factors belonging to an enterprise in a geographically identified place. Subsection 15.4 gives a more practical answer to the question of the date of occurrence of birth and death.

- *Local unit transfer*

Every local unit is linked to one and only one enterprise. Therefore, if a link ceases to exist and the local unit is continued, that is, does not lose its identity, a new link with another enterprise will come into being. And the other way round: if a link from an existing local unit to an enterprise comes into being, the link it had with the enterprise of which it was part ceases to exist. Clearly changes of links amount to transfers of local units between enterprises.

## POSSIBLE EXTENSIONS

Several extensions of the typology of demographic events are possible. First of all, it is possible to distinguish categories of concentration (merger, take-over) and deconcentration (break-up, split-off) and in principle also restructuring. Or, if these events are administered as births and deaths, the categories of birth and

death may themselves be subdivided to reflect whether they are the consequence of concentration, deconcentration or none of these.

Furthermore, the demographic events of the general typology of section 12 may alter characteristics of local units, which keep their identity. In this respect size class and principal economic activity are particularly important. Of course changes in these characteristics may also occur without any demographic event taking place. If the short list of demographic events at the level of the local unit were to be extended with categories of non-demographic events, such changes of characteristics would be very relevant to identify. It would also be relevant to add changes in ancillary status of the local unit.

For the categories of change of size class and change of principal economic activity there is demand, not the least from the side of statistical staff for reasons of survey management. Apart from their link to changes in market orientation of the local unit, changes of ancillary status are important because they imply changes in the links between data related to the enterprise and local unit data.

One other change of characteristic may seem natural to add, namely change of region. However, since a change of region implies discontinuity of the local unit (see section 16), this category of event can be dropped.

## 15.3. LOCAL UNIT EVENTS IN RELATION TO ENTERPRISE EVENTS

Analysing the links between the demographic events identified at the level of the local unit and those of the typology at the enterprise level can be done from either side. This subsection discusses first, what local unit events may occur if the enterprise does not experience any event and what local unit events may occur if it does. Then the other side is discussed: the implications for the enterprise level of what happens at the local unit level. Changes of characteristics and other possible extensions of the typology of demographic events will not be taken into account in the following analysis.

### FROM THE ENTERPRISE LEVEL TO THE LOCAL UNIT LEVEL

- *No event at the enterprise level*

If no event happens at the enterprise level it is possible that the number of local units of the

enterprise increases by birth of a local unit. If the enterprise consists of more than one local unit, one of the local units may die. If the enterprise has only one local unit, it is possible that the local unit dies, followed by the birth of another local unit, whereas the enterprise remains the same. (This follows from the continuity rules for the enterprise and the local unit; their relationship is discussed in subsection 16.4.) A transfer of a local unit from one enterprise to another may also occur, provided that this local unit is relatively unimportant to both enterprises concerned, so that their identity is not affected.

- *Birth of an enterprise*

If the new enterprise has only one local unit, which is usually the case, the birth of the enterprise entails the birth of a local unit; it is not possible that the local unit of the enterprise is transferred from another enterprise (see subsection 16.4). In case the new enterprise has more than one local unit, the situation can be more complex. Then, apart from the birth of one or more local units, local unit transfers are possible, in principle.

- *Death of an enterprise*

If the enterprise has only one local unit, the death of the enterprise entails the death of at least one local unit (again, see subsection 16.4). In case it has more than one local unit, additional local unit transfers are possible, in principle.

- *Merger*

After the merger none of the local units existing before the merger are linked to the same enterprise as before, since the merging enterprises lose their identity. In a typical case of merger, all local units are transferred to the emerging enterprise. However, a merger may be accompanied by some changes in the production capacity, so it does happen occasionally that one or more local units die or some are born in the event.

- *Take-over*

Typically, the local units belonging to the enterprise which is taken over are transferred to the other enterprise. However, if the take-over is accompanied by some changes in the production capacity, additional births and deaths of local units are possible in principle.

- *Break-up*

After the break-up none of the local units existing after the break-up are linked to the same enterprise as before, since the original enterprise loses its identity. In a typical case of break-up, all local units are transferred to the emerging enterprises. But again, if changes are carried through in the overall production capacity, birth and death of local units may also happen.

- *Split-off*

Typically, the local units, which belonged to the enterprise which was split off, are after the event transferred to the emerging enterprises. Again, if changes are carried through in the overall production capacity, births and deaths of local units may also happen.

- *Creation of a joint venture*

If the joint venture embodies new production capacity, it will be accompanied by the birth of one or more local units. If it comprises production capacity of (one of) the original enterprises, the local unit(s) of the joint venture may be transferred from them.

- *Restructuring*

In the heterogeneous case of restructuring, all local unit events are possible. It is not possible that no event takes place at the local unit level, since at the enterprise level there is at least one change involving the identity of an enterprise.

#### **FROM THE LOCAL UNIT LEVEL TO THE ENTERPRISE LEVEL**

What is the connection between demographic events at the enterprise and the local unit level, viewed from the side of the local unit? The following possibilities exist.

- *No event occurring to the local unit*

At the enterprise level no event occurs.

- *Birth of a local unit*

This event may occur without any change at the enterprise level or together with any other

enterprise event except enterprise death. If the enterprise of the new local unit consists of this local unit only, the enterprise itself has not necessarily been born as well (see subsection 16.4).

- *Death of a local unit*

This event may occur without any change at the enterprise level or together with any other enterprise event except enterprise birth. If the local unit equals an enterprise, the enterprise does not necessarily die. If that is the case, another local unit must be born at the same moment (again, see subsection 16.4).

- *Local unit transfer*

This event may occur without any change at the enterprise level or together with any other enterprise event.

## CONCLUSION

In short, the connection between enterprise events and local unit events is far from straightforward. All local unit events are possible even without any enterprise event.

The most specific observation is that some enterprise events (birth, concentration without change in overall production capacity) imply at least the birth or transfer of local units and some (death, deconcentration without change in overall production capacity) imply at least the death or transfer of local units. And if the enterprise comprises only one local unit, things get somewhat simpler.

An extension of the typology of local unit events by adding the variations possible at the enterprise level could be considered. And similarly, an extension of the typology of enterprise events by adding the variations possible at the local unit level is conceivable.

For instance, the category of local unit birth could be extended by dividing it into the subcategories "birth without enterprise change", "birth caused by enterprise birth", etc. However, this is not proposed here.

If the typologies of enterprise events and local unit events are applied both and a business register is capable of reconstructing those events, then it is also possible to provide the link between them.

## 15.4. REGISTER MOVEMENTS REFLECTING LOCAL UNIT DEMOGRAPHIC EVENTS

### TRANSLATION OF DEMOGRAPHIC EVENTS INTO REGISTER MOVEMENTS

In the following the demographic events that can occur to local units in the real, observable world are translated into movements in the statistical business register.

- *Birth and death of local units*

The representation of birth and death in business registers is straightforward: by creating a new record for the local unit and deleting an existing one, respectively. But a problem exists concerning the determination of the date of birth or the "date of commencement of the activities" of the local unit (variable 2 (f) of BR regulation). If the new local unit equals a new enterprise, the solution for the enterprise is adopted, that is, the date of birth of the local unit is the date of birth of the enterprise. If not, in view of the fact that by definition every local unit has one or more persons employed (even if only part-time), the convention of this manual is to take the first date on which persons are employed on the site.

- *Local unit transfer*

The transfer of a local unit is registered by the deletion of the link between the local unit and the enterprise to which it belonged before the event, and the creation of a link between the local unit and the enterprise to which it belongs after the event.

### RECONSTRUCTION OF DEMOGRAPHIC EVENTS FROM BUSINESS REGISTER INFORMATION

Compared to the enterprise, it is easy to reconstruct events at the level of the local unit from information on register creations and deletions of local units and links with the records of their enterprises, since in the case of local units no time-links are required for that.

But it is necessary to keep historic information, including historic links between local units and enterprises, if the register is required to provide information on all past events.

Unfortunately, as was the case for the registration of enterprise events, there are two circumstances that

complicate matters. The first is that a business register may have to correct past errors. This leads (when on technical grounds it may be impossible to distinguish between changes and corrections) to "false" creations and deletions and substantially complicates the consistent use of business registers for statistical purposes.

The second complication is caused by the fact that business registers may have some limitations in scope. For instance, according to the regulation on business registers, the registration of NACE Rev.1 sections A, B and L and group 70.2 of section K are not obligatory.

Then what has to be done, for instance, in case of a transfer of a local unit from an enterprise outside the scope of the business register to one within the scope or the other way round? Or in case the local unit's principal activity changes from outside to within the scope? In such cases it is important to note that the event itself is not affected: the event takes place independent from its possible registration in the business register. But its registration in the business register is necessarily incomplete. In general the solution is to record the cause of the register movement.

For instance, if the creation of a local unit is due to a change of principal activity from outside to within the register scope, it is recommended to register that the cause of the change is not the birth of a local unit but a change of activity. Some of the statistical

consequences of limitations in register scope are mentioned in the sections on the uses of business registers.

### 15.5. SUMMARY

Three demographic events at the level of the local unit are distinguished: birth, death and local unit transfer. Extensions of this typology, for instance with categories of concentration and deconcentration, are possible. The link between enterprise events and local unit events is complex, although it is more transparent in case an enterprise consists of only one local unit.

### 15.6. RELATION TO THE BR REGULATION

*The rules given in this section about the creation and deletion of identity numbers in business registers, particularly how they relate to real world events, are considered an interpretation of the regulation on business registers, because they pertain to a characteristic of the regulation. The same goes for the date of commencement of activities of the local unit. The use of the local unit events that are distinguished goes beyond the scope of the regulation on business registers. The same goes for the recommendations to record the cause of register creations and deletions whether or not they are affected by limitations in the scope of the business register.*

## SECTION 16

### CONTINUITY RULES FOR THE LOCAL UNIT

#### 16.1. INTRODUCTION

This section describes the continuity rules for the local unit, that is, the conditions for keeping or changing the identity number of a local unit. For instance, if the enterprise to which a local unit belongs loses its identity, should the identity number of the local unit also change, that is, should the record of the local unit be deleted and another one created in the business register? If so, this implies that this is interpreted as a death of a local unit in the real, observable world, followed by the birth of another. If not, what are the necessary conditions for register deletion and creation?

The question of continuity can be discussed in theory and practice. In theory, the continuity rules would be derived from the definition of the local unit and its statistical uses. In practice, the continuity rules depend on considerations of cost-efficiency, notably availability of information, costs of additional information collection for the statistical institute and response burden effects. Contrary to the rules of enterprise continuity, there is no problem of internal consistency of the continuity rules for the local unit, because events of concentration and deconcentration are not distinguished at the level of the local unit. However, the continuity rules for the local unit have to be in line with the continuity rules of the enterprise.

The structure of this section is as follows. Theoretical considerations are given in subsection 16.2, in particular regarding the importance of continuity of the location of the local unit. (The term "location" is used here in the sense of "geographically identified place" as mentioned in the definition of the local unit in the regulation on statistical units.) Practical considerations are discussed in subsection 16.3, which also briefly discusses the problem of how to deal with reactivations

of local units. Subsection 16.4 describes how enterprise continuity is linked to local unit continuity.

When reading this section, it should be kept in mind that where the deletion of a local unit record is mentioned, it is recommended that the business register keeps track of the deletions; by marking "deleted" records as historic, the business register greatly enhances its possible uses.

#### 16.2. CONTINUITY IN RELATION TO THE DEFINITION AND USE OF THE LOCAL UNIT

The definition and use of a statistical unit are relevant to the question of continuity. The regulation on statistical units defines the local unit as follows: *"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"*.

This definition is followed by explanatory notes, which explain, among others, how to deal with persons working at more than one place and how the unit is delineated. For example, if a public highway runs through a site, the site is considered one local unit; and a single local unit may be spread over several adjacent administrative areas. The regulation on business registers supplements the definition by stating that "the local unit is dependent on an enterprise". And as was explained in section 8, which describes operational rules for the local unit, under certain conditions the activities of a local unit are not strictly limited to those carried out at the location of the local unit.

The local unit is not a simple relationship between the entities "enterprise" and "geographical place" or "location"; it corresponds to a tangible part of the enterprise. The local unit consists of production factors combined to produce goods or services, as is the case for the enterprise, but it is not necessarily an organisational unit and its clientele may be another part of the same enterprise. The production factors include employment, with a minimum of one person part-time. The local unit need not benefit "from a certain degree of autonomy", as the enterprise does. As a consequence the data which can be collected for the local unit may be more limited.

As to the uses, in the system of European statistics the local unit mainly serves regional statistics that relate to the production of goods and services. The unit is primarily used in respect of variables that can be linked with geographically identified places. The main variables relate to employment.

Given the definition and uses, it is logical to define continuity of the local unit in terms of continuity of location and production factors, with emphasis on production factors that can be readily identified at the level of the local unit, that is, land, buildings and in particular employment. The continuity of the enterprise is also relevant to the continuity of the local unit since the local unit is dependent on the enterprise. This dependence is important because the local unit itself is not, like the enterprise, an organisational unit with a certain degree of autonomy. And a further requirement is that if the local unit and the enterprise happen to be the same, their continuity rules should lead to compatible results.

As was the case for the enterprise, the importance of the different continuity criteria has to be determined. It stands to reason to put much weight on the criterion of continuity of location, but this can not be an absolute condition, because a move over a short distance of a local unit should be possible without loss of identity. If the same activity is continued with the same employment at a short distance from the old location, the move generally does not interrupt the local or regional function of the local unit.

On the other hand, a move over a long distance would entail identity loss. In any case, when considering the criterion of continuity of location, it should be kept in mind that the location is not an administrative address, but the actual place of the factory, warehouse, office, depot, etc. If the premises remain the same, the location is considered to remain the same, even if the administrative address changes.

### 16.3. CONTINUITY IN PRACTICE

In view of the weight of the criterion of continuity of location and the relevance of the distinction between short and long distance moves, this subsection is structured accordingly: first local unit continuity is discussed if the location does not change and then if the location changes over a short distance. (If the location changes over a long distance, continuity will be lost.) The subsection ends with a short discussion of the special case of reactivations.

#### THE LOCATION DOES NOT CHANGE

If the location is the same, operational rules are needed for the continuity of production factors; operational rules for the continuity of the enterprise on which the local unit depends are given in section 14.

As was the case for the enterprise, the criterion of the economic activities carried out could very well be applied. It may be assumed to be positively correlated with the continuity of the production factors. In practice the criterion of continuity of economic activities carried out can be applied by considering the principal activity in terms of NACE Rev.1 at the four-digit level.

Although economic activity to a certain extent reflects all production factors including employment, the criterion of continuity of employment can be applied in addition, to give it a higher weight. A practical convention would be that employment is deemed to be continued if 50 percent or more of the persons employed by the local unit continues to work at or from the same location and deemed to be discontinued if the percentage is below 50.

If all relevant factors (i.e., enterprise continuity, principal economic activity and employment) change, then the local unit is considered to lose its identity. If none of these change, the local unit is deemed to be continued (provided the location is the same). If one or two factors change, the factors would have to be weighted, but in practice one can formulate rules for each of the following six possible situations.

- *Change of enterprise; (no other changes)*

The convention for this case is that there is deemed to be continuity of the local unit. As a consequence, the local unit is considered to be transferred from one enterprise to another. The situations in which this can occur are described in section 15.



- *Change of principal activity; (no other changes)*

In this case employment is mainly (at least for 50 percent) the same; then it is improbable that the change of principal activity takes place abruptly, although the principal activity code changes at a particular moment. The convention for this case is that there is deemed to be continuity of the local unit.

- *Change of employment; (no other changes)*

Since the location is the same and the principal economic activity as well, employment is presumably the only production factor to change. Considering the fact that the enterprise is continued, it is reasonable to adopt the convention that in this case the local unit is deemed to be continued.

- *Change of enterprise and principal activity; same employment*

If both the enterprise and the principal activity change, the local unit would not merely be transferred to another enterprise, but it is also, at least, reorganised. Even though the larger part of employment is still the same, the local unit is deemed to lose its identity.

- *Change of enterprise and employment; same principal activity*

If both the enterprise and employment change, the local unit is, again, not just transferred, but also, at least, reorganised. In this case the local unit is deemed to lose its identity.

- *Change of principal activity and employment; same enterprise*

The fact that the enterprise is the same is not enough to consider the local unit the same if the main production factors, notably employment, have changed. The local unit is deemed to lose its identity in this case.

The conclusion is that at least two of the three factors have to change for the local unit to lose its identity. If only one factor changes, it retains its identity, provided the location remains the same.

### **MOVE OVER A SHORT DISTANCE**

If a local unit moves over a short distance, some important production factors (land, buildings) have

changed. If any of the three factors mentioned above (enterprise, principal economic activity and employment) changes as well, the local unit is deemed to lose its identity. If none of the three factors change, it is deemed to retain its identity.

This is clear enough, but what is a short distance? Rather than defining a distance, it would be very practical to apply a regional classification: a move outside the region of the local unit would imply loss of identity, a move inside not. That is, if the new location is within the same region as the old one, the local unit retains its identity if the enterprise, the principal economic activity and employment remain the same; otherwise identity is lost. In that case the regions should be defined as the smallest administrative areas as mentioned in the Annex, section II B 2, of the regulation on statistical units. Another possibility is to apply so-called travel-to-work areas.

### **REACTIVATIONS**

As was the case with the enterprise, a practical problem may exist in respect of reactivations. If a local unit ceases and resumes its activities, the business register has to decide whether the old identity number is reused. In analogy to the enterprises, the convention of this manual is that the local unit is deemed to be continued (i.e., it retains its old identity number) in case it carries out seasonal activities or resumes its activities within 18 months after temporary suspension of activities because of paralysis of production for external reasons or sickness, accident, military service of the entrepreneur, etc.

### **16.4. THE LINKS BETWEEN ENTERPRISE AND LOCAL UNIT CONTINUITY**

The enterprise and the local unit have their own continuity rules. As a consequence, it is conceivable that an enterprise is continued whereas one or more of its local units are discontinued, or that it is discontinued whereas one or more of its local units are continued. In principle this does not result in any inconsistency, provided the differences between the concepts used are clear. But it is useful to examine the case where an enterprise equals a local unit before or after the event and see what situations to expect if the continuity rules as proposed are applied. After all, this is the most common case.

Suppose an enterprise is born and comprises one local unit. Is it possible that the local unit existed already and keeps its identity, so that it experiences a transfer to the new enterprise? No other enterprises are involved, otherwise the event would not be the birth of an

enterprise but rather a split-off, restructuring, etc. So the local unit which possibly existed at the location of the new enterprise must have belonged to an enterprise which died at the event. Since the continuity rules of the enterprise require that at least two of the three criteria (controlling legal unit, principal economic activity and location) change, and the old and the new enterprise have the location in common, they must differ in controlling legal unit as well as in principal economic activity.

Now consider the local unit. It belongs to different enterprises before and after the event, and, as shown above, its principal economic activity before and after the event is different. Therefore it can not be the same local unit. The conclusion is that the birth of an enterprise comprising only one local unit implies the birth of that local unit.

A similar reasoning applies if an enterprise comprising only one local unit dies. It follows that, at its location, the principal economic activity is not continued (otherwise continuation of the location and principal activity had resulted in enterprise continuation). For the local unit this implies that at least two of the three criteria for continuity, namely enterprise continuity and continuity of principal activity, are not met, so it loses its identity. The conclusion is that the death of an enterprise comprising only one local unit implies the death of that local unit.

The opposite does not hold. It is possible that a local unit loses its identity without the enterprise losing its identity, even if the latter consists of only one local unit. The principal economic activity and the employment of the local unit may have changed, but these conditions are not sufficient for the enterprise to lose its identity. If the enterprise keeps the same controlling legal unit, it remains the same as long as the location remains the same. The conclusion is that a local unit can die, followed by the birth of a local unit at the same location, whereas the enterprise remains the same.

## 16.5. SUMMARY

If the location is the same, the continuity of production factors, in particular of employment and the continuity of the enterprise to which the local unit belongs are in theory the criteria for continuity. In practice a local unit which does not change location is deemed to lose identity only if two or all of the following three factors change: the enterprise identity, the principal activity in terms of NACE Rev.1 at four digit-level and local unit employment for at least 50 percent.

If a local unit moves within a region defined at the local level or within the so-called travel-to-work area, it keeps its identity if none of the three factors mentioned above changes. Otherwise it loses its identity. If a local unit moves outside the region or travel-to-work area, respectively, it is deemed not to be continued.

Furthermore, a local unit is considered to be continued in case it resumes its seasonal activities or resumes its activities within 18 months after temporary suspension of activities because of paralysis of production for external reasons or sickness, accident, military service of the entrepreneur, etc.

Among others, an analysis of the continuity rules result in the following. The birth of an enterprise, which comprises only one local unit, implies the birth of a local unit and the death of such an enterprise implies the death of a local unit. However, a local unit equalling an enterprise can die, followed by the birth of another local unit at the same location, whereas the enterprise may remain the same.

## 16.6. RELATION TO THE BR REGULATION

*This section concerns the interpretation of a characteristic (the identity number of the local unit) which has to be recorded according to the regulation on business registers. Therefore this section is considered an interpretation of that regulation.*