

Profiling in business statistics

Preface

This chapter details the definition, rationale and methodology involved in profiling and describes the role it plays in the delineation of statistical units applicable in European business statistics. It is part of the online publication [European Business Statistics manual](#).

The Eurostat Business Register Recommendations Manual defines profiling 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’.

These statistical units are the profiled enterprises. This means that enterprises delineated within the group should have both an economic meaning and a ‘certain degree of autonomy in decision-making’ in accordance with Council Regulation (EEC) No 696/1993.

Contents

1. Introduction
2. What's new
3. The top-down approach
4. Units and terminology in European profiling
 - 4.1 Global enterprise groups
 - 4.2 Global enterprise
 - 4.3 Truncated enterprise
 - 4.4 Relation between the truncated enterprise and the enterprise
5. Different countries working together
6. Profiling types
 - 6.1 Intensive profiling
 - 6.2 Light profiling
 - 6.3 Automatic profiling
7. Impact of profiling
8. The Interactive Profiling Tool prototype
9. See also
10. Further Eurostat information
11. External links
12. Contacts

1. Introduction

The purpose of profiling is to analyse the legal, economic and operational structure of an enterprise group in order to delineate the statistical unit ‘enterprise’ in the best possible way in order to produce the most relevant statistics as possible. The enterprise definition is provided in Regulation 696/1993. Its implementation must follow the Operational Rules adopted by the Business Statistics Directors’ Group and the Directors of Macroeconomic Statistics at their parallel meetings held on 25-26 June 2015 in Luxembourg (Operational Rules from now on).

At the beginning of the 1990s, important groups in several countries largely restructured and created new legal units at national level to carry out activities that were previously part of one multidivisional enterprise and legal unit. The 'one enterprise equals one legal unit' principle therefore led to a distorted view – it was as if lots of new enterprises had been created, even though nothing had changed in economic terms. In addition, structural business statistics (SBS) that are often based on administrative tax data introduced biases in the time series of non-additive variables like turnover. Confronted with similar problems, European statisticians investigated alternative legal unit concepts for producing statistics, and the result was reflected in Regulation 696/1993. Later, Member State and EFTA countries developed national methods and processes for delineating the largest and most complex enterprises in their economies. The Business Register Recommendations Manual brought about further standardisation of national profiling practices.

At European level, economic globalisation and how enterprise groups organise their production chains across national boundaries create challenges for statisticians.¹ The profiling of large and complex enterprises that are part of multinational enterprise groups can be facilitated by cooperation between countries.

Different countries may well have a common interest in gaining a better understanding of the global structure of a multinational group with significant economic activity in their country because the relocation of activities from one country to another can have an impact on the correctness of the statistics of all countries involved. In such cases, the relevant information may be not available at national level or it may be extremely difficult to validate. As a result, no country alone can make adequate progress and ensure high data quality. This can affect the delineation of consistent enterprise units across Member States and EFTA countries and the compilation of foreign affiliates statistics (FATS), trade statistics and in general all statistics that are potentially affected by the effects of cross-border developments.

To better understand and monitor multinational groups in Europe, Eurostat and Member States decided to start building a database on the largest European groups in 2008, called the EuroGroups Register. This database includes the global decision centre of groups (which is the criterion for their nationality) and all their legal units in the different countries.

European profiling is a collaborative method involving all the countries that host enterprises on their territory that are part of the same multinational enterprise group. The respective national statistical institutes (NSI) participating in European profiling define and agree on the legal, financial and economic structure of groups and delineate their main economic activities irrespective of geographical borders. This common understanding of the groups' structure and their activities can

¹ The globalisation of economic activities, their restructuring across countries and registration of financial accounts in different legal units located in different countries can have a severe impact on national account data. Increased cooperation with multinational enterprises, the European Statistical System and on a global level is also needed to address the challenge. See also 'The impact of globalisation on national accounts', UNECE (United Nations Economic Commission for Europe).

strengthen data collection and data compilation and ensure more vertical and horizontal consistency in the EU.²

There is no explicit legal obligation in the EU to apply profiling (national or European). This is a stumbling block for some NSIs when they have to get in touch with groups. However, national profiling is largely recognised as the best available method for correctly producing SBS. Central data collection is also successfully employed by all Member States to compile outward FATS,³ in accordance with Regulation (EC) No 716/2007. Finally, Regulation (EC) No 177/2008 justifies data exchanges when it is for improving the quality of statistics on multinational enterprise groups. The combination of the above regulations provides a potential basis for carrying out profiling in Member States.

2. What's new

Following the Modernisation of European Enterprise and Trade Statistics programme, European profiling was included in the 2013 – 2017 work programme of the ESS.VIP project on the European System of interoperable Business Registers (ESBR).

Under the ESBR, European profiling becomes part of the complete statistical business process of the ESBR, which aims to produce consistent national and global frameworks for SBS and FATS. European profiling is tested using individual standard grant agreements. By the end of the ESBR project, some 300 multinational groups will have been manually profiled at least once⁴ based on the European profiling methodology.⁵

Under European profiling, the country in which the global decision centre of a multinational enterprise group is located initiates the profiling process and coordinates the countries where the group has affiliated enterprises. However, the global decision centres of the largest multinational groups in the EU tend to be concentrated in a few Member States. The burden of leading a profiling process is therefore not distributed evenly. European profiling is also resource intensive (especially

² Vertical consistency: consistency of statistics produced within the same statistical domain between participating countries, or their joint consistency with the corresponding statistics produced at EU level. Horizontal consistency: consistency of statistics produced between two or more statistical domains in a participating country or between two or more statistical domains at EU level. Source: ESSnet Consistency.

³ Outward FATS describe the activity of foreign affiliates abroad controlled by the compiling country. Source: *Reference Metadata in Euro SDMX Metadata Structure (ESMS)*.

⁴ In fact, because the perimeter of the large enterprise group changes every year, the profiling process should be optimally done every year. These follow-ups are the only solution to be up to date and to be able to calculate the most accurate statistics about enterprises.

⁵ By December 2017, the following countries will have tested the European profiling methodology over at least one year: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy,, Iceland, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Sweden, , Spain, Switzerland, United Kingdom.

for intensive profiling), and Member States need to carry out an assessment of the benefits before using it for regular statistical production.

ESBR implementation will follow a business architecture approach involving both national and European profiling. Both processes need to be integrated in the ESBR and follow a consistent methodology. In order to finalise the work, a task force on profiling has been set up and will also work in parallel and coordinate closely with the dedicated task force in charge of maintaining the business architecture.⁶

The following chapters describe the main aspects of profiling following some of the concept developed under the MEETS programme and already introducing the changes as proposed by the ESBRs. These chapters will be updated and aligned in accordance with future developments.

3. The top-down approach

National profiling as well as European profiling of large groups is based on the top-down approach in accordance with the method defined in the Business Register Recommendations Manual. This means that the group is first analysed to define its constituent enterprises based on economic relevance, autonomy and possibility to collect data.

Nevertheless, there are still important differences between national and European profiling, especially in terms of data sources. With national profiling, the national truncated part of an enterprise group is the starting point as each country is able to observe only what is located in its national territory; with European profiling, the starting point is the analysis of the group irrespective of its geographical borders.

Using a top-down approach, European profiling aims to delineate enterprises within the enterprise groups. To delineate the enterprise, the starting point is the main economic activities of the group, the so-called 'operational segment(s)', irrespective of any territorial border. The geographical dimension is added later in the process to clearly identify the national parts of each operational segment. This top-down approach and the resulting outcome can be a starting point for delineating the statistical unit enterprise, which is always carried out in accordance with Council Regulation (EEC) No 696/93 and following the Operational Rules described in the [Statistical unit chapter](#).

Different situations may arise in practice, which require adaptations to the outcome in order to fulfil the requirements of statisticians involved in data collection and data compilation at national level.

Countries that have tested the collaborative process of European profiling agree on the following benefits:

⁶ The ESBR business architecture will also have to be reviewed and continuously maintained. The two task forces will therefore coordinate and integrate their results.

1. Significant benefits deriving from the collaborative approach proposed
2. The top down approach improves the correct understanding of the economic structure of multinational groups
3. Profiling leads to important improvements for both the EGR and national business registers, especially as regard the additional legal units that can be discovered during the profiling process and the updating for the profiling reference year.
4. Profiling fosters important long-term relations with respondents

4. Units and terminology in European profiling

4.1 Global enterprise groups

An enterprise group can consist of several subgroups, which may be located in several countries. In European profiling terminology, the whole enterprise group is called a global enterprise group (GEG) to signify that it is considered an overarching unit due to its global nature.

GEGs provide the overarching structure to which administrative legal units are linked. Belonging to a GEG is a useful indicator for producing statistics that distinguish between real independent economic units and relevant ratios at group level (i.e. debt ratios). However, the GEG is too large and often too diversified to be used for analysing economic activities performed at global level.

4.2 Global enterprise

According to the current European profiling methodology the global enterprise (GEN) is an autonomous unit that fulfils the concept of the enterprise irrespective of national boundaries. The GEN is not to be considered a statistical unit in the ESS until clear user requirements are specified.

In practice, global enterprises often correspond to 'operational segments' of a multinational enterprise group according to the International Financial Reporting Standards (IFRS standards) on the compilation of financial reports. In fact, operational segments can be used as the starting point for defining global enterprises.

The concept could be adapted to the original concept conceived during the 1960s and 1970s, when the multinational enterprise (MNE) was a large multidivisional enterprise carrying out different economic activities in different countries. With MNEs following the external growth paradigm and adopting the form of an enterprise group organised not by divisions but by separate legal units, the term 'MNE' has recently come to mean the global group rather than the global enterprise.

If the global enterprise corresponds to an operational segment, it could be an organisational unit recognised by the groups themselves and for which useful information could be derived from the group's accounting system and collected. In such case, the global enterprise could provide relevant information about its global production chains that could be input for statistical data production.⁷

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See UNECE's Guide to Measuring Global Production:
http://www.unece.org:8080/fileadmin/DAM/stats/publications/2015/Guide_to_Measuring_Global_Production__2015_.pdf.

The profiled global enterprise may differ from the IFRS operational segments used to manage the group for several reasons. Indeed, not all multinational enterprise groups adopt IFRS or define their operational segment in terms that are relevant for statistical data collection. The operational segments are sometimes defined by geographical areas and therefore do not reflect the global enterprise concept and its activity, and cannot be used as such. In other cases, the operational segments may have no economic relevance for structural business statistics, no autonomy, or they are not suitable for statistical purposes. In other cases they reflect subgroups within a global enterprise group, and the profilers have to define global enterprises that meet the positive criteria and satisfy the need for data collection. In all such cases, further analyses are necessary, and the collaboration of the groups is essential. Once identified, the global enterprise could be a suitable technical unit for analysing the structural characteristics of the European economy at a more aggregate and consistent level in terms of what can be done by merely using the sum of national data.

4.3 Truncated enterprise

According to the current European profiling methodology a truncated enterprise (TEN) is the national part of a global enterprise. The truncated enterprise is not to be considered a statistical unit in the ESS. The truncated enterprise is a technical unit that can be automatically generated in the European profiling process and thus used at national level as the starting point for delineating the statistical unit enterprise.

4.4 Relation between the truncated enterprise and the enterprise

The truncated enterprise might in some cases correspond to the national enterprises as defined by Council Regulation (EEC) No 696/93 and the Operational Rules for statistical units. In other cases, the truncated enterprise as delineated by a top down approach and based on the global enterprise may result in a different unit from the enterprise delineated nationally without taking any global dimensions into account.

The difference can consist of different economic activities and different sizes. As a result, the enterprise equals truncated enterprise principle is not always applicable. When the truncated enterprise does not correspond to an enterprise, it should be up to the national statistical institute involved in delineating the enterprise to assess such differences.

It is the responsibility of the national statistical institutes to assess the statistical unit enterprise for compiling data in a way that is suitable for data collection and at the same time to ensure that international comparability and consistency is preserved.

5. Different countries working together

European intensive profiling is a collaborative activity which can help for national profiling. It is innovative because several countries cooperate to produce one output, with mutual benefits to be had for all. It is important to understand that there are two categories of countries and different responsibilities held by the respective national statistical institutes:

- The country where the global decision centre (GDC) of the group is located⁸. The relevant NSIs are responsible for selecting the group for profiling, initiating the process, contacting and visiting the GDC (for intensive profiling), collecting the requested information and sharing it with the other countries in which affiliated enterprises are located;
- The countries where the affiliated enterprises of the group are located. The relevant NSIs are responsible for analysing the information shared by the GDC — NSI and to delineate the statistical units in time. Feasible thresholds and agreements between countries on the number of groups to be profiled in common should be determined.

The ESBR business architecture is challenging the European profiling process developed as part of the MEETS programme. To have greater flexibility, the partnering countries do not necessarily have to accept all the information shared by the GDC-NSI. They could use it to delineate the enterprises located in their territory; in doing so, they would still be ultimately responsible for ensuring the best quality, comparability and consistency of business statistics at European level.

Close cooperation between NSIs is therefore a key factor in determining the success of European profiling. Working as part of a joint programme implies speaking the same language, sharing the same concepts, avoiding misunderstandings, trying to clarify most of the inconsistencies during the process and avoiding exercises for comparing or resolving data inconsistencies afterwards. The group itself is an important partner in the profiling process.

6. Profiling types

There are different sub methods available for profiling an enterprise group. These depend mainly on the size and complexity (number of legal units, their activities, and geographical locations) of the group, its economic relevance and the possibility to establish direct contact with group representatives. Another determining factor relates to the requirements from partnering countries for delineating the enterprises located on their territory.

6.1 Intensive profiling

With intensive profiling, the group should be fully involved in negotiations with group representatives (often the head of accounting) on the kind of data they can deliver. They should fulfil the statistical requirements for data compilation (e.g. statistical concepts and definitions), and these might sometimes be different to the information in the group's accounting system. In general, the majority of groups that adopt IFRS standards should be able to provide the required information on the operational segment in the same format as that required for profiling. However, this is not the case for groups that adopt IFRS standards 'by function'.⁹ In all cases, the profilers also have to establish collaboration with the group and 'negotiate' how to collect data on the structure of the profiled statistical unit.

⁸ If the GDC country is outside Europe, the European Country where the enterprise group could initiate the profiling process.

⁹ IFRS by function means that expenses are classified according to their role in determining net income (e.g. cost of sales, distribution, marketing and administrative expenses). See Guidelines for Manual European Profiling, Chapter 5.

With intensive profiling in particular, the whole process will fail if the group does not cooperate. Cooperation is essential for delineating a group's structure and for collecting information to be shared with the partnering countries. NSIs should create the right conditions for cooperation with the most economically important groups and should show them the benefits of a centralised approach in terms of reducing (or optimising) the statistical burden.

6.2 Light profiling

With light profiling, the operational segment of the group is determined only after desk research. Light profiling is normally sufficient for small to medium-size groups that carry out activities with a limited number of affiliates or/and in a limited number of countries. This is because it is usually possible to find all the necessary information in the annual report for these groups, together with other possible statistical or private sources available in the NSI.

Light profiling usually does not require a lengthy process of agreement between GDC-NSI and the partnering NSI. In the European profiling methodology proposed by the MEETS programme, the role of partnering countries in light profiling was very limited. They had little opportunity to comment on the results, although they were asked to accept and use the resulting statistical units in their data collection and compilation processes.

Following recent discussions with Member States and the results from their testing, the conclusion is that the partnering countries should play a greater role so that the results of light profiling are accepted and used.

While the involvement of the group and its cooperation in delineating the statistical units is not as essential for light profiling, it can be important during data collection. It is common practice for NSIs to set up a contact point with their data providers, and profiling can provide extra benefits by identifying the most efficient contact points in a group.

6.3 Automatic profiling

The manual delineation of enterprises is not recommended for all group types and sizes because there are simply too many of them. The vast majority of them are very small in size, with a maximum of two legal units, and are only set up to separate the productive activity of the enterprise from the assets (which often belong to several members of the same family or to several partners who are not involved in managing the enterprise). For such groups, automatic profiling is needed. It refers to the automation process used to delineate small and medium-sized enterprises. Automatic profiling is a method used to:

- delineate the population of enterprise groups to be treated as one enterprise and to statistically consolidate their statistical data coming from the legal units. These so-called simple enterprise groups may be very small or consist of legal units with the same activity and possibly legal units with ancillary activities;
- statistically consolidate existing information to gather data on truncated enterprises.

In cooperation with the Member States, Eurostat has developed several automatic methods¹⁰ for this purpose. Member States have further refined them with the support of individual grants.

7. Impact of profiling

As soon as tests started on national and European profiling, numerous studies were made to estimate the impact of this method. These studies were carried out by individual Member States themselves or as part of joint actions initiated by Eurostat. Some studies analyse the structure and the activities of one large group profiled by virtue of intensive national or European profiling, others consider the whole national productive structure of a country as a result of several hypotheses of automatic profiling.

Irrespective of the country and profiling method, these studies show that the impact of profiling and the derived delineation of the statistical unit enterprise can be summarized by the followings:

1. The economic structure is far more concentrated than it seemed to be with legal units. Prior to Council Regulation (EEC) No 696/1993, economic concentration was usually measured by the economic weight of the units in different workforce-size categories of legal units. However, with intensive profiling it is common to see large groups with hundreds of legal units, but only a few profiled enterprises or just one. Indeed, many groups' affiliates have been formed for strictly management-related objectives, and their only significance resides in their interaction with other groups' entities. Equally, the weight of the SMEs decreases dramatically. The reason is that a significant proportion of legal units of their size (10-249 payroll workers) consisted of affiliates and subsidiaries of groups in larger categories. This different statistical representation of the productive structure has huge consequences in terms of economic policy and aid for businesses.
2. Profiling changes the perception of the weight of each sector, decreasing the weight of services and increasing that of manufacturing. Large groups in these two sectors contain many affiliates and subsidiaries in their core businesses. However, they also set up separate affiliates for sales/marketing or support functions classified in service sectors. The inclusion of these legal units increases most of the SBS variables by a few per cent (turnover, employment, value added, wages, gross operating surplus) for manufacturing. The change affects export sales more because large manufacturing groups often assign their exports and imports to trade affiliates. Above all, the impact is far greater for other variables, which are affected in particular by spin offs to affiliates such as fixed assets or net assets. Most groups own these assets in 'professional, scientific and technical activities' or 'administrative and support services' (NACE Sections M and N).
3. Profiling provides a more realistic insight into how an enterprise is doing. By integrating all the legal units into an enterprise, we get a more realistic idea of economic performance as all the units that contribute to enterprises are now taken into account. As already

¹⁰ The method for automatic profiling was developed by way of tenders: Contract No 06111.2013.002-2013.193 and Contract No 06111.2013.002-2013.194. Title: 'Guidelines Deliverable 3' CircaBC/ESTAT/brnet/Library/profiling_construction/Studies on impact by contractor SOGETI SA.

mentioned, the key fact is the inclusion in enterprises of legal units dealing with NACE Sections M and N, where most of the assets held by head offices and various holding units are located. The same happens, to a lesser extent, with real estate activity. When shifting to an enterprise approach, all the means of production are taken into account and fixed assets per employee dramatically increase.

8. The Interactive Profiling Tool prototype

The Interactive Profiling Tool (IPT) is an application that allows profilers from different countries to participate in the collaborative European profiling process.

The IPT is currently operating as a prototype version and it is not fully integrated with the EuroGroups Registers applications. To start a European profiling process the IPT retrieves data on multinational groups from the last global frame produced by the EuroGroups Register.

The European profiling process is initiated by the EU country where the Global Decision Centre (GDC) of a multinational group is located. The EU countries where affiliates of the groups are located participate in the process as partnering countries. The result of European profiling is the agreed GDC of the multinational group, its perimeter in terms of affiliated legal units and its global activities as carried out by the defined global enterprises. IPT operates in the Commission secure environment for confidential data.

<Link to the IPT user guide will be added at a later stage>

9. See also

- Overview of methodologies of European business statistics: [EBS manual](#)
- Legal aspects related to this chapter can be found in the following [overview](#)
- [Statistical Units](#)

10. Further Eurostat information

Guidelines for Manual European Profiling, Eurostat, (2nd ESSnet ESBRS –Phase 1 version), September 2016 <link will be added at a later stage>

11. External links

[Council Regulation \(EEC\) No Regulation 696/1993](#) of 15 March 1993 on the statistical units for the observation and analysis of the production system in the Community.

[CIRCABC document with restricted access: Notice of intention](#) of the Business Statistics Directors Groups and the Directors of Macroeconomic Statistics on the consistent implementation of Council Regulation (EC) No 696/93 on statistical units.

[European system of national and regional accounts \(2010\)](#)

[Guide to Measuring Global Production \(UNECE\)](#)

12. Contacts

For questions or comments on this chapter, please contact ESTAT-G1@ec.europa.eu.

The methodology is being revised