Abstract

For the purpose of producing FATS and FDI statistics, national statistical authorities of EU and EFTA Member States have developed systems that allow identification of foreign controlled units and of units abroad controlled by resident enterprises. How this has been done differs between Member States. In some Member States, both national statistical institutes (NSIs) and national central banks (NCBs) are engaged in the production. Different registers may be used. Some Member States have well developed business registers which can be used as the survey frame containing information on the structure of the multinational enterprise groups (MNEs) or global enterprise groups, while others not yet have fully implemented this kind of information in their registers. Some use private sources to obtain the characteristics, while others collect the information through own surveys.

Experiences show that an NSI alone does not have the full picture of a structure of MNE or is only able to get this by labour-intensive and costly investigations. Business register staff needs to consult others involved and to tune decisions. The risk of inconsistencies between the business registers of different NSIs is high.

The EuroGroups Register (EGR) aims to serve as the unique frame for collection of EU statistics related to globalisation. The statistics at EU level will benefit by higher quality and consistency, when all producers have agreed on a common frame.

Centrally, the EGR is integrating data from private sources and NSIs by using preference rules based on the topicality and the quality of the data. The results will be checked and eventually corrected by designated NSIs.

Quality checking, information collection and analysis take place at central and national level. Generally NSIs have regular contacts with the large and complex enterprise groups for register and reporting purposes. Also national compilers analyse the statistical reports of those groups and have to their
disposal a lot of knowledge. The EGR offers the infrastructure to exchange this knowledge and to use this knowledge for improvement of information on MNEs.

The EGR network will offer a platform to consult other NSIs and to take coordinated decisions on quality issues like the country of residence of the 'head of the group', operational issues like to which NSI a MNE should report, the treatment of special cases (e.g. special purpose entities) or the treatment of important events like acquisitions or mergers. The EGR will offer the functionality to store and to distribute the end results of this work. By this way a coordinated information basis will be available and quality problems related to commercial data providers can be managed.

1. Introduction

The paper will describe the strategic importance of the EGR (why an EGR is needed?) and the way the EGR is functioning.

The EGR is a still an on-going project. The first version was implemented in 2009. Presently a second version is under development and is expected to be implemented in the course of 2015. An important new feature will be an interactive interface enabling a more effective and efficient data quality management.

An important milestone of 2014 is the implementation of the EGR Identification Service (EGR IS) which allows staff from NSIs and NCBs to uniquely identify legal units in any country of the world.

2. Strategic importance of the EGR


The EGR envisages meeting the needs formulated in Recital No 11 of the mentioned Regulation in the following way: ‘Increasing economic globalisation challenges the current production of several statistics. By recording data from multinational enterprise groups, business registers form a basic tool for the improvement of many statistics related to globalisation: international trade in goods and services, balance of payments, foreign direct investment, foreign affiliates, research, development and innovation, and the international labour market. The majority of these statistics cover the whole economy and thus require that business registers cover all sectors of the economy.’

From this the original EGR mission statement has been formulated:

The EGR is foreseen to become the platform that supports the production of micro based statistics on globalization in Europe, both on country and European level by offering compilers access to integrated and up-to-date register data on those enterprise groups which have statistically relevant transnational

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1 Published in the EU Official Journal on 5 March 2008
operations (financial and non-financial) in at least 1 of the European countries. By way of collecting, comparing and selecting information from different commercial and institutional sources, the EGR provides a set of pooled information that allows compilers of statistics to organize the data collection and to produce statistics on the basis of a Europe-wide shared and coordinated information basis.

The main information objects in the EGR are the ‘legal unit’, the global enterprise group and the national statistical unit ‘enterprise’.

The first important strategic design principle used in the development of the EGR is that the EGR should be output driven. For this purpose in 2008 an extended inventory was made of the stakeholders and their needs.

The following main groups of stakeholders are defined:

a) Inward Foreign Affiliates Statistics (Inward FATS)
b) Outward Foreign Affiliates Statistics (Outward FATS)
c) Foreign Direct Investment Statistics (FDI)
d) Foreign trade in goods and services statistics

When developing the EGR priority was given to serve FATS statisticians. In order to compile inward FATS the EGR should be able:

1) to identify enterprises (statistical unit) resident in EU/EFTA which are foreign controlled and active during a reference year;
2) to provide a country code of the ultimate controlling institutional unit (UCI) of the global enterprise group to which these enterprises belong to be used by all FATS statisticians;
3) to provide a (frozen) NACE code for those enterprises valid for all business statistics.

In order to compile outward FATS the EGR should be able:

1) to identify the UCIs of global enterprise groups, resident in EU/EFTA controlling (directly or indirectly) in and extra-EU/EFTA enterprises, as reporting unit;
2) to identify the controlled (in and extra-EU/EFTA) enterprises;
3) to provide a (frozen) NACE code for those enterprises valid for all business statistics;
4) to enable national statisticians to share/reuse data on EU/EFTA enterprises.

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2 Updated definition (2014): An ‘enterprise’ is an organizational unit which has a sufficient degree of autonomy in decision-making and sells in its own will goods and services to a third party. It can be constituted by one legal unit, a combination of legal units or of parts of legal units. An enterprise carries out one or more activities at one or more locations.
3 legal unit legally responsible for providing Outward FATS data
As a second priority for the EGR the FDI statistics has been defined. The EGR should be able to identify all units involved in a 10% control relationship (of which 1 resident in EU/EFTA) and their UCI and the ‘enterprise’ to which they belong.

Finally also the needs of statisticians producing statistics on trade in goods and services should be met. For this group of users the EGR should be able to uniquely identify the actors involved in cross border trade transactions enabling

1. statisticians to share/reuse already collected data (trade data should be collected once);
2. the identification of intra company trade;
3. the linkage of trade data to characteristics (NACE) of the statistical unit enterprise.

The second design principle applied in the EGR is that the statistical business registers of the participating NSIs in principle are considered as the ‘authoritative source’ for the resident legal units, the control relationships between resident legal units and the resident statistical units ‘enterprise’. The EGR is the store for legal units resident in a non EU/EFTA country, the cross-border control relationships, the control relationships between non-resident legal units and the global enterprise group.

During past years the EGR project was part of a broad program ‘Modernisation of European Enterprise and Trade Statistics’ (MEETS). Within this program also the role of statistical business registers as well as the system of statistical units has been redefined.

The role of statistical business registers as ‘backbone’ for business statistics has been accepted which means that statistical business registers should become the unique place where the statistical units are maintained and produced for all business related statistics on the basis of an agreed frame population methodology.

The present EGR version is limited to global enterprise groups, however also enterprises not being part of a global enterprise groups can be globally engaged. This means that there is a strong need that all enterprises engaged in cross-border transactions/positions could be properly identified in the statistical business registers concerned allowing micro-data linking and data sharing.

This requires an improvement of the interoperability between the statistical business registers. For this purpose the Eurostat launched a new project, called European system of interoperable business registers (ESBRs).

An important part of this framework is the EGR Identification Service. This system has been developed providing a service for a unique identification of legal units worldwide by assigning (by a lack of a global solution) a unique identifier which must be used in the data exchange with and between the statistical business registers.

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3. EGR value chain

The value chain of the EGR (see Figure 1) consists of activities performed in order to deliver the EGR output to the statistical users (national statisticians).

The added value of the EGR is collecting, integrating data from different sources and carrying out data quality management (among which ‘profiling’) aimed to create one and only one coordinated statistical view on the global enterprises groups and its constituent national parts: master frame populations.

Figure 1 EGR value chain
The activities 01, 02, 03 and 04 build the so-called ‘Input domain’ of the EGR process (see chapter 4), activities 05, 06 and 07 the ‘Throughput or data quality domain’ (see chapter 5). The ‘Output domain’ consists of activities 08 and 09 (see chapter6).

Currently the EGR is prioritising the needs of FATS stakeholder\(^5\) by providing:

a) Master Outward FATS frame population of reporting units (UCI’s) referring to a year (T).

b) Master Inward FATS frame population of enterprises referring to a year (T).

Ad a)

The core attributes of elements (legal units) of this population by frame reference year are:

1. EGR ID legal unit being the reporting unit for Outward FATS (ID number by the EGR)
2. NSI ID (ID number assigned by the national business register)
3. EGR ID of the global enterprise group (of which the reporting unit is the UCI – ID assigned in EGR))
4. Date in population of global enterprise group
5. Date out of population of global enterprise group
6. Size class (allowing stratification in sampling)

Presently the EU regulation on Outward FATS requires collecting the national population of reporting units (UCI’s) only data on enterprises outside the EU area, which means there is no direct requirement for the EGR to provide data on the enterprise population within the EU area to Outward FATS statisticians. For outside the EU area the EGR provides data on legal units not as a coordinated statistical unit but as auxiliary information for Outward FATS statisticians. A few Member States collect also data and produce statistics on enterprises within the EU area. A new Regulation is under way which obliges all Member States to do the same. At that moment the Outward FATS population formally consists of 2 subpopulations: the population of reporting units (UCI’s) and the population of enterprises (within the EU to be coordinated by the EGR). EGR is anticipating on this new legal act and is able to provide also EU enterprises to Outward FATS statisticians (= sub population of the Inward FATS population).

Ad b)

The core attributes of elements (statistical unit: enterprise) of this population by frame reference year are:

1. EGR ID enterprise ID number by the EGR)
2. NSI ID (ID number assigned by the national business register)
3. EGR ID of the global enterprise group to which the enterprise belongs

4. Date in population of enterprises
5. Date out of population of enterprises
6. Country code of the UCI
7. NACE code
8. Size class (allowing stratification in sampling)

Size class indicators are added as stratification variable allowing sampling (also on EU level: not practise yet).

The EGR is providing not only the core information but all the data needed to support the data quality management and validation procedures by business register staff and also to support statisticians in their statistical production processes. For these purposes the EGR provides information on the hierarchical legal unit structure of groups, names and addresses, persons employed, meta data (on data, processes, quality, sources), reference dates etc.

The EGR process has a cyclical character. The end products of a cycle are master frame populations as described. Master frame populations are populations to which statistics (must) refer. The next figure provides an overview of 1 EGR cycle. The EGR system allows in principle to process data on subsequent cycles in parallel.

Figure 2  EGR frame populations cycle

Outward FATS population of reporting units reference year T

<table>
<thead>
<tr>
<th>Reference year T</th>
<th>Reference year T+1</th>
<th>Reference year T+2</th>
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<tr>
<td>okt</td>
<td>apr</td>
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<tr>
<td>nov</td>
<td>Final frame population of enterprises</td>
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<tr>
<td>Data quality management on group structure</td>
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<tr>
<td>Validation</td>
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<td>Frame error correction procedure</td>
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Inward FATS population of enterprises reference year T

*Please note that the dates are a proposal and need to be discussed with the different sources and users*
The provision of master frame populations is preceded by an initial and 1 or more intermediate populations serving data quality management and validation processes. In practice it is shown that even after the production of master versions errors are detected. In case serious a frame error procedure is in place to correct the master frames.

4. EGR Input domain

Presently the EGR knows two types of sources/flows. The first one consists of the NSIs and the second one are commercial data providers (CDPs).

The two data flows have in common that information is provided on legal units and control relationships between legal units. A main difference between the flows is that CDP data are standardised and validated in the EGR process itself as data from NSIs are expected to be provided in the standard format and quality as defined in the EGR.

The EGR processes all data received from the NSI and from the CDP. All data files received from the NSIs and CDPs are stored in EGR as received. To ensure that the data can be processed all data files are technically validated at EGR side. All data files which are validated will be technically transformed which results in technically identical data files from all sources.

EGR will have a data processing monitor which will inform EGR staff on the quality of the EGR process. Based on this monitor decisions will be taken, which data will and which will not enter the next process step.

4.1 Select CDP data (01)

Presently Eurostat has an agreement with 2 global commercial data providers on the following services:

1. Information delivery on the complete structure of 5000, for the EU area most relevant multinational enterprise groups

2. A service for the worldwide identification of legal units (integrated in the EGR IS) and a service to provide on request for a set of legal units the upward control chain of legal units (the direct owner and the global group head).

4.2 Select, identify, standardise and validate SBR data (02, 03)

NSIs are expected to send two flows of data: one data set for the maintenance of the EGR IS and one for the EGR.

The following data sets by frame reference year:

a. Information on resident legal units (EGR IS and EGR)

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7 Pointer to ID in processes in figure 1
b. Information on relationship between resident legal units and between resident and foreign legal units (EGR)

c. Information on national enterprises (EGR)

d. Information on global enterprise groups (in case the UCI is seated in the country) (EGR)

The standard procedure is as pictured in Figure 3

**Figure 3 Preparing SBR data**

NSIs are requested to send a subset of their national data to the EGR. Their statistical business register (SBR) holds data on enterprises which are part of all resident enterprise groups or part of multinational enterprise groups. The EGR is interested in the multinational part of national SBRs.

**Selection of SBR data for Outward FATS populations**

The selection of data is carried out by SBR staff in cooperation with the national FATS statisticians. OFATS statisticians are familiar with their national populations of reporting units (UCI’s) and have also relevant information on developments in their population.

These reporting units are the starting point for the selecting data on the national level and to provide to the EGR this population (legal units) including the national group structure (control relationships between legal units).

**Selection of SBR data for Inward FATS populations**

The Inward FATS population of enterprises is a subpopulation of the population for structural business statistics (SBS). The task for national business registers is to select the enterprises which are part of a multinational group, with other words which directly or indirectly under foreign control.
The main challenge for the EGR is to define for these enterprises the country of the UCI. For this the EGR has to define the complete structure of the multinational.

Starting with the population of (known) foreign controlled enterprises NSI’s select national data on national group structures (including foreign ‘owners’ as far as known) and provide these data to the EGR.

The structure of the selected data based on Outward FATS requirements is identical to the structure of the data required for Inward FATS, which means also data on enterprises is included. By this way the EGR is anticipating on the future requirements for Outward FATS.

On the legal units EGR requests the NSIs to indicate whether a legal unit is a global group head (GGH), an Outward FATS reporting unit (UCI) or is foreign owned. This information is used in the data processing and data quality management of the EGR to construct the population of reporting units.

On the relationships EGR request the NSIs to indicate what type of relationship and what is the percentage of control. Four types of relationships are distinguished: control, no control, unknown and consolidated control relationships. The control and the consolidated control relationships are used to establish the cluster of control in the EGR. Based on the no control relationships it is possible that cumulative control will be derived.

Critical for the EGR process are the cross-border relationships between legal units. NSIs are requested to provide the direct or indirect ‘owner’ of resident legal units. Generally this information is available in national administrative registers (in line with EU regulations). However the quality of the identifying information is frequently poor (no standardisation of identifier, names and addresses). The proper identification of legal units is a key activity in the EGR process.

**Process of identification of legal units**

Because data from different sources are integrated the identification of legal units is a critical part of the process. For this purpose the EGR Identification Service has been developed which supports the unique identification of legal units worldwide.

The EGR IS offers identification services for users in batch as well as interactive mode. The EGR IS is available to users via a web interface deployed in the secure remote access environment of Eurostat.

The EGR IS contains information on legal units and assigns unique identifiers to legal units, called LEID numbers. The structure of the LEID number for the EU area is: first 2 positions: the country code of the legal unit, positions 3 to 7: an identifier of the national register of the legal units and finally the national ID number assigned by the register of the legal unit. Outside EU the structure of the LEID is: first 2 positions: the country code of the legal unit followed by a number generated by the EGR system (including a check digit).
As source for information on legal units serve for the EU area the national business registers of the NSIs and for outside the EU area a service of a commercial data provider is used.

Ideally this service should be a service offering via web services direct access to national business registers. Presently only a web service of a commercial data is integrated. NSI are sending regularly data sets to EGR IS to keep it up-to-date.

NSIs are requested to select and to send to EGR IS all resident incorporated legal units, not liquidated on 31/12/Year T or liquidated during year T. This selection is purely for identification purposes. The preferred scenario is that NSIs regularly provide full sets of information on resident incorporated legal units. Several NSIs have already chosen for this scenario. However other NSIs are hesitating or not allowed to do so because of confidentiality restrictions. If a NSI has not chosen for the preferred scenario the service of the one CDP is used resulting in addition of legal units from this provider. In a next stage the NSIs are obliged to provide their version of these legal units.
If NSIs are not able to send all resident incorporated legal units (because of confidentiality reasons), NSIs are requested to send resident legal units of which they know that these belong or belonged to multinational groups, not liquidated on 31/12/year T or liquidated during year T.

It is essential that NSIs identify in the EGR IS all legal units which they will send to the EGR as part of a control relationship. This refers to their resident legal units and also to foreign legal units involved in cross-border relationships. One of the quality controls of the EGR is that all communicated legal units should be identified with valid LEID numbers taken from the EGR IS. Valid means the LEID must be known in the EGR IS.

NSIs acquire LEIDs by offering legal units to the EGR IS for identification. The flows for resident legal units differ from the flows for foreign legal units.

For resident legal units NSIs are considered as authoritative source. When offering information on resident incorporated legal units to EGR IS there are two possible outcomes. If a resident legal unit was not known it is added to EGR IS and a LEID is created and it is send to the NSI. If the resident legal unit is already known the EGR IS information is updated.

The identification process for foreign legal units (being part of a control relationship with a resident legal unit) is different. NSIs can identify foreign legal units by batch or by interactive searches. NSIs cannot add or update directly foreign legal units to EGR IS. In case a foreign legal unit is not found in EGR IS itself, a service of one CDP can be used to search for a legal unit. If found the information of this legal unit is added to EGR IS and a LEID is created.

**Standardising, validating and sending SBR data**

NSIs have to validate their selected data on the basis of a set of common validation rules. For this they are facilitated by a generic validation tool developed by Eurostat. The main advantages are that validation rules are design and maintained centrally. Presently this tool is only accessible in the Eurostat environment, which means that NSIs have to send data sets to Eurostat. In the coming period this tool will become accessible within their own environment which makes this validation process easier and quicker.

NSIs have to map their data to standardised data sets according to the EGR agreed structure, code lists and format (Statistical Data and Meta eXchange SDMX). NSI use a tool (SDMX converter) to convert data into SDMX data sets.8

After data sets comply with the validation rules of EGR the NSI send the validated data sets to Eurostat via a secure communication channel (eDamis) where data are copied into the EGR Input domain.

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8 The SDMX converter creates data files in XML format which increases the size of files in substantially way. This creates serious performance issues in use the validation function in this tool. Still a point of discussion is whether DDI is more suitable for large amounts of micro data.
The exchange of standardised data meeting a common quality is still a challenge. The interoperability between the statistical business registers in the EU/EFTA area has to be improved. A project called European System of interoperable Business Registers, ESBRs has been started in 2014 by Eurostat and NSIs accepting this challenge.

4.3 Standardising, validating and identify data CDP data (04)

This process is carried out within the EGR Input domain. CDP data are standardised according to the concepts, format and structure of the EGR and EGR IS, e.g. names, addresses, national identifiers, NACE codes, legal form codes, etc.

The legal units provided are offered to the EGR IS for identification. This is a fully automated process. If the identifying information does match above a parameterised threshold of X% the legal unit is considered as identified and a LEID number is issued for it. In case of no/insufficient match a CDP legal unit is added to the EGR IS if for the country concerned the CDP is allowed to be source for the EGR IS. This is in principle the case for countries outside the EU and EFTA countries. Within the EU it is only possible for countries for which NSIs do not have the status of ‘full authoritative source’. For countries of ‘full authoritative source’ NSIs legal units can be added to the EGR IS only by the NSI.

5 EGR data quality management domain (throughput domain)

5.1 Integrate data (05)

Integrating data is one of the core functionalities of the EGR. Automated parameterised priority rules define which data from which source are used in the further process.

The design of the EGR is based on the principle that national statistical business registers are the authoritative source for the national populations of resident legal units, control relationships between resident legal units and the statistical unit enterprise. According to this principle this NSI information has priority and EGR does not change this national information.

However, taking into account that the coverage and quality of the national statistical business registers differs and not all NSI’s are able to be ‘full authoritative source’, especially concerning control relationships, the present EGR is integrating data from commercial data providers too.

The consolidation process follows a certain logic. First the legal units are processed. Since legal units are key entities in the information model of the EGR, data on legal units are integrated first. Statistical units like global enterprise groups and enterprises are defined in terms of their constituent legal units.

After the legal units are defined data on control relationships are integrated. This is a more complicated process because the status of legal units involved in relationships has to be taken into account (e.g.
liquidated legal units cannot be part of relationships). Checks and correction on circularity are carried out and information on indirect and direct control has to be integrated as well.

For the statistical units in the EU and EFTA area the NSIs are full authoritative sources which means that data on enterprises are ‘copied’ into the EGR (no integration with data of other sources takes place). Outside EU and EFTA area the enterprises are defined as being equal to legal units.

5.2 Compile and validate global enterprise groups (06)

Based on the pair-wise relationships the so-called cluster of control is derived in EGR. The cluster of control defines the set of legal units which are finally controlled by one and only one legal unit.

The cluster of control builds the global enterprise group. In case an enterprise consists of more than 1 legal unit (situation 2011: only occurring in the EGR for countries which have profiling implemented in their business register: NL and UK), a legal unit (being part of the enterprises) is appointed as the legal representative. On the basis of this legal unit enterprises are linked to the global enterprise groups.

Characteristics are compiled on the basis of the constituent units with the option of manual interference of business register staff. Continuity rules define whether a group ‘keeps’ it identifier or it is getting a new one.

5.3 Data quality management (07)

During an EGR cycle legal units and relationships are continuously processed until a rather stable and accepted global enterprise structure is achieved for a certain reference year.

In the EGR production process the first compiled picture on the global enterprise groups is only a preliminary version of a next frame population. The preliminary version is the basis for further data quality management. Active data quality management is triggered by analysing and validating developments in the frame population compared with previous frame reference years and/or also by analysing and validating significant changes on micro level (e.g. the country of the UCI of a group has been changed) for the most important groups.

Presently data quality management is handicapped due to the absence of an interactive interface with which business register staff of Eurostat and NSIs can carry out such analysis and validation processes systematically and supported by the EGR system. Also the generation and processing of proposals for improvement is yet a complex process.

Presently Eurostat makes a first analysis of ‘suspect’ developments/changes and undertakes accordingly actions for improvement, including requests to NSI for resending improved data. After this phase some overviews are prepared by Eurostat and are sent to the NSIs for analysis and validation.

For 2015 the implementation of an interactive interface is foreseen which supports the business register staff with their analysis, validation and improvement processes. For example notifications will be generated in case of relevant developments/changes. Moreover proposals for improvement (change
requests) can be offered and processed by the system followed by an immediate analysis of the consequence of these requests.

The DQM process is twofold. On one side it consists of analysing and validating levels and developments in the frame populations nationally by a NSI as well as on the EU level by Eurostat (macro validation). On the other hand monitoring the data and changes on the level of the individual global enterprise groups (micro validation).

For the task of macro validation roles are foreseen for Eurostat as EU validator and NSIs as national validator. These roles define responsibilities for validating the quality of the EGR output regarding the total EU and the national frame populations compared with the expected quality (checking coverage, comparing with previous cycles, comparing with other relevant data, investigating quality issues). Solving quality issues require cross-border interaction between the different validators, global profilers and business register staff. In case of disagreement the Eurostat validator has a decision taking role.

The TOP 500-600 global groups will be monitored on the micro level. Global profiling will be carried out in the future by NSI staff. Profiling will be a crucial instrument in securing the quality of the groups with a substantial influence/impact on statistical outcome.

6 Create master frame populations (08)

After the phase of validating the preliminary/intermediate frame populations a final frame population is created, this is called the EGR master frame population.

The aim is that this frame population becomes (by EU law) obligatory for FATS statisticians in defining their national populations.

The EGR is still in the phase of building up a quality level acceptable for FATS statisticians. The quality level accepted by FATS statisticians is a precondition to make a EGR master frame population obligatory.

A tool (called the EGR FATS interface) has been developed with which statisticians are able to select and download their national master frame populations from EGR.
7 Frame error correction procedure

Despite the validation procedures the practise will be that during the statistical production processes errors in the EGR are detected. Under certain circumstances the EGR will process corrections on the final population if they really have a high impact.

8 Future challenges

The EGR is a business register in development and in continuous discussion with its data providers and its users. At the moment there is no legislation which obliges the NSIs to use the EGR in their national statistical process. The EGR has still a long way to go. Challenges of the near future are:

1. The EuroGroups Register as a backbone for globalised business statistics

It is not a general praxis that statistical business registers are used as the only source for populations. The maintenance and use of domain specific repositories are still not rare phenomena. Presently the
Director Generals of the NSIs are preparing a policy decision on ‘the EuroGroups Register as a backbone for globalised business statistics’.

2. Towards a system of interoperable statistical business registers

Organising the synchronisation of data, methods and processes in the business register domain is another major challenge: achieving interoperability between national statistical business registers (a European System of interoperable Business Registers).

3. A common frame population methodology

Getting commitment of NSIs (business register staff as well as statisticians) on a common frame population methodology and after the definition commitment on a time table for implementation. The fact that FATS and FDI statistics are produced in NSIs as well as National Central Banks adds an extra dimension.

4. Cooperation and sharing information

An effective cooperation and willingness to share information between the business register staff and the FATS statisticians, not only within their own statistical institute but also with other statistical institutes country, are critical success factors in data quality management.

5. Unique identification of legal units

The identification of actors in financial positions and trade transactions are a key success factor in business register work enabling statisticians using information from different sources and integrating data on common entities/statistical units. A worldwide use of unique identifiers (e.g. the LEI initiative) would support the production of quality statistics on globalisation. This kind of initiatives should be supported by statistical institutes worldwide. The Identification Service is a tool which helps a proper identification. The participation of statistical institutes outside the EU/EFTA area in this service should become an option to be investigated.

6. Standardising of cross-border information

Generally, on the national level a huge amount of information is available on cross-border control relationships. However a proper and efficient use of these data in data quality management requires further standardisation of identifying information.

7. User driven data quality management

As mentioned before the use of the EGR is not yet obligatory for the production of statistics on globalisation. But all stakeholders see the EGR as an essential step forward to produce more efficient

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9 See: http://www.leiroc.org/
statistics with a better quality. Stakeholders can only be convinced of the use of the EGR by offering a satisfying quality level. Measurement\(^\text{10}\) and agreeing quality levels with users build an essential basis for defining and implementing a quality management program (among which global ‘Profiling’).

\(^\text{10}\) An EGR quality measurement framework is available