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1. Introduction

1.1. Background

The fragmented picture the EU Member States currently have on multinational enterprise groups (MNEs) operating on the European market has caused increasing harmonisation problems for several statistics affected by globalisation. The National Statistical Institutes (NSIs) of EU Member States and EFTA countries often have data on the largest all-resident groups but for MNEs mainly only the links between resident units (truncated enterprise group). The direct and indirect control links to foreign units are often incomplete and inconsistent between NSIs. Therefore the Community Statistical Programme 2008 to 2012 of the ESS (European Statistical System) foresees the implementation of a Community statistical register on MNEs and their constituent units (EuroGroups register or EGR).

The EGR requires a strong coordination between NSIs and Eurostat. It shall be a key element of the infrastructure necessary to collect data on globalisation. As the EGR will contain basic data on MNEs active on the EU territory and of their components, new information on group and business demography can be gained. The EGR is also in the growing interest of several users. On the side of business registers (BR), the NSIs of the EU are the main stakeholders. ECB (European Central Bank) and NCBs (National Central Banks) have a strong interest. Key stakeholders in Eurostat/NSIs are the following statistics (and main uses).

- Inward and outward Foreign Affiliates Statistics (source and EU-level harmonisation of foreign control)
- Foreign Direct Investments (harmonisation of ownership relations)
- Science and Technology Indicators (e. g. competitive situation of enterprises in the global R&D environment)
- Trade of multinational groups (creation of new statistics by linking registers)
- Intra-group Trade (survey frame)
- International Trade in services (as in goods trade)
- Balance of Payments Network Group Direct Reporting (survey frame)
- National Accounts and Balance of Payment (improved institutional sector classification, identification of special purpose entities)

1.2. Legal Basis

The new BR Regulation was adopted on 21 January 2008 by the European Parliament and the Council. It includes mandatory transmission of individual data on MNEs and their constituent units to Eurostat, and feedback of harmonised information to the EU Member States and to the EFTA countries. Data on MNEs will consequently be consolidated at European level and consistent data on ownership and control will be available in each Member State.

The first implementing Commission Regulation on the mandatory data exchange on MNEs between Eurostat and the NSIs has been agreed with Member States in the BR Working Group and in written consultation during 2008. It will be voted in the November 2008 Statistical Program Committee and adopted by the European Commission early 2009.

An outline of the second implementing Regulation on the voluntary data exchange between Eurostat, ECB and NCBs has been discussed at the BR Working Group end of September 2008. There are several issues to be clarified, for instance the situation regarding NSI-NCB cooperation at national level.

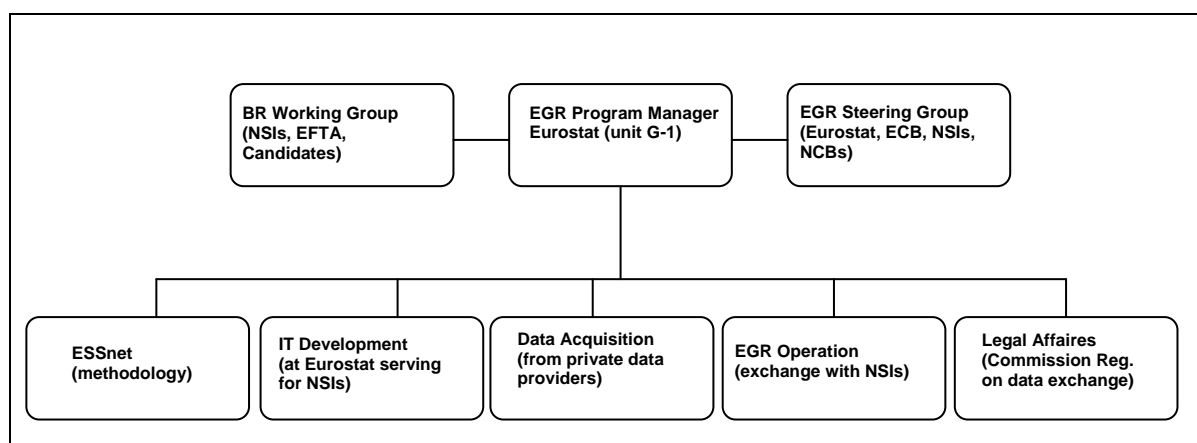
2. The EuroGroups Register Project

2.1. EuroGroups Register Approach

The EGR should serve as an important survey frame and form the basic tool for improving statistics related to globalisation. According to the legal basis on data exchange between Eurostat and NSIs (and later also with ECB/NCBs) the EGR will be established as a network of registers in Member States and on the EU level, the national BRs of NSIs and the central EGR at Eurostat. An efficient process flow has to be established, including clear rules of responsibilities, updating between Eurostat and Member States and between Member States themselves. Data from private sources on MNEs, consolidated at Eurostat, will be used in combination with information already available in NSIs. This common task for the EU can be described mainly in the following way: (a) Eurostat will acquire data on MNEs from private sources and consolidates it in the central EGR. (b) A subset of the merged data will be sent to individual NSIs for correction and updating the provided data; NSIs will send corrected and additional data back to Eurostat. (c) Eurostat will send data received in (b) to other concerned NSIs (i.e. MS in whose territory at least one legal unit of the group is located) to ensure that the data kept at Eurostat will be identical to all subsets kept in NSIs. The process should lead to an up-to-date EGR network of linked and coordinated statistical registers of MNEs active in the EU, exclusively for statistical purposes.

2.2. Project Organisation

The overall project organisation of the EGR network can be described in the following way.



The BR Working Group should approve the program provided by the EGR Program Manager. The EGR Steering Group will advise and support the Program Manager on decision making. The ESSnet¹ will produce, in close agreement with Eurostat, detailed specifications. The work on the IT Development is managed by a contract of Eurostat, and outsourced to a private IT Service Provider, which is processing output of ESSnet. Data Acquisition will provide input files for the EGR Operations, starting with EGR Version 1.0 with a full cycle. The Legal Affairs focus mainly on the Commission Regulations on data exchange between Eurostat/NSIs and Eurostat/ECB/NCBs.

3. Further Development

Although the EGR is in the interest of several statistics related to globalisation it has, for practical reasons, to limit its scope in the starting phase to certain statistics. A first stakeholder analysis was made in spring 2008. Statisticians in Member States and in Eurostat working with Foreign Affiliates Statistics (FATS) and Foreign Direct Investment (FDI) were approached.² Several Working Groups at Eurostat and at the ECB were also consulted. This communication has helped in setting the main priorities for the next two years. For example, among the 5 000 groups that will be covered, special quality efforts will be devoted to the 500 largest ones. Compilers of statistics consider as critical features the identification of units (including matching of units in the different registers), the sharing of information as well as the access to the central EGR, and the coverage and content of the EGR. It was also stressed that there is a need for a cost/benefit analysis.

The first EGR data processing with NSIs will start in January 2009. It is planned to provide the NSIs with a first version of the MNE population in spring 2009 to support the definition of survey populations for FATS. By mid of December 2009 the final population frame of enterprise groups should be available. The mentioned EGR procedures will be supported by the following main measures which are essential in order to make EGR Version 1.0 operable for 2008/2009.

¹ The ESSnet (Collaborative ESS Networks) concept stems from the need to find synergies and harmonize and disseminate best practices in the European statistical system. The ESSnet actions shall serve the interests of the whole European Statistical System (ESS) and should be in line with the 5 year statistical programme.

² In the next phase also compilers on International Trade Statistics will be consulted.

3.1. Data Acquisition

In April 2008 Eurostat launched a call for tender for the acquisition of data on 5 000 MNEs. Two different data sets have been requested, one for the global data on controlled enterprises (1) and one for the European data on share ownership (2).

(1) Global data on controlled enterprises: The contractor has to provide data on the constituent units of 5 000 MNEs and their controlled units, including both upward and downward control links. In order to get all MNEs and not only those defined through direct control, indirect and cumulated links of control between legal units located in different countries and belonging to enterprise groups have to be supplied as well.

(2) European data on share ownership: The contractor has to provide data on the constituent units of 5 000 MNEs, their majority ownership links and their first minority linked units abroad, including both upward and downward ownership links. The recording of exact share ownership links of 10% or more within the EU and EFTA countries and the first non-European country has to be provided. The ownership links must not take into account only direct links, but also indirect and cumulated links of ownership between legal units located in different European countries. It is preferred to provide the direct and cumulative ownership links separately.

Eurostat has signed contracts for this operation with Dun & Bradstreet Ltd., DnB (1) and with Bureau van Dijk Electronic Publishing GmbH, BvD (2). The first delivery of test data is expected for mid of November 2008 and final data by end of 2008. Meanwhile the procedure for selecting those 5 000 MNEs has started. The intention is to select the 5 000 MNEs which are the most important from the perspective of FDI and FATS (Outward and Inward FATS) of EU and EFTA countries taking into account national and European interests. Thereby it will be ensured that each NSI is represented in the population of 5 000. The final population will consist of more than 4 000 MNEs with the ultimate controlling institutional unit (UCI)³ in EU and EFTA Countries and about 1 000 biggest MNEs with UCI outside Europe.

3.2. IT Development

In August 2008 the first IT contract was finalised. Due to the limited resources at Eurostat this IT development had to focus on the needs of Eurostat, only serving indirectly for the needs of NSIs. The main results are the following.

- EGR Administrator web application interface (first version) including amongst others structured communication basing on SDMX (data and metadata), progress bar, logging and error handling, and user management
- EGR End User web application interface (first draft version shared with FATS and FDI statisticians at Eurostat) including amongst others functionalities like advanced search, tree structure, and export of search results
- Documents: Technical Analysis of the EGR database and pilot application, Administrator User Guide and End User Guide, Installation guide, and test documentation

In September 2008 Eurostat started the next IT contract. The requested tasks from the IT Service Provider can be defined on a high level in the following way (selection, each including one specific example).

- Technical Maintenance, e. g. Solutions needed for updating of the EGR (database and codes) according to changes in the structure and format of private sources for EGR administrators against the characteristics to be included.

³ FATS data are broken down by country of UCI of a foreign affiliate, which shall mean the institutional unit, proceeding up a foreign affiliate's chain of control, which is not controlled by another institutional unit.

- Evolutionary Maintenance, e. g. the IT Service Provider should implement use case updates according to the updated Business Use Case Model and Data Model.
- Improving the Data Exchange, e. g. the IT Service Provider shall carry out an exhaustive analysis of the data exchange infrastructure of the EGR with NSIs basing on data communication in SDMX⁴ via eDAMIS⁵ (technical report). On the basis of the technical report the IT Service Provider has to make a proposal how to revise, improve and enhance the data exchange infrastructure by suggesting exact technical requirements to be programmed.
- Testing and Deployment of Software Deliverables, e. g. the IT Service Provider has to perform thorough testing of software deliverables before shipping the application. This covers technical testing of the application and the data upload and data export/import as well as the system and integration testing of the whole system.
- Additional documents, e. g. the IT Service Provider has to create a Software Development Plan by taking into account the RUP⁶ methodology.

Apart from service for specific tasks mentioned above the IT Service Provider has to provide continuous maintenance for the EGR. For this purpose the IT Service Provider shall offer service to support existing functionalities as well as new functionalities by creating a stabilised and continuous change request approach for the EGR during the entire contract. For instance, the remote access to the central EGR at Eurostat for NSIs is intended to be achieved by this approach.

3.3. ESSnet

ESSnet will produce, in close agreement with Eurostat, detailed specifications according to functional and non-functional requirements for the IT Service Provider. By this the IT Service Provider should be enabled to program the updated or new functionalities (use cases) for the EGR. Therefore the ESSnet will carry out the necessary methodological work. It is essential that all parties, Eurostat, ESSnet and IT Service Provider, will guarantee an efficient cooperation. The ESSnet will offer understandable and high quality specifications and the IT Service Provider will make available high quality in terms of programming. The first work plan of the ESSnet comprises the following work on a high level.

- Development of the methodology and the definition of the specifications of the system for EGR version 1.0.
- Development of data quality management with priority to design the work flow for the unique identification of legal units and the definition of the UCI for the largest MNEs.

⁴ SDMX (Statistical Data and Metadata eXchange) is a technical and statistical standard and guideline, together with IT architecture and tools, for efficient exchange and sharing of statistical data and metadata provided by Eurostat (Unit B3).

⁵ Electronic Data files Administration and Management Information System provided by Eurostat (Unit B3).

⁶ The RUP (Rational Unified Process) product is a software engineering process. It provides a disciplined approach to assigning tasks and responsibilities within a development organization. Its goal is to ensure the production of high-quality software that meets the needs of its stakeholders within a predictable schedule and budget.

4. Road Map for the Future

4.1. Time Schedule

The time schedule for the EGR Version 1.0 (current status of the project plan) for Eurostat and NSIs can be defined in the following way for the year 2009.⁷

ID	Processes for EGR Version 1.0*	2009
01	Loading, standardising and transforming the data from private sources (5 000 MNEs from BvD and DnB, situation end of 2008) in the EGR	January
02	Matching of the units from private sources and the creation of unique EU legal units in the EGR	January
03	Data sets with results of the matching and the creation of unique EU legal units to be sent to NSIs	February
04	NSIs check the results of the matching, the creation of unique EU legal units, carrying out the matching with their BR and prepare data sets with feedback to the central EGR including data on legal units and relationships as registered in the national BR	April
05	Processing of the feedback on the results of the checking of the central matching and of the matching with the national BR	April
06	Data sets with results of the consolidation process and the compilation of the cluster of control and preliminary enterprise groups send to NSIs	November
07	Consolidation process and the compilation of the cluster of control and preliminary enterprise groups	December
08	Build up of the EGR quality: NSIs check the results of the consolidation process, the compilation of the cluster of control and preliminary enterprise groups and prepare feedback	December
09	Processing of feedback from the NSIs to improve the quality	December
10	Compilation of the final population frame of enterprise groups	December
11	Data sets with final population frame of enterprise groups for compilers of statistics available	to be defined

* Number of iteration between Eurostat and NSIs to be defined for process step 06-09.

In 2010 the main objectives for the EGR project will consist in an update of the population frame in the EGR with the same coverage of MNEs as in 2008 (situation end of 2009). In the same year the extension of the coverage to 10 000 MNEs has to be taken into account. The full coverage should be reached by 2013. It is a pre-requisite that at this stage the threshold will be defined in close stakeholder consultations.

4.2. Access to the EGR for NSIs

The stakeholder analysis showed clearly that the online access to the central EGR at Eurostat is crucial for NSIs (and NCBs). In the NSIs, both the BR persons and the compilers of statistics ask for such access. There are, however, legal and technical restrictions to this access. The legal ones will be solved incrementally by the Commission Regulations and a planned confidentiality charter.

One step forward on the legal issue is the Commission Regulation on mandatory data exchange between Eurostat and NSIs which should become available early 2009. According

⁷ Before the first implementing Commission Regulation on the mandatory data exchange on MNEs between Eurostat and the NSIs is adopted, NSIs are only able to participate voluntarily in the first full cycle of EGR Version 1.0.

to Annex B of the draft Commission Regulation Eurostat shall, exclusively for statistical purposes, transmit to the NSI other than the reporting NSI, certain characteristics of MNEs and their constituent units when at least one unit of the group is located in the territory of that Member State. From this coverage the data which can be shared is deduced. The following characteristics should become sharable (selection).

- Legal Units: Identity numbers (including identity numbers of the enterprise group to which the legal unit belongs), name and address, legal forms, characteristics on control and ownership of legal units
- Enterprises: Identity numbers (including identity numbers of the enterprise group to which the enterprise belongs), name and address, principal activity code (4-digit level), number of persons employed
- Enterprise Group: Identity numbers, name of the truncated and global group, identity numbers of the truncated and global group head, number of persons employed in the truncated and global group

The access right foreseen for the NSI BR persons would thus cover the MNEs operating in their country, their constituent units and their characteristics listed, and the additional data from private sources. It is proposed that the Head of the BR unit in NSI can authorise the access to the central EGR for the compilers of statistics in that NSI, but only for a read permission. The permission to change the data would be reserved to the persons of the BR units. The access right (read permission) foreseen for ECB and NCBs would cover the MNEs operating in their country, their constituent units and their characteristics under the condition that the access is authorised by the appropriate national authorities, and the additional data (or data replacing the non-authorised characteristics) from private sources.

On the more technical side the online access to the EGR by a web application always requires individual and accepted username and password. Currently the access from outside Eurostat is not possible. Access is available only for persons at Eurostat in the BR section and for certain persons in FATS, FDI and International Trade Statistics. Contractual IT experts will only have access for development purposes and only for a limited period at Eurostat. For the access from outside Eurostat an extract from the central EGR in the secure environment of Eurostat can be taken consisting in sharable data according to Annex B. It is saved in a secured area with restricted and controlled access in accordance with the mentioned Commission Regulation. From the current point of view two alternatives for the access for NSIs seem to be thinkable.

- Access for NSIs to Commission Regulation Annex B subset outside the secure environment of Eurostat: This solution is in line with the current secure environment requirements of Eurostat and the amount of additional IT measures appears to be manageable. However, the data selection procedure from the secure environment to the non-secure environment could require additional data protection measures and the keeping up-to-date of both the full content and Annex B content has to be solved.
- Access for NSIs to Commission Regulation Annex B subset inside the secure environment of Eurostat: This solution requires a total revision of data protection rules at Eurostat, e. g. access to secure environment by NSIs, further data protection measures and additional IT measures according to the revision of data protection rules.

For the moment this issue is under internal discussion at Eurostat with the aim to find the best way to arrange the NSI remote online access to the central EGR, including the potential changes needed for the current Eurostat security rules.

ANNEX

Erratum

Page 6, Chapter 4.1 Time Schedule, Table

ID	Processes for EGR Version 1.0*	2009**
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04	NSIs check the results of the matching, the creation of unique EU legal units, carrying out the matching with their BR and prepare data sets with feedback to the central EGR including data on legal units and relationships as registered in the national BR	February
05	Processing of the feedback on the results of the checking of the central matching and of the matching with the national BR	March
06	Consolidation process and the compilation of the cluster of control and preliminary enterprise groups	April
07	Data sets with results of the consolidation process and the compilation of the cluster of control and preliminary enterprise groups send to NSIs	April
08	Build up of the EGR quality: NSIs check the results of the consolidation process, the compilation of the cluster of control and preliminary enterprise groups and prepare feedback	May
09	Processing of feedback from the NSIs to improve the quality	June
10	Compilation of the final population frame of enterprise groups	December
11	Data sets with final population frame of enterprise groups for compilers of statistics available	December

* Number of iteration between Eurostat and NSIs to be defined for process step 06-09.

** Start dates (not end dates as assumed for the table on page 6).

The current time schedule will be review continuously in 2008/2009.