

## ***Description of the register***

<b>Basic information</b>	
Register name	FDB
Year	2015
Production cycle	
Variant	

## Business Register

NV0101

*Section A of this description provides administrative and legal information on the register as well as its purpose and historical background. Section B provides information on the quality of the register as a basis for statistics producers. Section C describes measurement, collection and processing. In conclusion, three appendices contain information that is not included in the final version of the document for a specific product. By pressing CTRL and clicking on a heading in the table of contents, you can access the relevant section directly.*

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## **A General information**

This document refers to the Business Register at the time when it is frozen for extraction for the system for coordinated sampling (SAMU) in November. At that point in time, the Business Register is saved in a database called FDB2015.

### **A.1 Subject area**

*Subject area:* Business activities

### **A.2 Statistical area**

*Statistical area:* Structure of the business sector.

### **A.3 Responsible for the register**

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### **A.4 Obligation to provide information**

Under the Official Statistics Ordinance (2001:100), there is an obligation for government agencies to provide the data required for the production of official statistics. The same also applies to business operators, foundations and non-profit organisations that are not engaged in any commercial activity, municipalities and county councils, as well as municipal associations.

The Business Register is based largely on administrative registers. Under the Ordinance on the General Business Register (SFS 1984:692), the registers of the Swedish Tax Agency and the Swedish Companies Registration Office may be used as sources. Data concerning numbers in the statement of earnings and tax deductions is regulated by the Act concerning Establishment of Numbers and Related Matters (1984:533). The obligation to provide information on numbers is regulated by the Tax Procedure Act (2011:1244).

### **A.5 Confidentiality and rules for handling personal data**

Regarding confidentiality in the agency's specific task of the production of statistics, Chapter 24 Section 8 of the Public Access to Information and Secrecy Act (2009:400) applies. For the automatic handling of personal data, the rules in the Personal Data Act (1998:204) apply. In the area of statistics, there are also specific rules on the handling of personal data in the Official Statistics Act (2001:99) and the Official Statistics Ordinance (2001:100).

### **A.6 Discarding and archiving regulations**

The Business Register surveys directed towards enterprises may be discarded within a time limit set by Statistics Sweden, but no later than after two years. Annual versions of the Business Register have been archived on data processing media since 1972. The annual versions are not subject to being discarded.

SAMU frames have been archived in SQL databases since 2004, as users requested that samplings should also be possible on historical populations. No data has been discarded since then.

## **A.7 EU regulations**

The contents of the Business Register are regulated in the European Parliament and EU Council (EC) Regulation no. 177/2008 on the establishment of a common framework for business registers for statistical purposes, replacing Regulation (EC) no. 2186/93 regarding business registers for statistical purposes.

The European Parliament and EU Council Regulation (EC) No. 696/93 prescribes the units to be used for observation and analyses of the production system within the Community. Most of these are also included in the Business Register.

The European Parliament and EU Council Regulation (EC) no. 1893/2006 on establishing the statistical economic sector classification NACE rev. 2 (SNI 2007).

## **A.8 Purpose and background**

In 1963, the Swedish Parliament commissioned Statistics Sweden to maintain a central business register. The purpose was to provide business statistics with the conditions to meet the requirements of degree of coverage, coordination, timeliness etc., and consolidate the various business registers maintained at other departments at Statistics Sweden. The central business register was initially updated twice per year with information from the tax administrative registers.

In the 1960s, technology was developed to create comparable statistics through the use of coordinated frame populations and sampling. In 1972, the system for coordinated sampling (SAMU) was applied for the first time. An annual version of SAMU was created in November, and extra efforts were made to ensure that the quality of the Business Register would be the best possible at that time. From 1975, information was collected from the 25 000 largest enterprises via an annual survey. In the beginning of the 1980s, the Business Register was supplemented with information from public sector local units.

An extensive collaboration with municipalities to improve the quality of the local unit segment was carried out in conjunction with the 1980 Population and Housing Census. After these efforts, the Business Register was considered nearly complete by the early 1980s, even including companies' local units, and it was renamed the Central Business and Local unit Register. Through the work that was carried out in the Base register study, which resulted in the Ordinance on the General Business Register (SFS 1984:692), conditions improved significantly for the care of the Business Register by means of the prescribed right to utilise a number of other administrative records. The ordinance defines the part of the

Business Register that was the general business register. It contains fewer variables, and a simpler enterprise concept compared with today's Business Register, where an enterprise corresponds to the legal entity and its local units. Approval was not required for distributing information in the general business register in Sweden. The general business register was also called the BASUN register. Since 1995, the formal name of the fee-financed register is Statistics Sweden's Business Register.

Once Sweden joined the European Union (EU), an adjustment was made to the EU regulations on economic statistics and business registers for statistical purposes. Thus the contents of the business register have been expanded with several new types of units, described in Section B 1.1.2 below. The current system became operational at the end of 1999. The Business Register has been renamed to reflect this expanded content and is now called the Business Register.

The Business Register database creates a sampling framework mainly for economic statistics, including labour market statistics, but it is also used in other statistical areas. The Business Register is used to delimit populations for statistical surveys with regard to units, sectors and size categories. The names and addresses of enterprises, local units and/or operational units to be included in various surveys are retrieved from the Business Register. Information in the Business Register is also used as a basis for studies of the business sector's structure and demographics.

The Business Register is one of the base registers in the statistical system of registers and also includes the previously independent Register of corporations.

## **A.9 Use of the register**

The main aim of the Business Register database for statistical purposes is to provide a basis for sampling frameworks. The aim of the SAMU frame is to delimit a population with active enterprise units (LEU, LOU, ENT and KAU), including selected variables from the Business Register. In principle, a SAMU frame reflects the Business Register frozen in time at a given time. The times are generally decided based on when the Business Register is most updated. No changes are made to the frame once it is established. The Business Register is used as a coordination tool for the stock, unit boundaries and classifications of all economic statistics. Four frames are produced each year and are used for sample draws in a number of statistical surveys.

Another important aim of the Business Register is to supply enterprise data (LEU and LOU) on a weekly basis, for further use in the fee-financed General Business Register.

## **A.10 Design and implementation**

The Business Register is updated continuously, at different times, with information from a number of various sources. Retrievals from the Business Register are made for various purposes. The retrievals are usually processed further in various ways depending on the objective of the use. For SAMU, for instance, all

non-active enterprise units are discarded, and a number of other variables are added that are not available in the Business Register.

The Business Register is largely based on administrative data concerning legal units. Information about local units for enterprises with more than one local unit is mainly derived from an annual survey: Verification of data in the Business Register database (the Business Register verification). For the majority of enterprise units, the information is derived from the legal unit. In cases where an enterprise unit comprises several legal units, a manual check has been made. This also applies to activity units.

For more information on ongoing production and updating of the Business Register, see the Business Register Handbook via the link below. However, the handbook will be revised and updated continuously during the year, so readers are encouraged to contact ES/REG regarding questions during 2016. <http://inblick.scb.intra/globalassets/dokument/es/reg/handboken.pdf>

**Table 1. External suppliers of administrative data**

<b>Government agency/organisation</b>	<b>Type of data/content</b>
<i>Swedish Tax Agency/Swedish Companies Registration Office</i>	<i>Administrative data regarding enterprise registration, VAT, employer and F tax registration, industry, private or public companies, basic data about legal and natural persons, data from tax returns, statements of earnings and standardised accounting statements</i>
<i>Svensk Adressändring</i>	<i>Postal and location address</i>
<i>Bisnode</i>	<i>Corporate data, Telephone number</i>
<i>Postal Code Service</i>	<i>Postal code</i>
<i>Stockholm Stock Exchange</i>	<i>Listed companies</i>

**Table 2. Internal suppliers of data**

<b>Statistics Sweden sources</b>	<b>Type of data/content</b>
<i>Balance statistics</i>	<i>Enterprise status (assets)</i>
<i>Structural business statistics</i>	<i>Closing date</i>
<i>Industrial production of goods</i>	<i>Economic sector</i>
<i>Forest Owners Register</i>	<i>Economic sector</i>
<i>Occupational Register</i>	<i>Economic sector</i>
<i>Publicly owned enterprises</i>	<i>Inspection of ownership</i>
<i>Foreign-controlled enterprises</i>	<i>Inspection of ownership</i>

A further source of information is the questionnaire "Control of information in Statistics Sweden's Business Register" which is sent every year to all enterprises with more than one local unit. Around 8 000 enterprises are included in the questionnaire. The primary purpose is for enterprises to check their local unit number, ASTNo., which must be indicated on every employee's statement of earnings that the enterprises send to the Swedish Tax Agency. The questionnaire also checks other variables, such as employees, industry and address changes of the enterprise's local units. This questionnaire is the Business Register's and SAMU

frames' primary source for gathering and updating information on local units in enterprises with more than one local unit.

The register is also maintained actively on a continuous basis at Statistics Sweden at the units ES/REG, DFO/FU-1 and DFO/SF. This requires a major element of manual inspection, which is to a large extent linked to all Business Register input data deliveries. The weekly deliveries from the Swedish Tax Agency and the Swedish Companies Registration Office comprise an important part. Special inspection is also carried out when the Business Register is frozen ahead of retrieval of a SAMU frame.

The SAMU frames only contain active units that are in the Business Register. This means that the rules for active activity must be met, or that the enterprise has a large balance sheet total and are therefore active.

### **A.11 New items in the register**

In 2015, the following changes have been carried out:

- A reconciliation with the Swedish Tax Agency's enterprise population was carried out at the beginning of the year. The reconciliation was important, since nearly the entire population of legal units is defined by the Swedish Tax Agency (and indirectly the Swedish Companies Registration via the Swedish Tax Agency). The Business Register population demonstrated good concordance with the Swedish Tax Agency with neither over- or undercoverage to any major extent. The variable content also demonstrated satisfactory consistency.
- Updates of sector and SNI codes for holding companies based on their ownership abroad were conducted ahead of the March SAMU. At the same time, the population was updated by the legal units that are made active, despite not fulfilling the rules of being active. These receive a special activity code (FtgStat=2) in the Business Register and fulfill special requirements in accordance with specifications from ES/NS and the survey Balance statistics (BAST).
- A new checking system was launched in the first six months of the year. It is a case management system that facilitates inspection and processing from the data source the Swedish Tax Agency and Svensk Adressändring. The link to the Business Register database was not yet implemented, which is why the update of the Business Register was still being carried out manually in existing systems.
- The number of employees was updated for a number of enterprises. The number of employees was listed as 0 for barely 8000 legal units that were missing statements of earnings and tax returns. This means a decrease of the number of employees in the Business Register with about 13 700.
- Local units missing from the Business Register, but that came to Statistics Sweden's attention via updates of the RAMS survey through its supplementary questionnaire, resulted in a net increase of 600 new local units in the Business Register.
- The mailbox basic data will be introduced.
- The Business Register's yearly questionnaire to enterprises and organisations with more than one local unit was mainly web-based, but a number of Excel

files were also sent out for practical reasons. However, the number of Excel files was reduced by 136 during the year. This simplified and streamlined data collection, as data providers were referred to the web survey instead.

- A visit to Gothenburg municipality was made with the aim of assisting their representatives in their role as data providers to the Business Register. It is sometimes difficult for major enterprises and organisations to submit requested information at local unit level to Statistics Sweden. The visit meant that Gothenburg municipality could respond to the Business Register's survey to employers with more than one local unit during the year.
- Swedish Companies Registration Office discarded its enterprise stock during the year, which meant that 15 655 enterprises disappeared from the Business Register's enterprise population between November 2014 and November 2015. These enterprises were non-active in the Business Register.

## **A.12 Planned changes in future registers**

The Swedish Tax Agency may possibly create conditions that make it possible to distinguish natural persons in the Business Register who have installed solar cell installations for private use, and that are offering surplus sales.

Otherwise, no major changes are planned for 2016.

The applicable EU regulation for business registers in the European Union entered into force on 20 February 2008. The Business Register largely complies with the requirements contained in the 2008 EU regulation. Some changes remain to be implemented, such as introducing the variable employees. Statistics Sweden is working to modernise the Business Register both in terms of content and technology. In coming years, efforts will be focused on converting Business Register applications from VB6 to .Net, as well as modernising database management.

## **B Quality declaration**

### **B.0 Introduction**

Statistics Sweden describes the quality of statistics according to a quality concept consisting of five main components. A corresponding one for registers, with the same main components, is introduced and used here. The purpose is to provide information to those who further use the register, alone or together with other registers, for statistical production. The five main components are listed below and are described in a register context:

**Contents**, which mainly applies to how well the register meets the target characteristics of the statistics.

**Accuracy**, which refers to sources of inaccuracy and how these affect the register and statistics produced from it.

**Timeliness and punctuality**, which includes issues of timeliness that are relevant for how well the register, and thereby the statistics, describes the current situation.

**Comparability and coherence**, which refers to possibilities for comparisons, over time and between groups, and to use the register together with other registers in the production of statistics.

**Accessibility and clarity**, which refers to the physical accessibility of the register and its clarity.

For more information on the concept of quality of official statistics and a more detailed account of the meaning of the five main components for statistics, see the report *Quality definition and recommendations for quality declarations of official statistics* (MIS 2001:1) in the series *Meddelanden i samordningsfrågor för Sveriges officiella statistik*. The publication is available on Statistics Sweden's website. [http://www.scb.se/Grupp/Hitta\\_statistik/Forsta\\_Statistik/Metod/Dokument/MIS2001\\_1.pdf](http://www.scb.se/Grupp/Hitta_statistik/Forsta_Statistik/Metod/Dokument/MIS2001_1.pdf)

## **B.1 Contents**

### **1.1 Statistical target characteristics**

#### *1.1.1 Population delimitation*

The population consists of: All registered LEUs that are:

- active
- non-active

LOU, ENT, KAU and LKAU (related to registered LEU) that are:

- active
- non-active

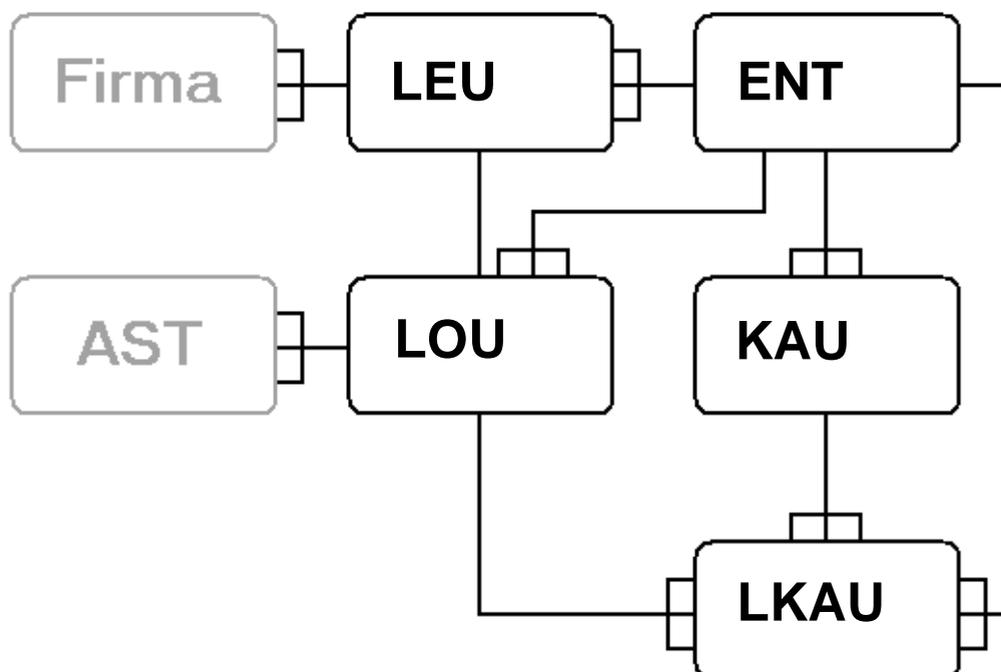
The criteria for LEU to be active are:

- have VAT registration and/or as employer and/or for F tax regardless of economic sector, regardless of Swedish, foreign or unknown address
- economically significant that does not meet the above rules

### **Figure 1. Relationships between object types in the**

## Business Register

### Enheter i FDB



### 1.1.2 Object types

#### Object type: **Enterprise unit (ENT)**

An enterprise unit consists of one or more legal units that engage in one or more economic activities at one or more local locations. An enterprise unit is usually the smallest unit for which an income statement and balance sheet data can be obtained. In some cases, it is placed at a higher level for coordination purposes. It can include the legal unit which has a non-activity status in the Business Register, but is “active” in, for example, the administrative registers. There are survival rules for enterprise units relative to legal units (for example, an enterprise unit with one local unit and unchanged operations “survives” with a change in “corporate identity number”) and survival rules for local units. In a minority of cases, an enterprise unit is a help-enterprise unit that serves several enterprise units (deviation from the EU definition).

#### Object type: **Kind of activity unit (KAU)**

If an enterprise entity operates on several different SNI levels (industries), it may be necessary to split the activity unit into different activity units. The purpose the activity unit is to enable the dissemination of values per SNI in the economic statistics without influencing other activities in the enterprise units.

#### Object type: **Local kind of activity unit (LKAU):**

A local kind of activity unit indicates a local unit conducting only one activity. A local unit where several economic activities are being conducted can be divided

up into several local activity units. Local activity units are the units that are placed in the activity unit (see figure above).

Statistics Sweden can also consider the data provider's desire for separation of business areas and the like. Thus in exceptional cases, there may be multiple local activity units within a local unit, all conducting the same activity. A local kind of activity unit may have secondary SNI codes. A local kind of activity unit – and thus also an activity unit – with several activities thereby contributes slightly too much to the statistics within its main business activity. At the same time, other activities will disappear from one or more other study domains in the National Accounts. The aim is that these over- and underestimations will be negligible in the statistics.

Object type: **Legal unit (LEU):**

The legal unit is a legal or natural person engaged in or intending to engage in any kind of commercial activity.

The practical definition used for legal unit is:

- Legal persons exclusive estates of deceased (legal form 91), foreign legal persons (legal form 96) and foreign natural persons (legal form 10) regardless of registration for VAT, employer or F tax.
- Legal persons that are estates of deceased and who are registered for VAT, employer or F tax (regardless of economic sector).
- Foreign legal persons regardless of registration for VAT, employer or F tax (Corporate identity number = 16-502, 16-516, 16-902, 16-934).
- Foreign natural persons regardless of registration for VAT, employer or F tax (Corporate identity number = 16-302).
- Natural persons with at least one registered company name regardless of registration for VAT, employer or F tax.
- Natural persons without a registered company but who are registered for VAT, employer or F tax (regardless of sector, age or employer type).

Object type: **Local unit (LOU)**

A local unit refers to a geographically defined part of an enterprise (an address) where it engages in economic activity. Legal units that are locally unified (for example, within a fenced area or in adjacent buildings) and are composed of several units (production, service unit, etc.) are registered normally only as one local unit. All active legal units have at least one local unit.

A number of conditions must be met for registration of multiple local units to a legal unit:

- there should be some type of economic activity at the local unit (industry);
- there should be a place where business is conducted (geographically defined unit = address);
- economic activity should be conducted at least 20 hours/week and have employed staff; and

- when a discontinued local unit resumes activity within two years, the previous CfarNo (ID term of local unit) is reused.

### *Exceptions*

Local units which have great economic significance can be counted as local units even if they do not meet the above rules. Power plants and cement stations are examples of this.

In those cases where a local unit with several economic activities is divided into several local units with the same address but different activities, this has been done in agreement between the data provider and Statistics Sweden.

For municipalities, a definition of local unit has been found suitable based on the municipality's various administrative activities, in accordance with the Swedish Local Government Act. Each administrative activity must be disseminated at the addresses where the activities are permanently conducted. Thus, each address within the administration is a local unit. This means that several municipal local units can occur at the same address. "Normal ancillary activities" such as cleaning and security services, however, do not have their own local unit.

The county council uses a definition of local unit based on the county council's various administrations/committees. As a particular local unit, each administration must disseminate each address where the administration permanently conducts its activity. This means that county councils may have multiple local units at the same address.

Not included as a local unit are

- (i) mobile activities, such as: taxi, trucking;
- (ii) temporary local units, for example: construction activities;
- (iii) changing local units, such as: mobile rock crushers;
- (iv) at home, for example: weather observer, home sewing.

In cases (i)–(iv), the activities are assigned to the local unit that most closely administers such activities. The home address appears as the location address if the legal unit has only one local and the operation is of type (i)–(iv).

Examples of what is not included as a local unit:

- logging;
- mobile rock crushers parked for less than one year;
- gravel pits, sandpits without permanent facilities and buildings, and unoccupied
- power stations < 100 KW for general usage, < 400 KW for other usage;
- building sites, regardless of the length of the building and storage, workshops etc. that exist only during the construction period;
- branches of Apoteket AB and Systembolaget that are housed in another enterprise's premises and served by that enterprise's regular staff;
- personnel cafeterias at a local unit with other activities for its staff and run by the staff;
- campsites, outdoor swimming places, ski slopes without specific equipment of major economic significance;

- distribution enterprise delivery depots for newspapers and magazines at newsstands, gas stations and the like;
- ships are assigned to the local unit from which they are administered; shipboard employees for international shipping are not included in the number of employees;
- cleaning companies that clean at other enterprises should not normally be registered as a local unit;
- the teaching activities of educational associations on rented premises (not simultaneously used as head office or offices);
- company health care facilities, normal scope;
- summer kiosks, summer businesses;
- truck drivers that delivery enterprises have stationed with major road haulage enterprises and shipping agents;
- croupiers, cloakroom attendants in special businesses housed in restaurants;
- lottery stands in department stores, in squares and the like.

### *1.1.3 Variables*

The Business Register contains a large number of variables. The most important variables for each object type are described below. In addition, there are variables that indicate the identity number, the source of stored information, random values and different times.

#### ***Enterprise unit***

Number of employees according to statistical measurement (AnstS)

Number of legal units

Number of local activity units

Number of activity units

Complex/non-complex enterprise (Regdel) Delimits examined populations

Activity code (NgS)

Turnover (FDB)

Turnover year (Turnover FDB)

Consolidated/non-consolidated enterprise unit (if consolidated: also type of consolidation.)

Industries block (NgSSparr)

Start and end date for when the activity starts and ends

Status code, active/non-active enterprise unit

Size class by number of employees according to statistical measurement (AnstSKI)

Size class by assessed value of properties owned

Size class by annual turnover (Turnover FDB)

#### ***Kind of activity unit***

Number of employees according to statistical measurement (AnstS)

Number of active local activity units

Description

Activity code (NgS)

Status, active/non-active activity unit

Start and end date for when the activity starts and ends

Size class by number of employees according to statistical measurement (AnstSKI)

***Local kind of activity unit***

Number of employees according to statistical measurement (AnstS)

Description

Activity code (NgS)

Status, active/non-active activity unit

Start and end date for when the activity starts and ends

Size class by number of employees according to statistical measurement (AnstSKI)

***Legal unit***

Number of employees (Anst)

Number of employees according to statements of earnings (AnstKU)

Number of employees according to statements of earnings who are mobile employees (AnstKURorl)

Number of local units

Number of enterprises

Number of statements of earnings

Type of listing (PrivPubl)

E-mail address

Legal form

Gross wages according to the statements of earnings (LonKU)

VAT group (VAT type)

Name

Industries (Ng)

Turnover (FDB)

Turnover year (Turnover FDB)

Postal address

Registered as employer

Registered for VAT

Registered for F tax

Registration and deregistration dates for when legal unites are registered or deregistered with the Swedish Tax Agency, that is, enters or leaves the population (linked to JESat)

Relationship between legal units with reference to complex enterprise units (JERel)

Sector

Status, active/non-active legal unit

Status, registered and deregistered respectively (JESat)

Start and end dates for when the operations start and end respectively

Size class by number of employees

Size class by assessed value of owned properties

Size class by annual turnover (Turnover FDB)

Municipal seat

Telephone

Year for statement of earnings (KUAr)

Ownership category

***Local unit***

Number of employees (Anst)  
 Number of employees according to statements of earnings (AnstKU)  
 Number of employees according to statistical measurement (AnstS)  
 Number of AST units (ASTAnt)  
 Number of active local activity units  
 Location address  
 Description  
 E-mail address  
 Ancillary activities in the legal unit (HjVerksJE)  
 Code for difference between Anst and AnstS (AnstSDiff)  
 Code for difference between Ng and NgS (NgSDiff)  
 Municipality code  
 Economic sector (Ng, NgS)  
 Postal address  
 Start and end dates for when the operations start and end respectively  
 Status, active/non-active local unit  
 Size class by number of employees  
 Size class by number of employees according to statistical definition  
 Telephone  
 Type of local unit (main local unit or non-main local unit)

#### 1.1.4 Reference time

The reference times for the SAMU frames are the date when the Business Register is frozen and work to compile the frame has started. The frames are normally available for users a week later. Variables and objects in the Business Register (and frames) have different reference periods as they are updated at different times.

In addition to ongoing updates from the Swedish Tax Agency, information from the Business Register's survey on local units has come in for the November SAMUs. The same applies to information from the statement of earnings (local units for year t-1) and IVP (industries).

#### Dates for SAMU 2015

Version	Time of retrieval in the Business Register	Frame available
March	20 February	27 February
May	22 May	29 May
August	21 August	28 August
November	27 November	4 December

The use of SAMU frames can be roughly illustrated as below:

November	Yearly statistics
March	Short-term statistics
May	Supplementary sampling for Nov + a few others
August	Supplementary sampling for March + a few others

## 1.2. Comprehensiveness

Comprehensiveness is considered to be very good, even if at any given time there is some overcoverage and some undercoverage due to the time it takes for information about an enterprise closing down and starting up respectively to be registered in the Business Register, see Section 2.2 below. Black market activities are not present in the Business Register.

## B.2 Accuracy

### 2.1 Overall accuracy

Data in the Business Register generally is of good quality for the purpose of a sample frame. Since enterprise data is widely used at Statistics Sweden and in the Swedish society, the chances of errors being found and corrected increase. Statistics Sweden receives weekly updates regarding the stock of enterprises from the Swedish Tax Agency. There are several other sources available for updating data in the Business Register, such as the Swedish Companies Registration Office, the Legal, Financial and Administrative Services Agency, county administrative boards, the Swedish Unemployment Insurance Board, and Lantmäteriet (the Swedish mapping, cadastral and land registration authority). Data on enterprises is also updated from Statistics Sweden's surveys directed towards enterprises.

The greatest uncertainties for the Business Register concern coverage, see *Section 2.2.1 Coverage* and questions concerning the correctness of certain data, see *Section 2.2.2 Measurement*.

#### *Specifications*

The Business Register fulfils well the EU requirements of a business register's stock and content of variables. NACE and institutional sector and ownership inspection codes are maintained and international classification is followed. However, the statistical units are not applied in full accordance with Council Regulation (EC) No 177/2008 on establishing a common framework for business registers for statistical purposes. Statistics Sweden assesses that more enterprise group units should be created.

Large enterprises and enterprise groups contribute to a large share of the economic statistics and a greater use of unit delimitations would provide more possibilities for coordination of the production of statistics, which in turn would lead to improved quality of the economic statistics. Statistics Sweden is responsible for about 60 enterprise group units that belong to the 50 largest company groups.

## 2.2 Sources of inaccuracy

### 2.2.1 Coverage

The Business Register is based mainly on administrative information about legal units from the Swedish Tax Agency, the Swedish Companies Registration Office, and Svensk Adressändring AB.

In general, coverage is very good for legal units based on a target population in which the Business Register is to contain all registered enterprises, sole proprietorships, organisations and government agencies that conduct some form of economic activity. The obligation to register activities and make tax payments means that coverage problems for legal units are considered to be very small.

### *I Undercoverage*

A source of supposed undercoverage in the Business Register is that Statistics Sweden is unable to capture information as to whether a new enterprise has two or more local units or not. In other words, undercoverage refers to the local unit object. The Business Register is entirely dependent on gaining feedback from other surveys at Statistics Sweden that have direct contact with the enterprises in question regarding if they have more than one local unit. This means that there is probably a growing undercoverage in the Business Register regarding information on enterprises that have multiple local units. Some input is provided through the supplementary survey for the Statements of earning and then refers to year t-1. Sometimes the Business Register obtains information on a second local unit when Statistics Sweden receives changes of address from Svensk Adressändring AB.

The number of enterprises that have two or more local units remained stable at around 8 000 for two decades. At the same time, enterprises with a local unit and with 20 employees or more increased by 73 percent in the same period. In 2015, there were more than 15 000 such enterprises. This is probably not an accurate reflection of reality. It is Statistics Sweden's assessment that the number of enterprises with multiple local units should be more than what is currently found in the Business Register.

The undercoverage involves an increasing difficulty for those statistical areas that use the Business Register as a statistical frame and who choose local units as sample objects. Enterprises with two or more local units are often scattered across several regions. In addition, it is not unusual for these enterprises to conduct different activities at different local units, which places them in different economic industries. If the number of local units in the Business Register is captured to a decreasing extent, then the statistical areas will have increasing difficulties in presenting accurate statistics at the regional level as well as in combination with economic industries. Even a presentation of statistics by economic industry alone can be affected in some cases by using local unit as the sample object.

Another form of undercoverage in the Business Register refers to natural persons who, according to Statistic Sweden's VAT register, pay VAT but are not formally registered for VAT with the Swedish Tax Agency.

### *II Overcoverage*

There are enterprises in the Business Register that no longer have any economic activity, but can still be registered mainly for VAT and/or for F tax at the Swedish Tax Agency. These enterprises are still registered as active in the Business Register. This is because Statistics Sweden has chosen to use registrations of VAT, employer and F tax as criteria for activities.

This means that the statistical areas using the Business Register as a statistical framework gain some enterprises that appear to be inactive in their sample. Depending on the extent to which these enterprises are included in the sample, and how the enterprises are handled in the individual survey, they can create a little inaccuracy in the statistics.

#### *Duplicates*

In an enterprise group company with multiple legal entities, there may be duplication of local units if several of the local units of the included enterprises have activities at the same address location.

There may also be duplicates, since a legal unit can take over a local unit from another legal unit. During a transition phase, existing local units are linked to the future legal unit, while a new local unit is listed for the transferring legal unit. This means that two local units with the same content, but with different identities, can exist at the same time. The object enterprise unit is also affected by this to varying degrees. Rules for continuity of enterprise units are available in the assessment of whether or not enterprise units are to survive when operations are transferred or taken over.

#### *2.2.2 Measurement*

The data in the Business Register comes mainly from administrative registers at the Swedish Tax Agency, the Swedish Companies Registration Office, and Svensk Adressändring AB. The Business Register is updated weekly with data from the Swedish Tax Agency's registers. The Swedish Tax Agency has in turn collected the data from forms for tax and fee notifications, statements of earnings, and VAT statements. Data on registered units also come from the Swedish Companies Registration Office, the Legal, Financial and Administrative Services Agency, the Swedish Unemployment Insurance Board, Lantmäteriet (the Swedish mapping, cadastral and land registration authority) and Statistics Sweden (for the public sector).

#### *Accurate data from the basic registration*

Enterprises must carry out a basic registration in order to get started with their business. Since the entrepreneur has such a strong interest in becoming registered, the basic registration should not give rise to large measurement errors.

#### *Risk of errors in the location address*

It has been shown that there is some risk of measurement error in the registration of data of the location address. It happens that the entrepreneur does not fill in the location address or misunderstands and fills in the postal address or home address instead of the location address. This affects statistical surveys when the incorrect entry causes the location address to be assigned to the wrong county or municipality.

#### *Risk of measurement error when enterprises register their economic industry code*

Business activities are described using economic industry codes (SNI codes) in accordance with the prevailing standard for Swedish Standard Industrial Classification for 2007 (SNI 2007). In connection with an enterprise registering with the

Swedish Tax Agency, the SNI code is also registered, either by the company using a web portal or by the Swedish Tax Agency administrator. An enterprise can register one or more SNI codes to reflect the enterprise's activities. A risk of measurement error arises if an enterprise chooses the wrong SNI code, if the administrator misinterprets the activity description from the enterprises, or if the enterprises describe the activities incorrectly.

In 2008, Statistics Sweden checked the accuracy of a number of variables, including SNI coding, with a survey from a sample of local units in the Business Register. At that time, enterprises had not yet been able to register the SNI code themselves. The results of the 2008 survey showed that about 5 percent of the local units had the wrong SNI code. There is reason to suspect that the proportion of enterprises and local units with the wrong SNI code is greater today than in 2008, because the overwhelming majority of SNI codes are currently set by the enterprises themselves.

*Special risk of overestimation within the manufacturing industry*

Enterprises may have an economic interest in registering certain SNI codes instead of others. For example, a SNI code affects the tax rate on energy for the enterprise, since manufacturing has tax relief in this area. Therefore, there is a risk of overestimating the number of enterprises belonging to the manufacturing sector. Statistics Sweden regularly checks SNI codes in the manufacturing sector to find and correct improperly set SNI codes.

*Annual checks to ensure the quality of enterprises with two or more local units*

Statistics Sweden conducts an annual survey among enterprises in the Business Register that have two or more local unit to find and correct erroneous register information. In 2015, the response rate was around 92.5 percent, which is an increase compared with the previous year. The fact that 7.5 percent of enterprises did not respond to the questionnaire means that the data in the Business Register are uncertain for these enterprises. At the same time, the proportion of unchanged information in the collected material increased, which can mean that the information is uncertain, also for enterprises that actually responded to the surveys.

*Actual proportion of incorrect postal addresses in 2008*

The survey conducted in 2008 with the aim of checking the quality of the Business Register also showed that 5 per cent of local units had the wrong address in the Business Register. Statistics Sweden estimated that about 3 percentage points were due to the time lag from the submitted change of address to Swedish Adressändring AB to the updating of the Business Register. Statistics Sweden's assessment is that the problem has not grown since then.

In an analysis of a mailing to barely 116 000 local units in 2015, there were 1.68 percent returned mailings. Among the returned mailings, 37 percent had an updated address after the mailing. Other explanations for the returned mailings included that the enterprise (and local unit) had been closed, and that postal addresses to enterprises with more than one local unit were not updated as often with regard to local units that are not main local units.

### 2.2.3 *Non-response*

#### *Unit non-response*

There is no unit non-response for legal persons. However, Statistics Sweden is not aware of all local units, since there is no obligation for enterprises to register new, nor to deregister closed local units. See Chapter 2.2.1. Coverage.

#### *Item non-response*

A quality defect in the Business Register is the nearly 8 700 active enterprises that lack economic industry codes. The vast majority of these enterprises have no employees; about 800 legal units with employees lack economic industry codes, of which the largest had nine employees. These enterprises are also included in the SAMU frames, but since most statistical samples are drawn with the economic industry as a term of reference, these enterprises are not included in the sample. As a consequence, undercoverage occurs in the statistical products' frame population relative to the target population. No studies have been done to further quantify the risk of undercoverage for the statistical products that are caused by this problem.

The problem has decreased significantly in recent years through the systematic work of Statistics Sweden. In 2002, the number of enterprises without an economic industry code was 78 000.

### 2.2.4 *Data processing*

Most of the data in the Business Register come from the tax administration system and has been registered with the Swedish Tax Agency. A large part also comes from Statistics Sweden's questionnaire survey "Control of information in Statistics Sweden's Business Register". However, processing from all input data sources follows the same model. Once Statistics Sweden is notified, a large number of checks are made concerning data validity and reasonableness. Errors and inconsistencies are checked and corrected by Statistics Sweden. This also gives an indication of organisational changes. Most changes in enterprises with more than 15 employees (ten employees before 2014) and enterprises with two or more local units result in a contact with the enterprise for verification before the change is entered into the Business Register.

Due to backlogs, it can take up to three weeks before an actual change is available in the Business Register. As a consequence, a small percentage of the enterprises have incorrect data at each extraction time.

Deriving the sector from the legal form does not guarantee that each object is linked to the correct sector on entry or change of legal form. Initially, a sector code is assigned where it is most likely that most of all types in each legal form belong. Then, the remainder is assessed manually, or input is awaited from other statistical areas with more knowledge about each object. For example, all objects with legal form=49 are assigned to the other limited companies sector 111000, even though some of these belong in the financial sector. However, this does not apply to legal forms 41 Banking company and 42 Insurance company, which are taken directly to the financial sector.

### 2.2.5 *Model assumptions*

In the Business Register, the number of employees is calculated mainly based on gross wages in the statement of earnings, but also in other ways. A description of how the number of employees is calculated is given below. The calculations also form the basis for the size class classification by number of employees.

The Business Register mainly uses two sources to update the number of employees in legal units: Statement of earnings and the survey “The Business Register verification”. The statement of earnings is used to update the number of employees at an enterprise with one local unit, while the Business Register verification is the source for the number of employees at enterprises with more than one local unit. A third calculation is made based on tax returns, and is used to update enterprises with one local unit.

#### *Statement of earnings*

For an enterprise with one local unit, the number of employees per enterprise is estimated based on the gross wages in the statement of earnings from the previous year. The calculation is based on a model in which each person is counted a maximum of one time. Since a person can have more than one statement of earnings, a decision must be made regarding which statement of earnings should be counted. The months which the statement of earnings refers to are utilised for this purpose. In the Business Register, in order to count a person as an employee of an enterprise with the use of a statement of earnings, the person must:

- earn at least one price base amount during the year, which was SEK 44 400 in 2014;
- not have higher earnings from another enterprise;
- not have ceased employment with this enterprise during the income year

#### *Business Register verification*

*Persons who are counted as employees:*

- those for whom the employer is obligated to report A tax (main employer)
- those who are currently employees
- for whom paid salary (income from work) per year is calculated to exceed one price base amount (SEK 44 500 in 2015)
- who are temporary employees for longer than three months

*Persons who are not counted as employees:*

- those who are seasonally employed
- those who have long-term leave of absence or are on long-term sick leave at the time of the survey (three months or longer)
- those who are temporary employees for less than three months

#### *Tax returns*

Gross wage plus benefits for a legal unit are divided by the average wage for the economic industry and the legal form. Updates are made monthly and affect between 250 to 300 legal units with one local unit.

## **B.3 Timeliness**

### **3.1 Frequency**

Four SAMU versions are created every year. The 2015 dates are shown below.

*Dates for SAMU 2015*

<b>Version</b>	<b>Time of retrieval in the Business Register</b>	<b>Frame available</b>
March	20 February	27 February
May	22 May	29 May
August	21 August	28 August
November	27 November	4 December

### 3.2 Production time

It takes a week to make a frame available from the time a version is frozen in the Business Register. This does not mean that all information in the frame have the time of freezing as the reference time. On the contrary, most data is older. See Section A.10.

### 3.3 Punctuality

Punctuality of SAMU frames is very good in relation to the time plans.

## B.4 Comparability and coherence

### 4.1 Comparability over time

The basic data in the Business Register is delivered from the Swedish Tax Agency's various registers. The definitions and rules that apply in the tax registers affect the contents of the Business Register, and changes in the definitions can have major consequences.

Registration in the VAT Register is one of the criteria that lead to a legal unit being regarded as active.

- In 1987, the limit for VAT registration was raised from SEK 10 000 to 30 000, which led to a decrease in the number of active enterprises by about 30 000 enterprises.
- In 1991, the VAT registration threshold was raised to SEK 200 000 and a large number of enterprises, about 70 000, were regarded as inactive.
- In 1996, the VAT registration threshold was lowered from SEK 200 000 to 0, and over 200 000 enterprises were added.

*Change of rules in determining an enterprise's activity*

Between May 2010 and June 2011, an enterprise was regarded as active if it had filed any VAT returns, paid an employer contribution or was charged a preliminary tax (F tax) during the past 12 months. This meant that those enterprises that did not have financial reporting were regarded as not active.

In June 2011, the rules for activity criteria in the Business Register were restored to what they were before May 2010, because the general business register and the statistical usage could not be unified and overcoverage remains as a result.

- Active

- \* registered for VAT and/or as employer and/or for F tax regardless of economic sector, regardless of Swedish, foreign or unknown address
- \* economically significant that does not meet the above rules
- Not active
  - \* never been registered for VAT, as an employer and for F tax, regardless of economic sector
  - \* has been registered in one of the above, but is now deregistered
  - \* “non-company” (embassies, private employer only “intentionally incorrect” of the Swedish Tax Agency, treated as type 101 + 112, 113)

#### *Information from statements of earnings*

In 1983, the number of employees for enterprises with one local unit was retrieved for the first time from statements of earnings. Prior to this, the number of employees was taken from the then National Social Insurance Board. The National Social Insurance Board data on the number of hours worked was divided by the annual working time as calculated by the Swedish Tax Agency. When statements of earnings were introduced, an increase was expected in the total number of employees in the register, since it now counted people who were not always full-time employees. However, the expected increase did not materialise. It turned out that the number of employees as calculated by the Swedish Tax Agency was too high, since the annual working time used in the calculation was too low.

*Since 2003, data on the number of employees are updated more often.*

Data on the number of employees are retrieved from the statements of earnings once per year for enterprises with one local unit. Since 2003, the monthly tax return is also used to estimate and update the number of employees.

The Business Register complies with Swedish and international standards for classification. When a classification is changed, the change is implemented in the Business Register, which can lead to problems of comparability. The Swedish Standard for classification of economic activities (SNI) has been revised three times due to changes in the European standard NACE:

- In 1993, the new classification SNI92 replaced the previous SNI69. This was a major revision of the classification: all codes were changed, the number of economic activity codes more than doubled, and all of some 600 000 local units were recoded.
- In 2003, SNI92 was replaced by SNI 2002. A much smaller revision: about 100 000 local units received new codes.
- In 2008, a comprehensive revision was made in SNI 2002 which was replaced by SNI 2007. The number of classes increased mainly within the service sector and all codes were changed. Recoding to SNI 2007 was done during 2006 and 2007 and the classification was introduced on 1 January 2008. SNI 2007 is more detailed than SNI 2002, which is why a large number of local units were coded manually. A total of about 450 000 local units were coded manually and about 550 000 were coded automatically. In 2010, the coding of SNI 2002 was carried out for those enterprises that could not be coded automatically.

*The previous undercoverage has now been rectified.*

Undercoverage that has been rectified includes:

- natural persons aged 70+,
- natural persons aged 16+ without a registered business and who are not employers but have other registration,
- foreign natural persons and now only private employers since 1 May 2010 are included in the population and are considered active if they meet the conditions for being active (see activity criteria in 4.1 Comparability over time).
- Enterprises that were previously included in the population and have foreign or unknown address are now regarded as active if they meet the conditions for being active (see activity criteria above).

#### 4.2 Comparability between domains

**Table 3. Which other definitions exist in addition to those selected in the register**

Variable/column name	Definition	Alternative definition	Alternative definition
<i>[State both the variable name and the column name]</i>			
Business activities/Ng			
Institutional sector/Sector			

-

#### 4.3 Coherence with other registers/data

**Table 4. Which other definitions exist in addition to those selected in the register**

Variable/column name	Definition	Alternative definition	Alternative definition
<i>[State both the variable name and the column name]</i>			
Employees/Anst	AnstKU: derived from the gross wage from the statement of earnings. StaSOA: information that the enterprise submitted to the Swedish Tax Agency, normally at the beginning of the activities. SKD: Derived from the gross wage for the tax return.		

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The Business Register is one of Statistics Sweden's three base registers. The coupling variables personal identity number/ corporate identity number and workplace number serve as a link to other base registers and to other registers with enterprises/organisations and workplaces as objects.

All surveys or registers that use enterprise units that are available in the Business Register can be compared with each other. Comparability also applies in the use of classification variables in the Business Register, such as, industry, sector and legal form. However, it is also important that the grouping of classification variables is made the same way between surveys.

## **B.5 Accessibility and clarity**

### **5.1 Forms of dissemination**

Information dissemination is carried out in various ways. Via direct communication with those responsible for products and via networks (methods). From the autumn 2014, there is a statistics group that focuses on the Business Register with representatives of SAMU and Business Register users and Statistics Sweden producers of mainly economic statistics.

SAMU frames aim to function as coordination tools for the economic statistics. No official statistics are published from the Business Register of SAMU frames, although a table is published in the SSD in December. Some compilations are made on behalf of the European Union, including Business Demography. Overall results for EU countries are compiled by Eurostat, but are not published.

### **5.2 Documentation**

Lists of variable lists and data set descriptions are presented in MetaPlus. The Business Register is also documented in SCBDok and BaS Information about the Business Register, with some emphasis on how inspection is carried out, can be found in the Handbook on the Business Register. See: <http://inblick.scb.intra/globalassets/dokument/es/reg/handboken.pdf>

### **5.3 Access to the final observation register**

Tables in the Business Register and SAMU frames are saved in an SQL environment. Business Register users at Statistics Sweden may have access to these.

Statistics Sweden conducts special processing of all years of the register on a commission basis. After special consideration, researchers and investigators may gain access to anonymised microdata for own processing in MONA, for example.

Access to read the Business Register (also old years) is applied for from the unit heads via the Beställarportalen order tool in Inblick intranet platform.

Microdata retrieval:

Contact person: *Jessica Kühne*

STATISTICS SWEDEN DESCRIPTION OF THE REGISTER

ES/REG

Christian Ekström

FDB

2016-04-25

NV0101

27(45)

*Unit:ES/REG*

*Telephone:*

*E-mail:*

Statistics assignment:

*Contact person: Jessika Kühne*

*Unit:ES/REG*

*Telephone:*

*E-mail:*

## **C. Data collection and processing**

### **C.1 Measurement instruments**

The quality of the register is mostly determined by the administrative systems on which the register is built. As a rule, data formation in the administrative systems differs from Statistics Sweden's data collection. Even if there are data providers who fill in forms in the administrative systems, the requirements for the provision of data is completely different and is governed by administrative rules and legislation.

The same measurement instruments used in the Business Register and the SAMU frames. There is a large element of administrative data (see also Section A.10). Further, the survey Business Register verification is important for updating information on local units. In addition, measurement is done via direct contact with enterprises, via telephone and e-mail.

### **C.2 Collection process**

#### **2.1 Collection process with external suppliers**

Enterprises contact different government agencies to make various registrations, pay taxes, notify of change of address and so forth. These contacts are often via some type of form, which normally has to be signed to be legally binding. In recent years, many forms have become digital.

This means that an enterprise is frequently present in administrative registers at various agencies, although it is possible to conduct business without being registered for VAT, employer contribution or F tax. The administrative information and amount of information is slightly different, depending on the type of enterprise. For example, there are many more requirements on a limited company compared with a sole proprietorship.

In the companies' reporting of information to the Swedish Tax Agency and other agencies, the enterprises have in common strong reasons for providing information, and for ensuring that the submitted information is correct.

For tax reasons, enterprises report considerable amounts of information to the Swedish Tax Agency, such as gross wage payments, tax deductions and turnover. The obligation to pay tax and provide information to the Swedish Tax Agency is regulated in legislation such as the Social Insurance Contributions Act and the Tax Procedure Act. The Swedish Companies Registration Office is a subject registering authority for a number of enterprise types, such as limited companies, and thereby receives basic information about enterprises.

#### **2.2 Collection process with a collection unit**

The survey Business Register verification is directed to all enterprises with more than one local unit in the Business Register at the time of sampling in August (about 8000 legal units with about 88 000 local units). There is an obligation to provide information for this survey according to the Official Statistics Act

2001:99). The statistics are also regulated by the Official Statistics Ordinance (2001:100).

The Tax Procedure Act (2011:1244) regulates that employers are to state the local unit number in the statement of earnings, and the Act concerning Establishment of Numbers and Related Matters (1984:533) states that Statistics Sweden is responsible for information on local unit numbers.

The strategy for contact used in the survey is to, in the first mailing in August, include login information (security post) for submitting via a web-based questionnaire (SIV) for those with up to 49 local units. Other enterprises and public enterprises submit using an Excel file via SIV. In the first and third reminder, login information is sent out again (security post) and in the second reminder, a paper version of the survey is included. A reminder via telephone is also made after the final written reminder. Data collection is concluded in the middle of November every year.

Statistics Sweden is responsible for sending out a local unit number list to all enterprises in the Business Register with more than one local unit no later than 30 November each year, and the Business Register verification aims to ensure that the Business Register is to have the most current information possible about enterprises with regard to local unit numbers. The local unit number list is information to the enterprises, and the enterprises are not obliged to contact Statistics Sweden to correct or supplement the information that may be incorrect in the enclosed list. Statistics Sweden nevertheless receives supplements and corrections when this list has been sent out, and the Business Register is then updated accordingly. The list can help enterprises when they report their statement of earnings to the Swedish Tax Agency.

In 2015, an e-mail reminder was tested for the subset of the population that had not replied between reminder 1 and 2; the result was good. In 2016, an e-mail reminder will be sent out to all enterprises who have not replied between reminder 1 and 2.

The e-mail inbox and the group telephone number linked to the survey are staffed and are replied to daily by staff at DFO/FU-1.

### **2.3 Collection process with producers of registers**

#### **Supplier contacts:**

Swedish Tax Agency:

Yearly supply contract with the Swedish Tax Agency (and the Swedish Companies Registration).

Close contacts with the Swedish Tax Agency via telephone and e-mail as needed.

Bisnode:

Recurring contacts in connection with contract renewal or as needed.

Svensk adressändring:

Recurring contacts in connection with contract renewal or as needed.

Contact with collection unit DFO/FU-1:

Daily contact

Running follow-up meetings on ongoing register maintenance

Contact with profiling unit DFO/SF:

Daily contact

Running follow-up meetings on ongoing register maintenance

### **C.3 Data processing**

#### **3.1 Data processing with external suppliers**

See Chapter 3 in the report on quality in the Business Register's input data regarding the Business Register's main sources: the Swedish Tax Agency, Svensk Adressändring and Bisnode (Relevant). The report is available [here](#).

#### **3.2 Data processing with a collection unit**

With regard to the Business Register verification, the web-based survey contains both "hard" and "soft" controls. The hard controls must be taken care of to enable the respondent to send in the material. Soft controls do not need to be checked, and the respondent can voluntarily submit a comment and/or send in information with "soft" errors. For enterprises with more than 49 local units that submit information in an Excel file, there are no controls built in to the Excel file, but some controls are made and can be signalled to the respondent when they send their Excel file in.

Information submitted via the web-based survey or via an Excel file (SIV) is uploaded to the review application (GRUS), where error codes show up for control and in some cases for action by the review staff. The review staff is helped by review instructions, including descriptions of each error code (there are 24) and controls (there are 51) and which must be controlled or addressed. Any requests for change and such are noted in a yearly log book and are then followed up in production meetings that are held regularly during the collection period with the review staff. The aim is to address and develop the collection for the next round.

For the 2016 round, the web-based survey will be updated for enterprises that submit Excel files. The change means that those who previously had to complete three separate sections, will now only need to enter a web form to complete the submission. The objective is for this to make is easier for the respondent.

Current manual register maintenance is handled to a large extent by the content group at DFO/FU-1. Maintenance of the major enterprises group population currently lies outside, and is handled by a few people at ES/REG. Maintenance of the complex enterprises is handled in cooperation between mainly DFO/SF and ES/REG. In addition, a minor part of register maintenance in other parts of Statistics Sweden is handled by the persons who are authorised to update the Business Register.

Manual register maintenance at DFO/FU-1 was done based on the sources, procedures and frequencies listed below:

*Running/weekly management*

- SKVBas
  - SKV lists 91-94
  - Johnny's lists
  - Newly started before and after update
- SVAAB
- Mailbox (external incoming mail)

The running/weekly management should be, as much as possible, settled before the next delivery.

A new checking system was implemented in the spring 2015. This meant a new working method that provided a better overview and coordination of the review objects. This applied mainly to the SKVbas weekly and monthly, but also parts of Johnny's lists and Newly started before updated, that was conducted weekly.

*Monthly handling*

- SKVBas
  - Changes in status (for example bankruptcies) compared with the SKV lists 91-94

The monthly management should be carried out as quickly as possible and be processed no later than the next SAMU occasion.

*Before the SAMU session*

- The mailbox for internal incoming mail (ES/REG prioritises/sorts the mails and DFO/FU handles the questions if there was time)

The objective of the work before the SAMU session is to ensure that checking cases are settled, as much as possible, during one SAMU period.

*Register maintenance in the Business Register can be divided into four types:*

**Type 1:** New notifications are checked for validity and observation lists are produced regarding large deviations compared with previous values. These are based on rules in the SKV system of checking before updates. Major errors are separated here. The observation lists are checked manually in accordance with given rules. A large checking programme in the form of SQL questions is run in connection with the electronic collection of administrative data. Once the type 1 check is complete on Monday and Tuesday, the material is considered sufficiently good to update the Business Register.

**Type 2:** The system accepts new or revised information that is, in some cases, questionable, but not sufficiently questionable to generate a conflict of rules. Cases are created in the checking application based on predefined checking limits. The generation of some of these checks can be considered a supplement to the rules and checks contained in the SKV system. The content group processes

these from Wednesday to Friday, once the Business Register is updated. Type 2 checking is related to the deliveries from SKV and SVAAB each week.

**Type 3:** Cross-checks are generated by the Business Register application in the form of error markings or error codes. These build on a number of defined rules. The basis for cross-checks includes everything that comes from the sources that the Business Register collects and supplements the data set with. Once the cross-checks have been run, the content groups check them. A “top-down” approach is used to handle the largest enterprises first and then in descending order with regard to the number of employees. Since the checking system was launched in the spring of 2015, the working method has been changed. This resulted in only some type-3 checking being done.

**Type 4:** When a manual entry, such as via a questionnaire or feedback, is made in the Business Register, the validity of the information is checked. Changes to the variable values are permitted within certain intervals. If, for example, the number of employees is changed from 50 to 100, the reasonableness of this increase lies outside the system allowance under the set rules. The new value should not be entered if it has not been checked via, for example, another contact. The value should then be accepted and a note made in free text, or else an error code will be generated, resulting in a cross-check.

Detailed information on how checking is to be carried out with regard to the Business Register verification is available for staff in the form of a checking instruction. Register maintenance is primarily carried out in accordance with work procedure descriptions, but also via the Handbook for the Business Register. In addition to the comments below on checking activities, in general, the surveys relate to a number of connected phases that can take days to complete. These include consistency check, unit delimitation, continuity check and reconciliation with the standards.

All data in the Business Register that is changed is saved in historical files. If new data is entered, the old information is saved. A copy of the files delivered from the Swedish Tax Agency is saved in the SKV system, which is, in principle, a copy of the part of the Tax database delivered to the Business Register.

After a number of error checks, error signs based on weekly deliveries are created in the checking system in the form of cases.

In primary key maintenance, the register is reconciled with the administrative (external) sources, and cross-registers are created across different identities. The Business Register has a cross-register with AST-nr (the administrative local unit number) and CFAR-nr (the number of the local unit as statistical unit). Cross-registers also exist for the relationship between representative numbers and corporate identity numbers.

Co-checking at microlevel is done against other administrative registers, to check activities in the enterprise and to check certain variables. Statements of earnings and the tax database (gross wages and turnover) are registers that are used for record linkage. The gross wage data from the monthly tax database delivery is used to make comparisons between gross wages and the number of employees in

legal units. Large deviations are extracted in observation lists for manual handling under type 3.

With regard to cross-checks, the content group addresses these if there is time. Today, there is no priority order, rather cross-checks comprise a “bulk” in the checking stage that is handled continuously throughout. Certain cross-checks have been carried out in the checking system since its implementation in the spring of 2015.

Manual review of a checking case is to a large extent carried out through further contact with the enterprise, but also by using other register information, such as websites and financial statements. Editing is done continuously through the changes that result from manual checking. Information is “corrected” and manually entered into the Business Register in all checking types.

There is no systematic documentation of sources of error. All events or changes are saved in historical tables at microlevel, and include information about the source. However, in the current system, it is not possible to determine whether the change is the result of an error or an updated of a previously correct value. The historical tables also sometimes contain free text comments to explain why a change was made.

The work carried out by the content group is to be prioritised by ES/REG based on existing user needs and decisions related to quality in the Business Register. Changes are communicated at reconciliation meetings with DFO/FU-1.

### **3.3 Data processing with the producer of the register**

Most of the data in the Business Register come from the tax administration system and has been registered with the Swedish Tax Agency.

Once Statistics Sweden is notified, a large number of checks are made concerning data validity and reasonableness. Errors and inconsistencies are checked and corrected by Statistics Sweden. This also provides an indication of organisational changes. Most changes in enterprises with more than 15 employees and enterprises with two or more local units result in a contact with the enterprise for verification before the change is entered into the Business Register.

Due to backlogs, it can take up to three weeks before an actual change is available in the Business Register. As a consequence, a small percent of the enterprises have incorrect data at each extraction time.

Material from the Swedish Tax Agency, which constitutes a large amount of the input data to the Business Register database, is processed in a separate part of the production system. Telephone numbers, industries and addresses are edited to some extent. Double notification items are handled manually. Through automated comparisons between the information previously received from the Swedish Tax Agency, today’s delivery and the information available in the Business Register, decisions are made on the measures that must be taken with regard to each enterprise. For small enterprises (less than 15 employees), this leads to the

creation of notification items for updating in the database. Changes in large enterprises, with 15 or more employees, leads to cases in the checking system being investigated manually, often in contact with the enterprise in question. Changes in enterprises with more than one local unit are investigated manually regardless of the size based on the number of employees.

Information from Svensk Adressändring AB is processed manually. Non-active enterprises are updated with postal address and telephone numbers. Enterprises with one local unit and less than ten employees that are active are updated with location address, postal address and telephone number. Updated manually in the Business Register. The enterprises are contacted to verify the information with regard to enterprises with at least 10 employees and enterprises with more than one local unit, and if it is deemed necessary (for example when the new and old address are geographically far from each other) even in small enterprises. Corrections are made directly in the Business Register application.

The number of employees from the statement of earnings. The material contains all submitted statements of earnings, about eight million. Employees who have worked for several employers in one year have statements of earnings from each employer. The data processing results in information on the number of employees according to the statement of earnings in the legal unit. In enterprises with one local unit, the same information is also listed in the local unit. The objective of the calculation is that a person should be counted no more than one time, and that the salary earned should be large enough to be defined as an employment. Calculated in several stages:

- Approved statements of earnings are selected from the material. An approved statement of earnings is one with a gross wage larger than one base amount and in which employment also applied in December.
- In cases where the person only has one approved statement of earnings, that one counts.
- In cases where the person has several approved statements of earnings, the one with the highest gross wage counts.
- Non-approved statements of earnings are used only for persons who do not have an approved statement of earnings. A check is made to determine whether the person has several statements of earnings that together amount to a base amount. If that is the case, the statement with the highest amount where employment has not ended it counted.

The automated processing creates data about the number of employees according to the statement of earnings in the legal unit. It is compared with the number of employees listed in the Business Register, and lists of large changes are retrieved as below.

The lists are checked manually. Enterprises with at least 10 employees are always contacted, although also in small enterprises, a telephone call is often the only way to sort out differences between the Business Register and the statement of earnings.

Enterprises that are not retrieved on the list are updated automatically with the variables number of employees according to the statement/statements of earnings

(for the year the statement refers to). The number of statements of earnings, salary according to the statement of earnings, number of mobile employees (ASTNr 99980-99999) are also updated.

Other register information from internal and external registers is handled in a similar way. Automatic notifications are created, unmatched relationships are listed and investigated, as are large changes. The enterprises are contacted when deemed necessary. Corrections are made using the automatically generated notices and using manual registration in the Business Register application.

In the survey Business Register verification, information is collected via a web form that is reviewed in the review application. Then, new information is sent to the Business Register system. Some changes may require contact with the enterprises, for instance to check whether it is a matter of really new/really closed local units, or whether it is a matter of transfers in which another enterprise is involved. User guidelines and instructions for reviewing variables are available for handling the surveys.

In checks of location addresses in manual register maintenance, Eniro, Hitta, websites and the postal database PDB (postal codes, addresses, etc.) comprise the basic tools for the checks. The aim is to be able to find correct location addressed in the Business Register.

Automatic checks. A change in the information in the Business Register leads to a large number of automatic checks. The checks are the same regardless of whether the change is registered manually in the Business Register application or by updating through automatic notices. The units (enterprise unit, local unit, legal unit, activity unit, activity unit, see 1.2) in which the error codes landed are saved in a table for each unit type. At the next update of the unit, for example, correction of the error, the checks are run again, and the error codes that no longer appear on the item are removed, while any new errors are added. Inconsistency checks are one of the checks that can be mentioned.

Source codes with various levels of priority are used to automatically rank information arriving for updating together with information already available in the Business Register.

### *3.3.1 Coding*

SNI coding, or valuation of existing SNI codes in the Business Register, is carried out once a year for enterprises included in the survey Industrial production of goods and refers to SNI for main groups 05-33, 38 and 58.

### *3.3.2 Imputation*

No imputation is done in the Business Register or the SAMU frames.

### *3.3.3 Model calculation*

*Data on the number of employees retrieved from the statements of earnings*  
Every year, employers send in statement of earnings for each employee to the Swedish Tax Agency, which contains the individual's salary /remuneration from

the company for the previous year. Every year, Statistics Sweden receives the statement of earnings data from the Swedish Tax Agency and can then supplement the Business Register with the number of employees per enterprise based on a model where each person is counted a maximum of one time. Since a person can have more than one statement of earnings, a decision must be made regarding which statement of earnings should be counted. The months which the statement of earnings refers to are utilised for this purpose.

In the Business Register, in order to count a person as an employee of an enterprise with the use of a statement of earnings, the person must:

- earn at least one price base amount during the year, which was SEK 44 400 in 2014;
- not have higher earnings from another enterprise;
- not have ceased employment with this enterprise during the income year.

Every year, the number of employees in enterprises with one local unit is updated. The number of legal units that are updated varies, but amounts to between 120 000 and 130 000. About 65 percent of all active legal units that are registered in the Business Register as employers have the statement of earnings as the source of information on the number of employees.

#### *Data on the number of employees retrieved from the tax return*

Gross wage plus benefits for a legal unit are divided by the average wage for the economic industry and the legal form. Updated monthly for enterprises with one local unit and affects about 250 legal units per month.

#### *3.3.4 Derivation*

There are a number of automated derivations carried out in the Business Register based on administrative sources. Those described below should be present for all relevant objects. (Adjustment for each object in Section 1.1.3.)

<b>Variable</b>	<b>Derived from</b>
Activity status	Different values of the Swedish Tax Agency's information on the enterprises' registration for VAT, as employer and for F tax.
Municipality code	Location address
Ownership category	Legal form
Sector	Legal form
Type of listing (PrivPubl)	Legal form
Legal form	Statistics Sweden codes legal form = 10 for natural persons. This legal form does not formally exist, but is used in the Business Register for practical reasons.
Number of employees according to statistical measurement (AnstS)	Number of employees when AnstSDiff = 1 for local unit
Economic sector, statistical (NgS)	Economic sector administrative Ng when NgSDiff = 1 for local unit
Location address	Postal address when location address is missing for the local unit

Initially, a sector code is assigned where it is most likely that most of all types in each legal form belong. Then, the remainder is assessed manually, or input is awaited from other statistical areas with more knowledge about each object.

### 3.3.5 *Checking*

#### *Duplicate checks*

All objects in the Business Register have unique identities, and duplicates do not occur in this regard.

#### *Reasonableness checks*

Between SAMU frames, various types of checks are carried out in the production of the Business Register. Some can be considered to be reasonableness checks, other cannot. Here, checks are specified that are carried out towards the end of the production round and/or based on a level that is not exclusively linked to the collection objects local unit and legal unit. Special checks are carried out at ES/REG and DFO/SF before the production of a new SAMU frame. The starting point for the checks is the legal units marked “complex” or “SF” in the Business Register application.

<b>Task</b>	<b>Time</b>	<b>Who has the task</b>
Register maintenance of local units and legal unit (Svaab, SKV, Feedback from the statistics)	Running	DFO/FU or ES/REG
Business Register verification	Aug-Nov	DFO/FU with some exceptions ES/REG and EFO/SF. See below
Distribution of employees for local units with more than one local kind of activity unit	Appears on an errors list when the number of employees is changed regularly	ES/REG DFO/SF
Check list for enterprise units divided by activity units after change to the local kind of activity unit	Running	ES/REG DFO/SF
Check holding companies' coding with regard to SNI and NgSdiff	Continuous for new arrivals and before SAMU	ES/REG DFO/SF
Check SNI changes for legal unit	Running or not	ES/REG
Check SNI changes for enterprise units with 200 or more employees	Running or before SAMU 44 times a year	ES/REG DFO/SF
Check New enterprise units with 200 or more employees	Running or before SAMU 4 times a year	ES/REG DFO/SF

Check Sector affiliation	Before SAMU 4 times a year	ES/REG DFO/SF
Check enterprise units with 200 or more employees and with changes to number of employees	Before SAMU 4 times a year	ES/REG DFO/SF
Industrial production of goods industries for multiple local units enterprise/forms	Sept/Oct	ES/REG DFO/SF
Update legal unit content for small enterprise units and possibly activity unit structure	Before SAMU in March and November	ES/REG DFO/SF
Check that all local units within one help enterprise unit has NgSdiff = 5 and 6	Before SAMU 4 times a year	ES/REG DFO/SF
Legal units in small enterprise units with deviating NgS	Before SAMU 4 times a year List submitted to the person responsible for IT	ES/REG DFO/SF
Activity unit share of total turnover for enterprise units with more than one local unit	Before SAMU 4 times a year List submitted to the person responsible for IT	ES/REG DFO/SF
Profile and classify enterprises that have emerged via feedback from the statistics, but also via own searches	Running	ES/REG DFO/SF
Reprofile already profiled enterprises	Running	ES/REG DFO/SF
Monitoring/check of NgSdiff 2,3,5,6 and 7 to ensure it is correct.	Before SAMU 4 times a year	ES/REG DFO/SF
Various inconsistency checks Enterprise unit other status than activity unit. Active legal unit to non-active enterprise unit. Check that small enterprise unit has a main unit.	Running	
Check of statement of earnings, 3 types of lists	April and Oct	
Miscellaneous other Profiling, Feedback, and more		

*Changes*

See above.

*Comparisons with other registers/sources*

No particular comparisons are made between the Business Register according to the version described here and other registers besides those available in the Business Register system and are used to updated or review the information in the Business Register.

Population reconciliation is done to some degree for the object activity unit using information from the statement of earnings. Otherwise, tax returns (gross wages and turnover) are used to reconcile and derive data about the number of employees and turnover in the Business Register.

*3.3.6 Concerning particular registers*

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## Appendix 1 Information and instruction

### Information

The main purpose of the Description of the register (BaR) is to describe the characteristics of the register based on the primary purpose of the register, that is, the register's primary statistical use. Another purpose is to describe the register in such a way that secondary users of the register may also use the information and make a quality assessment based on the purposes and requests.

Being able to describe the quality of the register requires cooperation between the register producer and the statistical producer. This is because the quality cannot be described solely based on the register; it needs to be supplemented with the statistics' purpose and requests.

A quality description should be carried out in three stages:

1. Register description.
2. Description of statistics (purpose and requests).
3. A common quality assessment of the register based on the register itself and the purpose and requests of the statistics.

The register producer and the statistics producer need to cooperate to complete Section B.4. In the first year, the register producer completes as much as feels reasonable; *after* the first year it should be considered whether the section should be adjusted.

The description of the statistics (BaS) describes the statistics and how the production of statistics has affected its quality, while SCBDOK describes how statistics has been produced "from farm to table". The description of registers contains information for both the description of the statistics (Chapters A and B) and SCBDOK (Chapters A and C), and can contribute with information to certification of statistics under ISO 20252.

### Instruction

#### *Instruction for documentation*

Producing a description of registers requires information from the *Checklist for reviewing* and *Metadata in register production*. The help text under each heading contains a reference to the *Checklist for reviewing* and to the chapter in *Metadata in register production* where the information can be found. In addition, knowledge is needed on how data is collected outside Statistics Sweden, to increase understanding for the variables and be able to assess the quality.

Explanations of some of the concepts used in the BaR template can be found in Appendix 2 *Terminology*.

BaR has three main sections:

- Section A – General description of the register and changes that have occurred or that are planned.
- Section B – A description of how the quality is expected to be affected by the different stages of register production.
- Section C – A description of how the register has been produced. A summary of *Metadata in register production*.

*Specific questions*

How do you describe an integrated register in the description of registers?

- Focus on what is unique in the integrated register.
- Describe any data that is collected externally.
- Describe what is done differently compared with the registers that are retrieved internally; otherwise a reference to its documentation is sufficient.

## Appendix 2 Terminology

The terminology is intended to be of help in filling in the document, but cannot be considered to be established general terminology at Statistics Sweden.

Terms	Description
Quantitative variable: continuous or discrete	A qualitative variable is a numerical variable. A continuous variable can adopt all values in its area of variation. A discrete variable can only adopt certain numerical values, such as integers from zero and upwards. Examples of quantitative variables include age, length, income and number of children.
Qualitative variable/categorical variable	A qualitative/categorical variable is a variable that adopts non-numerical values and whose variable values can be coded (including numerical codes). No average values can be calculated. Examples include sex, civil status and industry.
Unit non-response	Unit non-response means that all information is missing from an object.
Item non-response	Item non-response/variable non-response means that one or more data are missing from an object that has been examined.
Deviation errors	Signals from checks focused on deviation errors normally just mean that there is a suspected error. This data must be examined further in order to establish whether or not they are incorrect. One way to detect deviation errors is to use acceptance limits.
Contradictions	The value of a variable is contradicted by the value of one or more variables.
Source	Data of external origin, that is, administrative data from, for example, another authority.
Registers	Data processed and checked at Statistics Sweden and that is prepared in a final observation register, such as the Business Register, the Total Population Register or the FR.
Source = register	Refers to integrated registers in which variables are retrieved from other registers at Statistics Sweden.

Producer of the register	The person who produces the current register.
Statistics producer	The person who produces statistics from the current register.
Indata	Data delivered to the register in question, normally from an external source, such as the Swedish Tax Agency, the Swedish Social Insurance Agency or Lantmäteriet. Input data can also originate internally from Statistics Sweden.
Output data	Input data that has been checked and normally processed. A final check is made before output data is granted the status as final observation register. Output data must not be confused with a retrieval from the register.
Input data supplier	Supplier of input data, such as external suppliers of administrative data.
Collection unit	The unit at Statistics Sweden that collects data, such as the collection units at DFO and DIH as well as the base register units.
Key figures	Statistics that are used to check that the review succeeded in the register production.

### **Appendix 3 Changes compared with the Description of the statistics, version date 2012-11-26**

The purpose of the description of the statistics is to describe the statistics and the purpose of the description of registers is to describe registers. For this reason, the templates for the description of the statistics and the description of registers will differ slightly. The description of the statistics is used as a model for constructing the description of registers, although some headings in the description of the statistics are not suitable for the description of registers. Since some headings have been removed or changed as per below, this will also affect the numbering. A new Chapter C has been added to the description of registers in order to provide further information for SCBDOK.

Specification errors have not been included in the description of registers. This is because a specification error can be reflected either as a failing in the content or as a failing in the accuracy after calculation using a model assumption.

#### **Sections that have been removed or changed**

Under A. *General information*:

**A.3 SOS classification** has been removed, since the final observation register may be part of the official statistics system, but the statistics have the SOS classification.

**A.4 Responsible for statistics** has been changed to A.3 Responsible for the register.

**A.5 Statistics producer** has been removed.

**A.8 Archiving regulations** have been changed to A.6 Discarding and archiving regulations.

**A.11 Use of statistics** has been changed to A.9 Use of registers.

**A.13 International reporting** has been removed, since the statistics producer carries out international reporting.

News in the register has been added as a new heading (A.11).

**A.14 Planned changes in future surveys** has changed to A.12 Planned changes in future registers.

Under B. *Quality declaration*:

**1.1 Statistical target characteristics** are used in statistics but do not describe the register. The heading has been changed to Information concerning Statistical

target characteristics, since the information in this section will be used this way. See also 1.1.3 and 1.1.4 below.

Population delimitation has been added as a new heading.

**1.1.3 Statistical measures** do not measure the register, but rather the statistics, which is why this section is not included in the description of registers.

**1.1.4 Study domains** are used by the statistical producers based on the register, which is why it is not a section in the description of registers.

**2.2.1 Sampling** normally does not apply for registers, thus this section is not included in the description of registers. Insofar as you create a register consisting of, for example, persons born on the 15th of the month, this is expressed in Population delimitation, Section B.1.1.1.

**2.2.2 Frame coverage** has changed heading name to 2.2.1 Coverage.

**2.2.4 Non-response** has changed heading name to 2.2.3 Non-response and now has the two subheadings Unit non-response and Item non-response.

**2.3 Reporting of inaccuracy measurements** has been removed as an independent section in the description of registers.

**4.3 Coherence with other statistics** has changed heading name to Coherence with other registers/data.

**5.1 Dissemination forms** has been removed as an independent section, but the information remains under heading 5.3.

**5.2 Presentation** has changed heading name to 5.1 Information dissemination.

**5.4 Access to primary material** has changed heading name to 5.3 Access to the final observation register.

**5.5 Information services** has been removed, but the information remains under heading 5.3.