

Data linking and globalisation: Eurostat's project EuroGroups Register (EGR)

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Abstract

The statistical capture of aspects relating to the globalisation phenomenon is a challenge for the official statistics, as the underlying activities are trans-national or multinational, and statistics are usually bound to national boundaries.

With the EuroGroups Register (EGR) project, Eurostat is currently linking national business registers used for statistical purposes in the European Statistical System (ESS) Member States in order to improve the information on Multi National Enterprise groups (MNEs).

EGR can be described as a network of registers consisting of a central register at Eurostat and local registers in the ESS Member States containing data about MNEs and on their constituent units

The paper will illustrate the identification, linking, consolidation and validation processes in EGR as well as the main functions available for the EGR users.

Finally the present state of the EGR project will be assessed and the benefits and challenges of the EGR use will be discussed.

Key Words: Data linking, Globalisation, EuroGroups Register (EGR)

1. Background

With the advent of globalisation, economic activities undertaken by enterprises are extending more and more beyond national borders.

As a result, official statistics are faced with new challenges, particularly with respect to the need for:

- information on globalisation phenomena
- increased statistical standardisation
- data linking at national and international level.

The EuroGroups Register (EGR) proposes solutions to these challenges.

EGR is the statistical business register of multinational enterprise groups in Europe and contains structural economic information on multinational enterprise groups, their constituent legal units and corresponding enterprises, having at least one legal unit located in a country of the European Statistical System (ESS).

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The purpose of the EGR is to offer users a tool for improving and coordinating population frames across different countries.

A population frame is a statistical data file containing all the statistical units that are in scope for a certain statistical activity.

EGR users are statisticians in the ESS using population frames to produce globalisation statistics. For the time being EGR is mainly used by producers of foreign affiliates' statistics (FATS).

The European Statistical System ²(ESS) is a partnership between the statistical systems of the EU member states³ the statistical office of the European Commission (Eurostat⁴), and the statistical systems of the European Economic Area ⁵(EEA) and the European Free Trade Association ⁶(EFTA) countries.

The primary purpose of the ESS is to co-operate in the development of EU statistical laws and other agreed policies of joint action. EU statistical laws aim to provide reliable and comparable official statistics across member states to inform political and public decision making about EU policies.

The EGR is one component of a broader system called the European System of Business Registers (ESBRs) which is established as a complete and consistent European system of interoperable business registers comprising of National Business Registers (NBRs) and the EGR. The ultimate goal of the system is to provide a coherent set of frames to a variety of stakeholders to support the production of statistics, contributing to high quality information on the European economy and society in a globalised context.

2. Short EGR history

In June 2003 in Geneva, Statistics Canada organized a Seminar on globalization within the 51st plenary session of the Conference of European Statisticians. Based on the results of the session a project was launched, called the MNE Project – Seeing the whole elephant!

The MNE Project was an experiment on measuring the activities of MNEs using a mirror exercise: measuring some economic data on individual enterprises in one country (traditional data collection) vis-à-vis measuring the same data from the top MNE (new top down data collection). Five national statistical institutes participated: Statistics Canada, INSEE (France), ISTAT (Italy), CBS (Netherlands), and ONS (UK). The results showed that it was necessary to start building an information systems integrating information across countries on MNEs and share them to have better quality.

As a follow-up of the MNE Project in 2006 Eurostat launched the EGR Pilot project for

² <http://ec.europa.eu/eurostat/web/european-statistical-system/overview>

³ http://ec.europa.eu/europe2020/who-does-what/member-states/index_en.htm

⁴ <http://ec.europa.eu/eurostat>

⁵ <http://www.conformance.co.uk/info/eea.php>

⁶ <http://www.efta.int/>

the creation of a European Business Register on Multinational Enterprise Groups. The project was run by a consortium of four national statistical institutes: CBS (Netherlands), ONS (UK), DESTATIS (Germany), KSH (Hungary) and one private IT company.

The pilot was evaluated by Eurostat as successful and **EGR version 1.0** was set up in 2008. As legal background the new version of the business register regulation was published in 2008 allowing micro data exchanges for the creation of the EGR. EGR 1.0 produced 4 yearly frames for reference years 2008 to 2011.

EGR 1.0 process was based on commercial data validated by NSIs.

In 2011 the new concept of **EGR, version 2.0** was launched. EGR 2.0 was completed in 2016 with several new applications. The new version is based on NSIs data supplemented by commercial data. The EGR redesign was targeting several goals:

- Improve EGR process - collecting NSI data and supplementing them with commercial data.
- Improve EGR functionalities - (e.g. better validation of input files, collaborative platforms for users)
- Create on-line applications for users with remote access
- Create a system assigning unique identifiers to the legal entities applied in the EGR data exchanges
- Improve the quality of output
- Targeting complete coverage

3. EGR applications

The EGR 2.0 consists of a main application for the administration of the system (EGR CORE) linked with on-line tools of remote access provided to the users, allowing them to consult the EGR data in the various steps of the EGR production cycle.

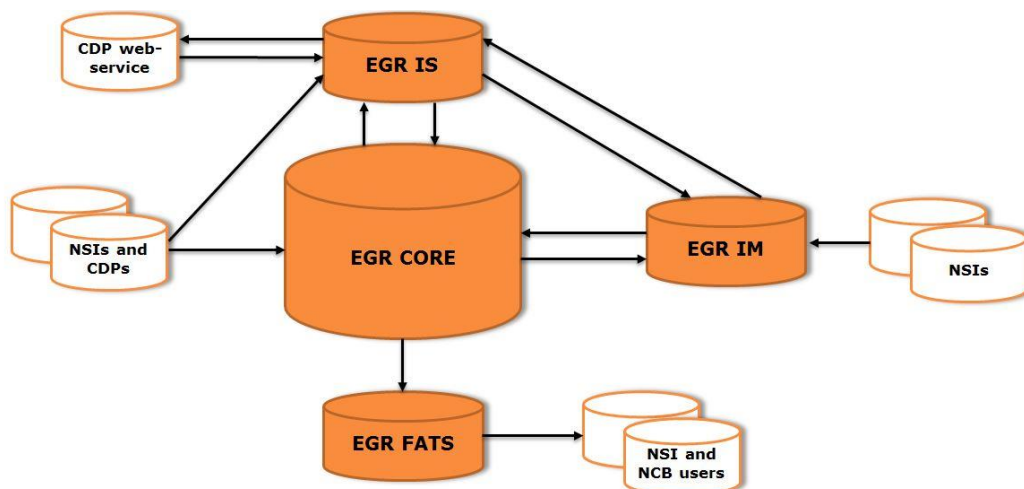


Figure 1: The EGR 2.0 applications

3.1 The EGR Identification Service

The EGR Identification Service (EGR IS) allows users to identify legal units and assigns unique identification numbers to these units. The EGR IS aims to cover all incorporated

legal units that may potentially be part of multinational enterprise groups.

3.1.1 The legal entity identifier number (LEID number)

The legal entity identifier number (LEID number) is the unique identification number assigned by the EGR Identification Service. The structure of LEID numbers has been created by Eurostat specifically for the purposes of the EGR; the LEID number is a combination of the country code, register code and national identification number of the legal units.

The unique identification of legal units is critical for avoiding duplications in the EGR. The use of the number is mandatory in the EGR process. For instance, when Member States' national statistical institutes inform the EGR of relationships between resident and foreign legal units, both units must be identified with LEID numbers.

3.1.2 Sources and updating of the EGR Identification Service

The EGR Identification Service uses a database for searching, matching and identifying the legal units. The database is maintained with data of the national statistical authorities of the ESS countries and with data from commercial data providers.

Business registers held by the national statistical authorities - The role of the NSIs in maintaining the EGR IS database can vary:

- Authentic store NSIs - National statistical authorities which send data on the full population of incorporated legal units to the EGR IS are called 'authentic store'. The register of the national population of incorporated legal units is updated once a year. Where the national statistical authority is classified as an 'authentic store', it has the exclusive right to register new national legal units with the EGR IS. Commercial data providers cannot request new legal units to be added on the basis of their data.
- Partially authentic store NSIs - National statistical authorities that provide the EGR IS with details of only those incorporated legal units which they know belong to global enterprise groups are called 'partially authentic store'. The register of the national population of incorporated legal units is updated once a year. Where the national statistical authority is classified as a 'partially authentic store', both it and commercial data providers have the right to register new legal units in the database.

Commercial data providers - Where the NSI of an EU or EFTA country is a partially authentic store, details of new legal units can be sent to the EGR IS by both the NSI and by commercial data providers. Information already received from the NSI in relation to a particular legal unit is not overwritten by information on that same unit provided by a commercial data provider. Legal units in ESS countries can be added to the database on the request of commercial data providers on the condition that the legal units have a valid national ID number.

Commercial data providers are, for the time being, the EGR IS's only source of information on legal units outside the ESS countries, as the national business registers only contain information on domestic legal units. Commercial data providers provide the EGR with data on legal units twice a year. The information sent by the commercial data providers is matched up to the records held by the EGR IS where possible (i.e. to identify for which units there is already a record and which are new). For those units for which

records already exist, these are updated with the new information; for those units for which no record yet exists, a new record is added to the system. In addition to the fact that commercial data providers send data to the EGR on a regular basis, users of the EGR IS database can also search for legal units in the databases of these commercial sources, via a built-in web service within the EGR IS. They can then add commercial records for legal units from outside the ESS countries to the database at any time.

3.1.3 Functionalities of the EGR IS

The EGR allows retrieving identification information relating to legal units. The LEID number is the unique identification number assigned to legal units. In addition to the LEID number, the EGR IS also contains other information serving to identify a particular legal unit, e.g. the name and address of the unit and/or additional ID numbers. Users can search for legal units using any of these pieces of ‘identifying information’ and can then download the full file of information relating to that unit into their national statistical business registers.

Manual identification of legal units - The online interface of the EGR IS allows users to search for one specific legal unit. To carry out a manual search, the user must enter the country in which the legal unit is based, and can then add additional search criteria such as the company name, the city in which it is based, its address, its national ID number, LEID number, commercial ID numbers or other ID numbers (e.g. VAT number). At least one of the company name, the national ID number and the commercial ID number should be entered when performing a search.

logged in as volfizs (NSA_NA_HU_BR) | LOGOUT

The screenshot shows the 'EuroGroups Register Identification Service' interface. At the top, there is a navigation bar with the European Commission logo and the text 'EuroGroups Register Identification Service'. Below this, there are three tabs: 'Online identification', 'Batch identification', and 'Datasets management'. The 'Online identification' tab is active.

The 'Identifying data' section contains a search form with the following fields:

- Country: CROATIA (HR)
- Name: Podravka DD
- National ID: (empty)
- DUNS: (empty)
- BVD ID: (empty)

 There is a 'Show advanced search' link and a 'Run identification' button.

The 'Data sources' section shows '1. LEID Database'.

The 'Identification process' section displays a table of results from the LEID Database (Number of matches: 20):

SOURCE	COUNTRY	NATIONAL ID	DUNS ID	BVD ID	NAME	CITY	SIMILARITY	ACTION
NSA_NA_HR_BR	HR	18928523252		HR3454088	PODRAVKA DD	KOPRIVNICA	100.0%	?
NSA_NA_HR_BR	HR	52935153496			KORANA DD - U STECAJU	KARLOVAC	67.0%	?
NSA_NA_HR_BR	HR	56994999963			JADRAN DD	CRIKVENICA	66.0%	?
NSA_NA_HR_BR	HR	29735620766			SONIK DD	VINKOVCI	60.0%	?
NSA_NA_HR_BR	HR	58701507957		HR3005372	COLAS HRVATSKA DD	VARAZDIN	60.0%	?

Figure2: Manual identification screen from the EGR IS

The EGR IS provides the user with the results of their search immediately on screen. Where there is just one single result, e.g. for a search on a national or commercial ID number, the identification information of the legal unit that matches the search criteria entered will be displayed in full. Where the search produces multiple results, e.g. for a search based on a name, up to 20 possible matches will be displayed by the system, sorted in descending order on the basis of a score indicating the similarity. The user can select any one result from the list to see the full identification information relating to this legal unit.

If the EGR IS does not find any results for a search relating to a legal unit from outside the ESS countries or a legal unit based in a country whose national statistical authority is a 'partially authentic store', the user can resubmit the request and the EGR IS will then search for the legal unit within the database of a commercial source.

The commercial data provider searches its database for matches, based on the country code and the name of the legal unit, and the three closest matches are then sent to the EGR IS. The user can select from these results the one that best matches their search criteria and the details of this legal unit will then be obtained from the commercial source and added to the EGR IS database.

If the EGR IS does not find any results for a search relating to legal units based in countries whose national statistical authorities are 'authentic stores', the user should refine their search criteria and perform a new manual search. This type of search cannot be resubmitted to the commercial data provider because new legal units cannot be added for 'authentic store' countries to the database on the basis of information from commercial data providers.

Batch identification of legal units - Where users need to identify a set of legal units, they can send files containing the search criteria to Eurostat via eDAMIS⁷.

Eurostat uploads the identification files onto the EGR IS and the user can see and manage their data files via the system's interface. The user can then launch the batch identification search and the matching results will appear directly on screen.

3.1.4 Search mechanism applied in the identification process

Where searches are performed using ID numbers, the EGR IS will produce either one single result or no results. Where a search has multiple results, e.g. a search based on a name, the system may display up to 20 possible matches, sorted in descending order, on the basis of how well they match the search criteria. It is only when a search is performed using text, that the system computes the closeness of each match.

⁷ eDAMIS, electronic Dataflow Administration and Management Information System, is a modern communications management system allowing easier and more accurate transfer of data between various national, EU institutions and Eurostat.

European Commission > EGR Identification Service

Online identification | **Batch identification** | Datasets management

Identification request number: 518

Basic info		Legal unit info	
Dataset name	EGR_ISNORLE_N_II_2012_0001_V0013_07112014	Number of Legal Units	391
Request date	2014-11-13	Resident Legal Units	0
Request status	FOR_VERIFICATION	Non resident EU Legal Units	0
		Non resident non EU Legal Units	0

Identification process (After source with priority: 1)

Identified		Open for identification		Not identified	
Number of Legal Units	56	Number of Legal Units	233	Number of Legal Units	102
Resident Legal Units	0	Resident Legal Units	0	Resident Legal Units	0
Non resident EU Legal Units	56	Non resident EU Legal Units	233	Non resident EU Legal Units	102
Non resident non EU Legal Units	0	Non resident non EU Legal Units	0	Non resident non EU Legal Units	0

Identified | **Open for identification** | Not identified

Identifying data							
COUNTRY	CITY	NATIONAL ID	DUNS ID	BVD ID	NAME	NUMBER OF RESULTS	ACTION
GB	AYLESBURY	LP10694	215590427		ACCO BRANDS EUROPE HOLDING LP	19	
GB	LEICESTER	1073957	211170519		URSCHEL INTERNATIONAL LTD	20	
GB	ABINGDON	314578	210289609		TAYLOR & FRANCIS LTD	20	
GB	MANSFIELD	776384	210154720		DUNLOP SLAZENGER INTERNATIONAL LTD	20	
GB	HAYES	5957575	516404584		UNITED BISCUITS HOLDCO 2 LTD	20	

Items per page: 5 | Page: 1 / 47

Close request | Resubmit | Show source | Back

Figure 3: Batch identification screen from the EGR IS

The EGR IS computes the closeness of the match on the basis of the Levenstein distance algorithm. For each of the criteria provided, the distance between the criterion value (i.e. the term entered in the search) and the entry in the corresponding field of the record suggested as a possible match is computed. A weighted average is then taken of the 'similarity score' for each criterion. This is shown as this result's 'final score' on the search results panel.

The criteria used in the full text search have the following weights: name of the legal unit: 4; country code: 1 (the country code must match exactly); address: 1; postcode: 1; city: 1. Where the data for the address, postcode or city is missing or has a low 'similarity score', the system will not take these fields into account in calculating the weighted average.

3.2 The EGR CORE

EGR CORE is the key application of the EGR 2.0 system, which consolidates the input data arriving from sources, creates group structures and generates the EGR frames.

3.2.1 Functionalities of the EGR CORE

The application is only accessible to the EGR administrators at Eurostat running the EGR production cycle (it is not opened to users). During the production process the functionalities of EGR CORE follow the main concepts of EGR 2.0:

- Authenticity of NSIs data
- Unique identification of units
- Record based updating
- Live register / Master frames

The main functionalities are as follows:

- Stores EGR data in the different production phases: source, transformation, consolidation, output
- Consolidates the input data arriving from sources, creates consolidated legal units and consolidated relationships (where needed conflicting cases are treated by the system according to the priority rules of the sources)
- Processes pair-wise relationship data following EGR 2.0 priority rules and creates EGR group structures
- Generates the EGR frames, output data, from the EGR structures
- Administrative module for system settings and user management

3.3 The EGR Interactive Module

The EuroGroups Register Interactive Module (EGR IM) allows users to browse and modify group structures, relationships of group members and characteristics of the enterprise groups data during the EGR production cycle.

EGR IM provides the means for users to look into the consolidation area of EGR CORE in the context of reference year. The consolidation area includes all legal units and relationships which were processed by the system.

In the consolidation area not only multinational groups' units can be found, but also domestic groups and unlinked legal units. Only the data delivery process from the consolidation area to EGR FATS will filter the groups, where only multinational groups will be forwarded to the EGR frames in EGR FATS.

3.3.1 Functionalities of the EGR IM

Search and display global enterprise groups - Searches can be executed in EGR IM based on enterprise group attributes and on legal unit attributes (name or identifiers).

logged in as volffiz | LOGOUT

2014

Some features of application were temporary disabled by system administrator, please come back later if you need full access.

Search on: GEG Legal Unit

Search on: GEG

Search criteria

GEG EGR ID*	<input type="text"/>	GEG UCI Country	<input type="text"/>	GEG UCI City	<input type="text"/>
GEG Name	<input type="text" value="Group ONE"/>	GEG GGH Country	<input type="text" value="BELGIUM (BE)"/>	GEG NACE	<input type="text" value="code"/>
1-Search on EGR ID uses complete match. The other text attributes use partial match.		Relevance indicator	<input type="text"/>	IPT profiling indicator	<input type="text"/>

Search results: 0

Search Clear

EGR IM 6.0.11 Top

Figure 4 - Search page of the EGR IM application

Updating group structures - Users can modify group structures with adding or changing pair-wise relationships between legal units.

Updating group data - In EGR IM users can update groups' attributes, for example the global decision center. Other characteristics of the groups can be also updated, for example group name, group employment, group consolidated turnover.

Notifications and comparison of data - On the changes and for some variables also on proposed changes of other NSIs notifications will be sent by EGR IM to the user. Users also can compare in EGR IM groups between reference years.

3.4 The EGR FATS online Interface

The EuroGroups Register FATS online interface allows browsing, comparing and downloading the data of the preliminary and final populations of the EGR. The application is designed to facilitate the production of foreign affiliates' statistics (FATS). EGR FATS is presenting the EGR data according to the needs of FATS statisticians.

3.4.1 Functionalities of the EGR FATS

EGR FATS provides a means of consulting the data on groups stored in the EGR via an online interface. Users can consult data on enterprise groups, on enterprises and legal units in them, providing at least one of the legal units is registered in the country where the user is based.

All output data from the EGR production cycles can be found in EGR FATS, including data on the characteristics of the enterprise groups, of the individual enterprises in a group and of the legal units making up the group. Users can browse the

EGR data, download data files in predefined formats and compare the different annual EGR populations with statistical tables.

The screenshot displays the 'EUROPEAN COMMISSION FATS Online Interface'. The main content area shows a table titled 'Frame population general info (Total EGR)' with the following data:

Reference year	2013	Number of global enterprise groups	46835
Frame version	Final	Number of enterprises	497989
Initial downloaded Frame Population Version	Not selected	Number of legal units	611872

Below the table is a 'Quick search' dialog box with the following fields:

- Entity type: Enterprise (dropdown)
- Country: (dropdown)
- Type of ID number: Enterprise EGR ID (dropdown)
- Name: (text input)
- Close dialog after search:
- Buttons: Search, Reset

Figure 5: Opening page of the EGR FATS online interface

Browsing EGR data - The search function in EGR FATS allows users to search the EGR population for groups, enterprises or legal units.

The search results are displayed in a list, from which users can select the result they would like to consult, i.e. the group, enterprise or legal unit they would like to see more information on.

Data on the groups and their constituent units are presented on a default display page. The display pages in EGR FATS show all the information on the specified group and its units.

The enterprises in the group can be shown categorised by country, and users can browse the information on any enterprise in the group by clicking on it.

Details of the legal units behind the selected enterprises are also provided. For results relating to groups and enterprises, users can choose to display basic or detailed information sheets.

The screenshot displays the EGR FATS Online Interface. At the top, the European Commission logo and 'FATS Online Interface' are visible. The main content area is titled 'Frame population general info (Total EGR)'. A sidebar on the left shows the year '2013'. The main panel is divided into several sections:

- Tree View:** A tree structure showing 'Enterprises by country' and 'Enterprises'. A dropdown menu for 'Presence in 24 countries' is set to 'Please select a country'. A table lists the following data:

	GDC c...	Employ...	NACE	Activ...
9205027847 EXAMPLE GROUP	NL	15200	15	
EUROPE				
AFRICA				
TUNISIA (TN)				
1745255915 EXAMPLE TUNISIA SA				A
ASIA				
NORTH AMERICA				
OCEANIA				
- Group Limited info:** A summary of group-level data:

Group EGR ID	9205027847
Group name	EXAMLE GROUP
GDC country code	NL
Group size	L
Group employment	15200
Group NACE	15
- Enterprises:** A section for the selected enterprise:

Enterprise EGR ID	1745255915
Enterprise NSA ID	
GDC country code	NL
Enterprise activity status	A
Enterprise NACE	15.20
Enterprise employment	210
Enterprise address	13 RUE DES CHARMES
Enterprise postal code	1002
Enterprise city	TUNIS
Enterprise country code	TN
- Legal units of enterprise: EXAMPLE TUNISIA...:** A table showing legal units:

Legal unit EGR ID	Legal unit national ID	Legal unit nam
1745255915		EXAMPLE TUNISIA SA

Figure 6: EGR FATS display page with information of a group and a selected enterprise

Statistics on EGR populations - EGR FATS allows users to compare both different preliminary and final EGR populations from one reference year and EGR populations from different reference years.

The tool also displays statistics on total numbers of inward, outward and total FATS populations. Users can see the most significant changes that have taken place in EGR populations, for example, the number of enterprises that entered or left the respective EGR population, the number of enterprises where the controlling country changed and the number of enterprises whose main activity or status changed.

Downloading data on national EGR populations - In addition to browsing the data on multinational groups, users also can download data on national populations from the EGR, for use in the production of FATS statistics. EGR FATS has download functions for inward FATS populations (foreign-controlled enterprises present in a particular

country), outward FATS populations (enterprises controlled by the multinational groups of the country) and on total FATS populations (all enterprises belonging to multinational groups present in the country).

The data on the requested EGR population are sent to the user in three data files (enterprise groups, enterprises of the groups, and legal units of the groups). EGR FATS sends the data files to the users via eDAMIS, the secure communication platform used for data exchange between Eurostat and Member States.

4. EGR: Present state, benefits and future challenges

4.1 Present state – output, coverage and quality

The main output of the EGR is the frame produced yearly. For the time being EGR just produces frame population for FATS statistics. The production of EGR frame populations for other statistical domains is planned in the coming years.

The so-called EGR cycle is the process for the production of the EGR frame population for FATS. Typically a cycle refers to a year T and is run yearly over a period of 11 months, between May T+1 and March T+2.

The coverage is still not complete but has improved considerably during the seven years in which frames populations were produced till now.

The number of multinational enterprise groups gradually increased from 6350 in the first cycle (reference year 2008) to 61000 groups in the most recent cycle (reference year 2014, produced in March 2016). The 61000 groups cover more than 780 thousand legal units. Moreover, for identification purposes, currently about 20 million legal units are registered in the EGR identification service, of which 19.5 million from ESS countries.

The measurement of the EGR quality is still at a preliminary stage, basically based on some coherence rules and on comparison with existing FATS and business demography information. However Eurostat launched recently a wide Data Quality Program aiming at important progress in measuring and improving the EGR quality already from 2017.

4.2 Benefits

The EGR frames populations are distributed to ESS statisticians. At present the main EGR's users are the compilers of FATS statistics at national level, i.e. in some cases the national statistical office and in other case the central bank. However the FATS frame populations contain relevant and harmonized information on group structures and characteristics which make them interesting for all ESS statisticians dealing with the compilation of statistics related to the globalisation phenomena.

There is also a growing request for EGR information for non-statistical purposes and from non-ESS countries. The confidentiality of the EGR micro data does not allow a wide dissemination, but reflections are ongoing on how to satisfy, at least partially, the requests.

The next improvements in the EGR should lead to better coverage, better quality and the production of specific frames for different statistical domains.

These improvements are expected to have a substantial impact on the quality of the whole business statistics and in particular on globalization statistics.

4.3 Overview on the future challenges

Several initiatives are ongoing or planned in order to make more useful and used the EGR and to even extend its principles beyond the European borders.

The main challenges are summarized hereafter.

4.3.1 Data Quality Program (DQP)

The quality of the EGR is highly depending on the quality of the national statistical business registers, who are the main providers of the basic information. Thus, to fulfil the EGR mission in the ESS, quality management and quality improvement are considered as an integral part of the European System of Statistical Business Registers (ESBRs) ensuring high quality of the data in national Statistical Business Registers (SBRs) and in the EGR.

The annual data quality program (DQP) will set quality standards (targets) for input, throughput and output of SBRs processes based on the ESS quality assurance framework.

The DQP will target improving consistency, accuracy and comparability of national and international processes and outputs in the European network of SBR by:

- recommending good practices in the short run;
- harmonizing methodology and processes in the production and dissemination of national SBRs and EGR as far as necessary and possible;
- identifying best practices and promoting the use of common tools (in the longer run);
- continuously monitoring and assessing the quality of NBRs against targets.

Moreover some reflections and pilot tests are going on concerning the possibility of using EGR not only to produce frames for statistical users but also to produce directly some aggregated information. Users' feedback on such information is expected to help better identifying gaps in the EGR quality.

4.3.2 Full coverage

The main issue concerning coverage is the identification of foreign legal units in the national SBRs. The EGR only accept relationships where both the subsidiary and the parent are identified with LEID numbers in the EGR identification service.

In the case of non-EU legal units it is quite frequent that the LEID number is not attributed. The situation varies from country to country. At present between 10% and 50% of foreign legal units are still not identified in the national SBRs of ESS countries.

Therefore the efforts will focus on approaching the target of 100% LEID numbers for European legal units. On the other hand the EGR methodology will be adapted in order to register also single legal units under foreign control.

4.3.3 Dissemination

As already mentioned, there is a growing request for information on multinational enterprise groups from the EGR.

In the recent past Eurostat have been very busy with the development of the necessary IT infrastructure making possible the realization of the version 2.0 and has therefore neglected the dissemination aspects.

Moreover there are some serious obstacles that have limited drastically the publication of EGR information till now. However the publication of some aggregated information is likely to start in 2017, after analyzing the results of the ongoing pilot exercise and having achieved further progress in eliminating or reducing the obstacles.

The most important obstacle is the confidentiality of the micro data contained in EGR. Eurostat plans to overcome partially this problem through the publication of some aggregated information. Other obstacles are the EGR quality and coverage. They were described in the two previous paragraphs (4.3.1. and 4.3.2.) together with the planned actions to solve these problems.

4.3.4 Specific frame populations

As highlighted, the EGR has been developed targeting the production of just one specific frame population for FATS statistics. The requirements of some other statistical domains have already been or will be analysed in order to plan the next developments.

In principle in the coming years several statistical domain should be supported by EGR data, starting with the foreign direct investment (FDI) statistics, for which the minority relationships (10 to 50%) are already registered in EGR.

In order to serve the small and medium enterprises (SME) size classes of the enterprises should be defined in context with their group's size class.

Other domains, like the trade statistics by enterprise characteristics and the patent statistics by enterprise characteristics are also candidate for ad-hoc frame populations.

4.3.5 Global Group Register and Global Legal Entity Identifier

Recently the UN Expert Group on international trade and economic globalisation statistics showed an interest to co-operate with Eurostat on the European Group Register. In the medium and longer term a Global Group Register could be built up using the EGR content and processes as example.

It seems possible in a first instance to organise (under the UN governance) pilot bilateral micro data exchanges with some extra-EU countries; on the one hand this would improve the quality of the EGR; on the other hand the respective countries concerned could improve the monitoring of their groups; these countries (and maybe also the UN) would need to get at least partial access to the EGR micro data.

On a longer term a more ambitious option could be to build up a Global Group Register under the UN governance; this Global Group Register should be made fully compatible with the EGR in terms of content, concepts, definitions and exchange processes. A Global Group Register encompassing the main enterprise groups in the world would enable all participating countries to better measure globalisation directly or in several statistical domains. It would also improve the quality of the EGR considerably.

The impact of a Global Group Register or an enlarged EGR would be as follows:

- The establishment of a Global Group Register or of an enlarged EGR would increase and intensify the data exchange, production and dissemination activities. Increased international collaboration would get necessary beyond the already

quite intensive interaction with Member states on the production and dissemination of the EGR.

- On the other hand, the quantity and quality of all official statistics measuring globalisation would increase substantially. Data would be much better comparable at international level, i.e. beyond the ESS.

The general ideas seem quite easy and feasible. In reality the micro data on enterprises are very sensitive and therefore subject to quite strict confidentiality. In Europe it was possible to launch the EGR thanks to a specific legal basis⁸ which regulates the exchange processes between national registers and the EGR.

In the absence of similar legal basis regulating the exchanges at global level, the confidentiality of the micro data will be difficult to overcome.

Eurostat is also exploring the possible use of the 'Global Legal Entity Identifier System' (GLEIS).

GLEIS is an initiative launched in 2011 by the Financial Stability Board, mandated by the Group of 20 (G-20). Its implementation started with a focus just on the entities being parties to derivative contracts but extended rapidly towards a more general coverage of entities, including the collection of information about relationships between entities.

The ambition of the initiative is to implement the Legal Entity Identifier (LEI) as a global standard.

In the short term EGR will continue using its own unique identifier. However tests are ongoing for the use of the LEI as supplementary data source. On the long term it cannot be excluded that the LEI would replace the present identification code (EGR-LEID) used in the identification service.

⁸ European Parliament and Council Regulation 177/2008 establishing a common framework for business registers for statistical purposes, together with Commission Regulation 192/2009 and Commission Regulation 1097/2010.