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Emerging conceptual issues in global production

**The European profiling of multinational enterprise groups
and the European Enterprise Groups Register: crucial tools
for improving (business) statistics**Prepared by Eurostat¹*Summary*

This paper presents the European statistical register on multi-national enterprise groups. It is developed and operated by Eurostat integrating data on cross border relationships of control over legal units. The data are provided by the statistical authorities of the Member States and EFTA countries, and complemented by commercial sources. In the EuroGroups Register Eurostat consolidates all information and reconstruct the legal structure of the multinational enterprise groups. Annual frames are then extracted and distributed to the national statistics authorities to ensure that all the national statistics compilers have the same view on the composition of the multinational groups. For ensuring the quality of the statistical information on multinational groups in the EuroGroups Register and in national statistics the preferred method is to use profiling at European level. Eurostat will present the content of the EuroGroups Register and the general orientation of profiling as well as the roadmap for how this information will be used for European business statistics. The paper can contribute to the discussion on how the new tools can improve statistical information on globalisation by new ways of cooperating and exchanging data across statistical organizations.

¹ Update of document presented to UNECE Group of Experts on Business Registers, 2-4 September 2013, Dominique Francoz, Eurostat

I. Introduction

1. Over the last decades, the increasing globalisation of activities of businesses has had an enormous impact on the way they operate. Not only did foreign trade activities increase, businesses are more and more considering their organization on a global level without being limited by any national borders. Businesses take into account fiscal, legal and other administrative considerations for locating certain activities in a particular country. Business statistics should reflect as well as possible the real economic activities taking place on the national territory. By signing the Riga Memorandum, the Directors General of the National Statistical Institutes of the European Statistical System have acknowledged that a better understanding of the structure of the enterprise groups and how it changes over time will improve the quality of business statistics. For multinational enterprise groups, it is necessary to obtain a consistent and comparable representation of (business) statistics in the different countries they are operating in. An inconsistent implementation of the definitions of statistical units of Regulation No 696/1993 has made the latter especially difficult. This inconsistent implementation was confirmed by the findings of two ESSnets (networks of NSIs of European countries) established in the framework of the MEETS programme (Modernisation of European Enterprise and Trade Statistics)² over the period 2008-2012.

2. The introduction of the EuroGroups Register (EGR) was a first step to improve the (business) statistics on multinational enterprise groups. The initial goal of this register is to get a complete picture of a multinational enterprise group and not the fragmented picture that results from the national business registers. As a second step for improving the (business) statistics on a more general level, work was undertaken on the basis of the results of the two aforementioned MEETS ESSnets to improve the implementation of the definitions of the statistical units, especially that of the definition of enterprise. First an amendment of some of the statistical unit definitions was considered, but when this proved to be too difficult, operational rules were drafted that will make the implementation of the definitions more consistent across Member States. In order to improve the quality of the information on multi-national enterprise groups contained in the EGR and the national business registers a methodology for delineating statistical units within multinational enterprise groups by using different profiling techniques is being developed. The work of the aforementioned ESSnet profiling is continued by the ESSNET on a European System of interoperable statistical Business RegisterS (ESSnet ESBRS).

3. This paper first presents recent developments regarding the definitions of statistical units. It then focuses on how profiling helps to better delineate enterprises and thus to improve the quality of (business) statistics. It gives information on the profiling methodology and the process that needs to be set up in order to ensure a successful implementation in all NSIs. Finally, the paper concentrates on the EGR.

II. Definition of statistical units

A. Background

4. In the frame of the MEETS programme, Eurostat launched, amongst other, an action acknowledging the need for developing statistics that take into account the globalisation of

² Decision No 1297/2008/EC of the European Parliament and of the Council of 16 December 2008 on a Programme for the Modernisation of European Enterprise and Trade Statistics (MEETS)

the economy as well as an action focusing on finding ways of improving the consistency of statistics in Europe. Two ESSnets (networks of NSIs of the ESS) were created for these purposes. The ESSnet on profiling was entrusted by Eurostat to develop, test and implement a common methodology for the delineation of statistical units in large and complex multinational enterprise groups. The ESSnet on consistency of concepts and applied methods of business and trade-related statistics worked on consistency issues resulting from the current use of statistical units. Starting from the results of a preliminary study on inconsistencies between legal acts³, in the field of business statistics, the ESSnet Consistency explored more practically their implementation in different statistical domains and across the Member States. Both ESSnets concluded that there was a need to clarify the definition of the enterprise as its implementation diverged across countries.

5. As a matter of fact, most European countries use the legal unit instead of the enterprise, as it is an easy solution and allows an easy use of administrative data. This approximation was acceptable when enterprises were not organised in complex clusters of legal structures. However, in time, together with the globalisation of the economy and the creation of large and complex enterprise groups, the operational structures of businesses deviate more and more frequently from the legal structures. In particular inside the European Union enterprises no longer see national borders as a limitation to their structures: they organise themselves globally. The use of the legal unit to study the activity of the enterprise becomes less and less relevant and impacts the overall quality of business statistics (impact on relevance, accuracy and consistency). The risk of using legal units for analysing the activities of enterprises is that breaks in series in the data may occur because of a "legal" reorganization of the enterprise groups. New legal units may be created for part of the activities of the enterprise groups for tax, administrative or other purposes. Often, it concerns ancillary or supporting activities. Considering these legal units as separate enterprises would incorrectly attribute the factors of production to the enterprises and activities and may result in breaks in series for e.g. the labour factor.

6. As an outcome of both ESS nets, work was undertaken to improve the definitions of statistical units in order to ensure a consistent implementation across Member States. Agreeing on new definitions proved to be difficult in the short term and therefore it was decided that rather than drafting a new definition, it was preferable to continue working on implementing correctly the current definition of Regulation No 696/1993: Member States should work on a consistent implementation of the current definition. This work is supported by complementing the definition with operational rules that make an unambiguous implementation of the definitions possible and thus increase consistency and comparability among Member States. A Task Force was mandated to work on these operational rules and it is foreseen that these rules will be adopted by the Business Directors Group and the Directors of Macroeconomic Statistics in June 2015. The key statistical unit for business statistics is the enterprise.

B. The definition of enterprise

7. Regulation No 696/93 defines the enterprise as "the smallest combination of legal units that is an organizational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit".

³ Richter/Engelage/Thomas: External Study on the detailed evaluation of the legal acts in the areas of statistics which were identified by Member States as areas to revision; Luxembourg 2010.

8. The key element of this definition is notion of autonomy in decision-making. The operational rule regarding the characteristics of an enterprise helps to implement this concept:

"A unit is deemed to be an enterprise if it

- (a) Operates the necessary factors of production (e.g. human resources, capital, technology, land and in particular management) and
- (b) Accesses the necessary controlling systems, e.g. an integrated cost calculation, which covers the main, secondary and ancillary activities of the unit deemed as enterprise and
- (c) Has adequate managerial structures, i.e. managers that can decide about the production process and about the economic transactions."

C. Identification of Enterprise in case of an Enterprise Group

9. An operational rule for the definition of enterprise was drafted to help delineate the enterprise in case of an enterprise group.

10. "In case of an enterprise group, the identification of the statistical unit enterprise should in principle be made on the basis of the structure and the perimeter of the enterprise group reflected in the national Statistical Business Registers and in the EGR.

11. Further guidance:

- It should be noted that some enterprise groups may decide to organise their activities in various so-called profit-centres or operating segments. Each of these operating segments can be considered, for statistical purposes, as a starting point for the identification of an enterprise inside the enterprise group.
- Inside an operating segment there may be one or more legal units, or parts thereof, which are organisationally integrated with each other but not with the rest of the segment and have the factors of production at their disposal. Such units have to be considered as an enterprise, if they operate under an own management and do not carry out ancillary or vertically integrated activities.
- The application of operational rule "Identification of Enterprise in case of an Enterprise Group" may result in an enterprise being equal to enterprise group. This is the case if an enterprise group performs its activities under a single management and operates as one organisational unit."

D. Enterprises active in more than one country

12. In Regulation No 696/93 enterprises are not defined in the frame of geographical boundaries. In the case of multinational enterprise groups, the autonomy of decision-making cannot be found in the restricted geographical area of a country, but at a higher level. In practice, the application of the enterprise concept by delineating the enterprises is performed according to a top-down approach (rather than, up to now, a bottom-up approach). As a result an enterprise can be active in more than one country. An operational rule has been proposed to describe these cases.

13. "Application of the enterprise concept may lead to identifying enterprises active in more than one country. In such cases, there will be links of the national part of the unit with the EuroGroups Register. For national statistics, the national part of the unit is to be

considered an enterprise. However, in some specific cases this may lead to more than one national enterprise. Techniques like European profiling will aid to ensure consistency. "

14. The national part of the unit will be the basis of national business statistics, even if it does not necessarily fulfil the criteria of autonomy of decision-making and market orientation.

III. European profiling for the implementation of the definition of enterprise

A. What is profiling?

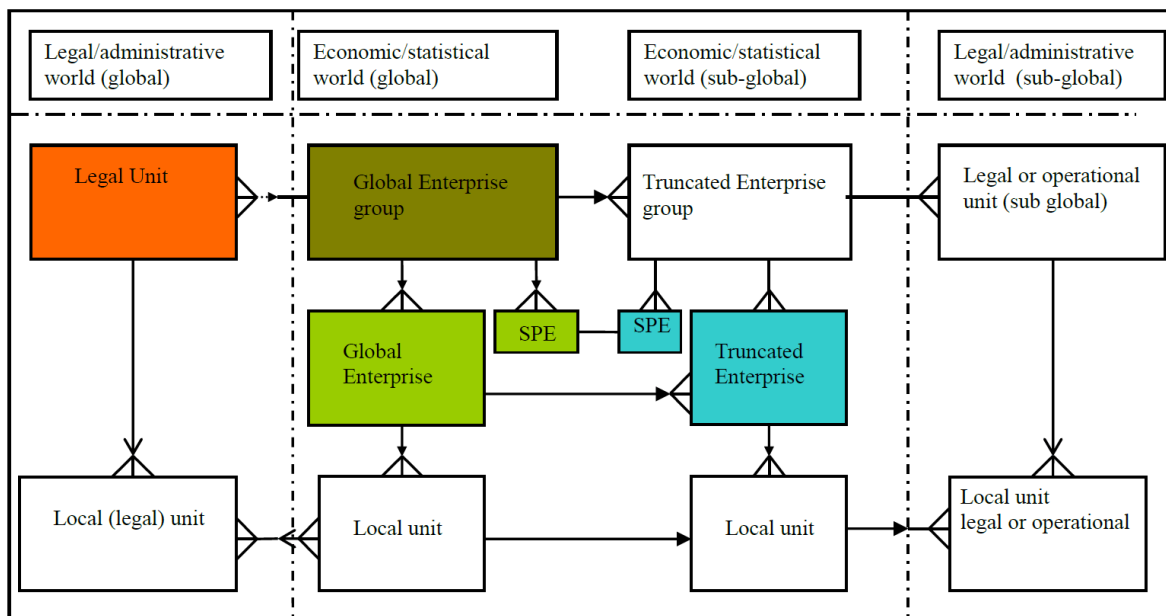
15. Profiling is defined in the Eurostat Business Registers Recommendations Manual as: "*a method to analyse the legal, operational and accounting structure of an enterprise group at national and world level, in order to establish the statistical units within that group, their links, and the most efficient structures for the collection of statistical data*" (annex 3.1, paragraph 19.9).

16. European or international profiling has as a goal to analyse the multinational enterprise groups (or global enterprise groups = GEGs) regardless borders, with a top-down approach resulting in Global Enterprises (GENs) as first results. These GENs have pure national parts, which are named Truncated Enterprises (TENs). A characteristic of European profiling is that it is performed by the NSI of the country in which the global decision centre (GDC) of the GEG s located (or for the GEGs controlled by a GDC outside of the EU the country of the "European Headquarter).

17. The role of profilers is to identify the most appropriate statistical structure of the GEG. The enterprises delineated should represent the economical organisation rather than the legal organisation. In order or the delineated enterprises to be useful for statistical purposes, it should be possible in practice to collect data on these units.

B. Profiling terminology

Figure 1
The European profiling of GEGs is implemented according to the following conceptual model:

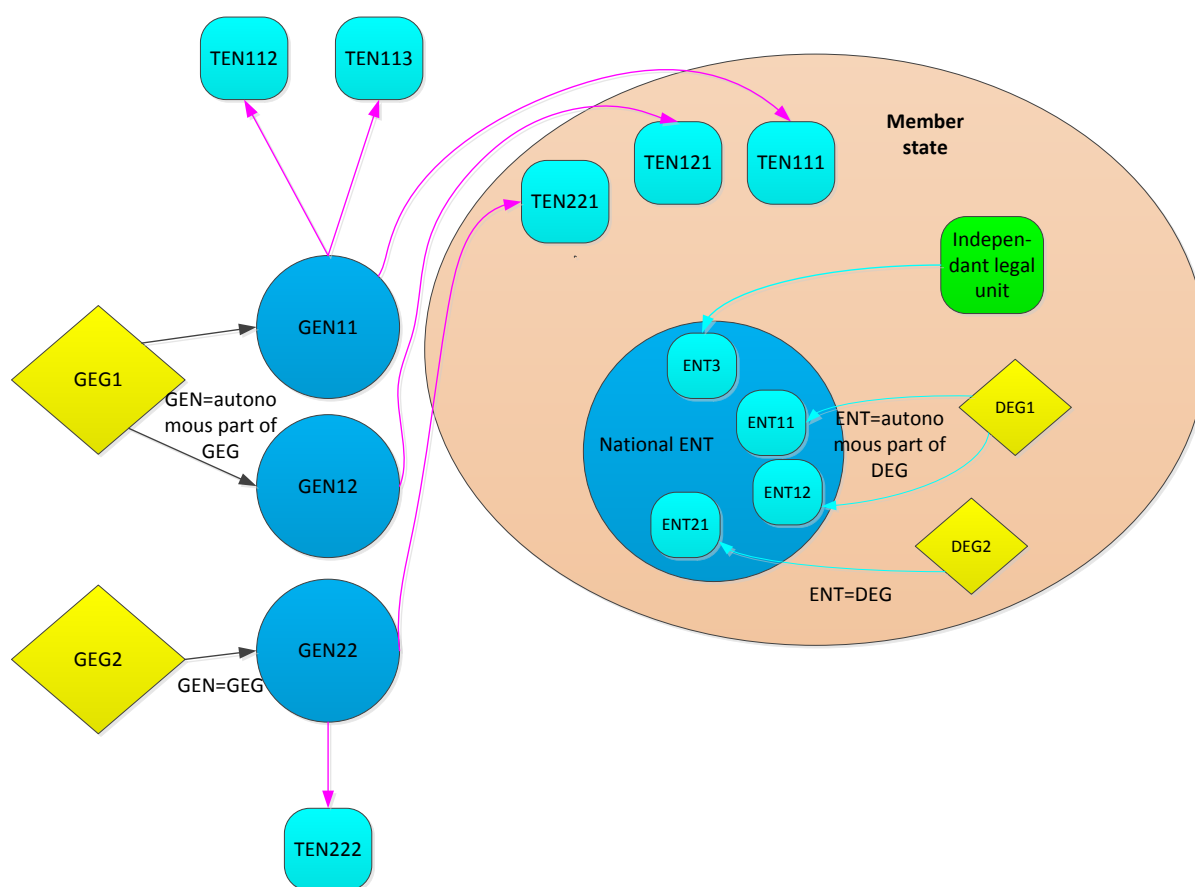


18. In using this model, profiling proceeds according to a top down approach that:
- Starts from the GEG as a whole, including the check of its perimeter of controlled Legal Units (LeU's) in all countries in which it operates,
 - Analyses its activities at a global level, resulting in the delineation of the global enterprises and then,
 - Goes down to the national level, defining the truncated enterprises purely as the national parts of the global enterprises.

19. The global enterprise and the truncated enterprise are technical concepts. In business statistics data are compiled for enterprises. The following "types" of enterprises active at country level can be distinguished: the national enterprises (national ENTs) and the national parts of multinational enterprises. In principle the latter should correspond with the TENs identified in the profiling process. In principle a global enterprise can result in only one truncated enterprise, but in exceptional circumstances (e.g. when there are no intra-enterprise transactions between national parts of the global enterprises) there may be more than one. National ENTs can be independent legal units, domestic enterprise groups (DEGs), which are groups of resident legal units, or an autonomous part of a DEG.

20. The global organization of multinational enterprise groups can be illustrated with the following figure 2 using the technical concepts of profiling methodology.

Figure 2
Global organization of multinational enterprise groups



C. Profiling techniques

21. When profiling GEGs, a distinction can be made regarding their intensities, from "Intensive" to "Light" to "Automatic" profiling. Intensive, light and automatic profiling do not differ in terms of results, but in terms of methodology. A minimum set of information still needs to be made available: delineation of GENs and TENs in terms of legal units, GENs and TENs economic information if available (employment, turnover and NACE). The distinction mainly depends on the type of contact established with the GEG, including visits or other direct contact with the GEG.

- In "intensive" profiling the group should be fully involved in negotiation of the GEN or TEN structures.
- In "light" profiling the GENs will be derived purely as a result of desk research. It appears very rare that published information is sufficient for providing all necessary information for profiling; thus data coming from other statistical sources seem essential. Outward FATS data could be in a lot of cases used as a helpful source of information to determine the GENs, including eventually further use of its statistical results (e.g. on employment or turnover). However, it must be noted that some

contact with the group may be required in order to verify or confirm the proposed GENs and TENs.

- In "automatic" profiling automatic procedures are run on data stemming from national business registers and EGR on enterprise groups in order to delineate enterprises. For instance, algorithms based information on employment of a legal unit and its NACE code can be used. In the case of the automatic profiling, the enterprises are profiled at the level of the countries in which they are active: the EGR provides the perimeter of the enterprise group and the automatic procedures for delineating the enterprises are run on all legal units that active within a certain country.

22. Best practice for delineating enterprises in enterprise groups and certainly for the large and complex multinational enterprise groups is of course the intensive profiling. Due to the range of legal, taxation and regional structural differences across Member States as well as the burden on business, resource and time limitations, it may not always be possible to implement best practice. Thus the different operational rules for the different types of units and associated guidance will be categorised as A, B and C quality-approaches, depending on the complexity and size of the enterprise group, where:

- A methods: most appropriate methods ("A" methods are deemed to meet recommended or best practice, for example, application of manual profiling to deal with all the large, difficult or complex cases. In the case of multinational enterprise groups, the national delineations are based on profiling, which may be (manual or automatic) depending upon the complexity of the case and the global structure).
- B methods: those methods which can be used in case an A method cannot be applied ("B" is deemed to cover alternatives to recommended or best practice but which form good practice. For example, profiling (manual or automatic) is applied to simple multi-national enterprises at the national level, with appropriate consideration of the global structure of the delineated national enterprises).
- C methods: those methods which shall not be used ("C" is deemed to recognise the application of the rules, for example in an uncoordinated way to simpler cases or to specific situations addressed without a rules based approach).

Table 1

Application of A, B and C methods for delineation of Enterprise Groups

	<i>Manual intensive profiling</i>	<i>Manual Desk profiling</i>	<i>Automatic profiling</i>
Large and complex ⁴	A	B	C
Large and simple	A	A	C
Small and complex	A	A	B
Small and simple	A	A	A

23. The main criteria to be taken into account to are:

- the size of the group in terms global employment, number of subsidiaries, size of the group in the EU: large/small

⁴ Large: significant impact in the NACE classes in question

Small: negligible impact in the NACE classes in question

Complex: e.g. many legal units with many different activities and delivery-relations between the units

Simple: e.g. one activity in all legal units and ancillary activities)

- its complexity in terms of number of performed activities and the geographical scope of the group (part of the EU employment outside the country of the GDC and number of EU countries where the GEG is acting): complex/simple

24. NSAs must be able to demonstrate in a plausible way that the quality requirements for ESS business registers and business statistics are met. This means that they can convincingly justify the choice made for the threshold for profiling and that the impact of any automated rules has been tested.

25. In addition to the operational rules, the definitions of statistical units of Regulation No 696/93 will also be accompanied by guiding principles. One of the guiding principles concerns the quality evaluation which contains the information about A-, B- and C-profiling methods.

D. Intensive profiling is a collaborative process

26. The methodology of intensive European profiling proposed by the ESSnet Profiling and currently being refined by the ESSnet on a European system of interoperable Statistical Business RegisterS (ESSnet ESBRs) has been designed as a collaborative process and its success depends on the willingness of all the players/stakeholders to take part to it. The profiling process described here only refers to the intensive profiling process.

27. The profiling process is an iterative process that starts in the country of the Head-Office (Global Decision Centre). The starting point of the profiling is the enterprise group in terms of the legal units that belong to the "perimeter" of the enterprise group, meaning all legal units which are controlled by the global decision centre of the enterprise group. The EGR gives the first scope of the group in terms of legal units and the countries in which the group operates for enterprise groups that are active in at least two countries of the EEA (+Switzerland). In order to obtain the most up to date legal perimeter the information coming from the EGR needs to be checked and updated using the national Business Register as a source.

28. The profiling team in GDC- NSI performs a desk activity that consists in analysing all the available information on the GEG (publicly available information or statistical data available in the NSI) and makes a first delineation of the GENs. This first phase should already involve the statistical data compilers in order to check how the national economic structure fits with the global economic organisation.

29. In a second step, the profilers of the GDC-NSI contact and visit the enterprise group to confirm the GENs and TENS and their delineation and to, whenever this is possible, collect data on the GEN and on the TEN. The visit to the GEG gives the opportunity to set up the conditions of a long-term cooperation with the enterprise group.

30. In a third step, the GENs and TENs agreed with the enterprise group and inside the GDC-NSI are proposed to the partnering countries. They have to check if the TENs proposed by the GDC-NSI fit with the activity of the enterprise group in their country and investigate if the TENs can serve to make the national enterprise statistics: it has to be ensured that the delineated enterprises make sense from a statistical point of view, i.e. that it is possible to compile statistical information for these units either by information available at the level of the GEG or in the country the delineated enterprises are active in (either collected directly on the enterprise level or calculated on the basis of information collected from the legal units it constitutes of). In this phase, both profiling teams and statistical users (business statisticians) should be involved. The result of this could be an acceptance or a proposal for amendment.

31. The fourth step consists in a round of discussion between the GDC-NSI profilers and the partnering NSIs profilers that stops when all parts agree on the delineation of the enterprises that will be included in the EGR. This step is important as it will ensure a consistent treatment of the enterprise group across the countries concerned and improve the quality of the EGR and of both inward and outward FATS data.

IV. The EuroGroups Register (EGR)

A. An ESS statistical business register on multinational enterprise groups

32. The traditional statistical indicators based on individual enterprises have become insufficient to correctly measure the degree of international integration of the European economies within the single market and with the Rest of the World. Information on global activities of multinational groups is needed for official statistics in European countries.

33. The EuroGroups Register (EGR) is the statistical register providing information on control relationships between enterprises and multinational enterprise groups in Europe. The EGR is developed and operated since 2009 by Eurostat and the national statistical institutes (NSIs) of the EU Member States and EFTA countries. It contains information on statistical units and variables in line with Regulation 177/2008 on statistical business registers.

34. The statistical units included are the enterprises and enterprise groups and additionally the legal units that form them. The variables are related to the identification and to the demographic and stratification characteristics, as defined by the Regulation. Information on the ownership and control of legal units, including cross border one, is used to derive the complete structure of the groups.

35. The EGR can be updated continuously, but the statistical frame (i.e. the frozen version, vintage or snapshot of the register) is produced annually.

36. The EGR frame is distributed to the ESS and ESCB and can be used for statistical purposes, according to Regulation 177/2008 and implementing regulations 192/2009 and 1097/2010.

B. The EGR governance

37. To create the EuroGroups Register Eurostat and the NSIs exchange confidential micro data according to the current legal framework.

38. The EGR system is hosted at Eurostat and Eurostat is the owner. Each year the NSIs of Member States and EFTA countries send data on legal units and their relationships to Eurostat from their national statistical registers. Eurostat complement such data with commercial data for legal units outside the EU and derives the consolidated structure of multinational enterprise groups in the EU.

39. In EGR the role of the MS is defined by the concept of authentic store. NSIs can decide to be 'Authentic store for the EGR' or 'Partial authentic store'.

40. National statistical authorities are 'Authentic store' when they send data on the full population of incorporated legal units to the EGR are called 'authentic store'. 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 in the EGR. No new legal units from commercial data providers can be added.

41. National statistical authorities are ‘Partially authentic store’ when they provide the EGR with details of only those incorporated legal units which they know belong to global enterprise groups are called ‘partially authentic store’. 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 add new legal units to the EGR.

42. The ESCB can use the EGR final frame according to Regulation 177/2008 and implementing Regulation 1097/2010. In order to receive data on multinational enterprise groups having a legal unit resident in their territory, the NCBs have to get an authorisation from the NSIs and have to sign a declaration for the statistical confidentiality. Currently all MS and 3 EFTA countries have released the necessary authorisation to the NCBs.

C. The EGR process and system

43. The EGR system is hosted at Eurostat but Member States contributed to design the statistical methodology in several ESS-nets. The IT development was done by private companies.

44. The EGR system evolved over time and two versions were created since 2008. The first version (version 1.0) operated from 2009 to 2013 and was centred on commercial data. Version 1.0 has several limitations and required a lot of manual intervention from Eurostat and from Member States. In the second version (version 2.0) the EGR business process is more complex but aims at reducing manual interventions. It is mainly based on data from the national statistical business registers. It gradually started to replace the previous version in 2014 and the full switch is planned in 2016. The EGR system is made up of four applications:

1. EGR Identification Service

45. The EGR process is based on integrating data on legal units from several sources that do not have unique identifiers. The EGR Identification Service is the application that assigns a unique identifier (called LEID) to all legal units in the EGR system. The need to develop the EGR Identification Service came from the real experience made with EGR the version 1.0 where the quality was impacted by many duplicates.

46. In order to assign the LEID 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 EU and European Free Trade Association (EFTA) countries and with data from commercial data providers. The EGR IS database has at the moment more than 15 million incorporated legal units, however not all of them will be finally part of a multinational group.

47. The EGR Identification Service allows users to search for one specific legal unit or for a set of legal units. To carry out a search, the user must enter the country in which the legal unit is based and additional search criteria such as the company name, the city in which it is based, its address, etc. In order to make the identification more successful one or more national ID numbers have to be provided. Alternatively a fuzzy match based on names and address is used. In such cases the result of the identification process may be not unique and the users have to choose one of the records and confirm the identification. When the identification is done, the EGR IS provides the LEID for the requested legal units. The LEID is used in the next steps of the EGR process.

2. EGR core

48. The EGR core application is the one able to receive input data, transform and consolidates them. Once all legal units from input sources received a LEID, NSIs can send the identified legal units and their ownership and control relationship to the EGR core application. The EGR core creates the cluster of control and the preliminary groups' structures.

3. EGR interactive module for validation

49. The EGR interactive module is the application for the validation of the preliminary groups. It is located in a secure environment and allows National Statistical Institutes to access and update EGR data on line. Users have different access rights to manipulate the EGR data. The basic rule is that data on line. EGR data can be updated according to the authentic store principle. The validation is carried out in a cooperative approach by MS, each contributing to the respective portion of group. The country where the Global Decision Centre of the group is located leads the activity in order to ensure consistency. The application has a dash board for communication and notifications and users can decide how to contribute to data quality. For instance notification of relevant changes in the structure of a groups are sent to the involved statistical offices in the respective country, they can see delta information and do manual interventions. The EGR interactive module is in development and will be available as from 2016.

4. EGR FATS users interface

50. The EGR FATS users interface is the application for consulting and retrieving the EGR final frame. Once per year the EGR data are frozen and an EGR frame (called master frame) is generated. The EGR master frame is then broken down into country specific files, i.e. each country receives the multinational enterprise groups where at least one legal unit is resident in their territory, according to Regulation 177/2008. NSIs and NCBs can access the EGR FATS interface and retrieve the country specific file of their interest. Each country specific file is consistent with all others. The application provides also statistics on the deltas, search functions for legal units, enterprises and groups as well as views on the groups' structure, by country or by tree of control. The application is accessible on line as from May 2015.

D. The EGR to improve the consistency of EU global business statistics

51. The EGR master frame is an instrument to support the process of ensuring the consistency of data relating to multinational enterprise groups across the European countries. The outcome of the profiling process should be included in the EGR once it is implemented by the respective NSIs and the Interacting profiling Tool should be the application to serve this scope. For the time being the updating of the EGR with profiling remains a separated procedure for Member States.

52. The final purpose of the EGR is to offer consistent information on global businesses on their cross borders relationships for producing selected statistics.

E. Inward and Outward FATS statistics before the EGR

53. The main statistical framework to measure the global activities of enterprises is given by Inward and Outward FATS, according to Regulation 716/2007. Inward and Outward FATS user requirements have been used to drive the development of EGR 2.0.

54. Before the EGR Inward and Outward FATS populations were defined by each NSI in each EU country completely independently. They used different independent sources especially for getting information about the Ultimate Controlling Institutional unit (UCI) that is the classification variable for breakdown FATS statistics. This situation is still partly true. Some countries use administrative sources or commercial data. Other countries find the UCI using surveys and direct reporting. In both cases it is extremely difficult to find the right UCI having a short sight national view only of the multinational group structures. Even in direct reporting respondents have difficulties to answer. In all cases where the UCI is not punctually identified estimation methods are applied by NSI. They also differ from country to country according to the information available.

55. According to a study on some Nordic countries⁵ to mirror foreign Outward FATS data with domestic Inward FATS data the main issue in FATS statistics is consistency across the two domains and across countries. Data collected with Outward FATS compared to the respective national data showed that just a small percentage was consistent. One of the most complicate tasks reported in the mirroring study was to link records of legal units on the basis of the names because the parent and the subsidiaries do not have unique identifiers in the different countries. In other words, different countries did not have the same picture about the same multinational groups.

56. The study verified that also the accuracy of UCI was affected. Information on UCI collected from units belonging to the same multinational groups but resident in different countries were different. Even in the case of a very large and well known multinational group present in more than 50 countries with Head Office in the EU it was not possible to assess the same UCI. A private equity fund was on top of the control chain and this was interpreted differently either by the respondents or by the NSIs.

F. The improvements with the EuroGroups Register

57. With the entering into force of Regulation 177/2008 Eurostat launched the EGR project. The Regulation allowed for the first time the exchange of confidential micro data among national statistical registers and with the Commission (Eurostat). The objective of the Regulation is to improve the quality of global statistics. The EGR project activated an intense cooperation activity among NSIs on data quality, especially in order to coordinate UCI information in the national statistical business registers.

58. The EGR system started to be built up in order to allow the exchange of micro data with the NSIs. The first version of the EGR (version 1.0) was available in 2009. Under this version NSIs exchanging data with the EGR had to do lot of manual work to check the multinational groups derived from the commercial data. The main weakness in terms of quality was the reduced coverage of the EGR with respect to the Inward and Outward FATS populations. Also the quality of the EGR was affected by duplicated legal units and differences in the UCIs. Data quality management was complicated because there was no direct access to the EGR data and the coordination among NSI was on a best effort basis. Some NSIs started to use the EGR frame as an additional source to improve the quality of statistics when needed.

59. With EGR 2.0 the coverage of the EGR has increased and NSIs manual work has been reduced. To improve EGR quality for FATS, users are invited to participate in the selection of the legal units to be sent to the EGR. In practise the legal units considered

⁵ "Mirroring foreign affiliate statistics – what do we see?" Statistics Norway.

relevant at national level and sent by one NSI to the EGR should be in the final frames complemented with information on cross border relationships and UCI by the EGR.

60. Data received from the NSIs 'Authentic store' do not need to be validated again, only the groups' structures derived by Eurostat require further improvement in quality by the NSIs. The foreseen EGR interactive module to validate EGR data on line should facilitate their activity and ensure a better coordination. The application of the concept of 'Authentic store' reduced duplicated units. The FATS user interface offers the possibility to view the groups' structures and retrieve the respective frames on line.

G. Main figures on EuroGroups Register

61. The 2008 EGR cycle was carried out in 2009 and produced data for 6350 multinational enterprise groups. The second EGR cycle processed data for reference year 2009 and was carried out in 2010 and extended the coverage to 8185 multinational enterprise groups. The 2010 and 2011 EGR cycles were implemented respectively in 2011 and 2012 and produced data for more than 10 thousand multinational enterprise groups.

62. From 2013 onwards EGR was developed in the direction to cover all relevant multinational enterprise groups acting in Europe. The EGR frame 2013 was released in May 2015. The process used more and more the available applications of the EGR 2.0 and the underlined methodology.

63. According to the EGR frame 2013 about 50 thousand groups are in the final frame, about 4 times the number of 2011, the last year when EGR 1.0 was used (the year 2012 was transitional). More data from NSIs and less from commercial sources (5000 multinational groups only) were used. Cross-border pair wise relationships are included in the EGR frame 2013. The groups are in general smaller than those of 2011. A strict validation of legal units, in order to exclude duplicates was performed, so that less legal units are used. Some groups' structures could be incomplete with respect to the past when commercial data were used.

Figure 3
Coverage of the EuroGroups Register

Global enterprise groups by number of LEUs	Final frame 2011	Final frame 2013	Change 2013/2011
1000 or more	57	23	-59.6%
500 to 999	130	84	-35.4%
250 to 499	321	218	-32.1%
50 to 249	2320	1865	-19.6%
20 to 49	3017	2687	-10.9%
10 to 19	3119	3584	14.9%
3 to 9	6693	17752	165.2%
3 or more total	15657	26213	67.4%
2	0	20622	
Groups total	15657	46835	

H. Further developments

64. In addition to FATS statistics also Foreign Direct Investment statistics could benefit from the EGR. Requirements from FDI uses are available from users and will be next considered. As said, EGR data can be used by the ESS and ESCB for any and only statistical purpose.

65. Additional users requirements are planned to be considered for further evolutionary maintenance of the EGR in the coming years, from other producers of global business statistics, like international sourcing, global value chains.
