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European Profiling to better measure Multinational Enterprise Groups' activities

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Summary

Economic globalisation and the way multinational enterprise groups (MNE groups) organise themselves have led to increasingly complex organisations. This is why during the last decade Eurostat and the European National Statistical Institutes (NSIs) have worked closely together to implement a relevant and consistent cross-border view of MNE groups. In particular, they have committed to looking beyond the purely legal definition of the legal unit, capturing instead the 'enterprise' in the economic meaning. This method is called "Profiling" and it involves the direct dialogue with the MNEs' representatives. Through collaborative work, Eurostat and European NSIs have created a database on MNE groups located in Europe and their enterprises delineated by European Profiling.

In this paper we present: 1) short background information on this collaborative work; 2) first quantitative results from this database and first findings on MNE groups; 3) a first analysis on electricity-producing groups, as an example of the use of European Profiling to better measure the MNE groups' activities.

I. Background and definitions

A. Profiling and the implementation of the statistical unit Enterprise

1.   In official statistics, the enterprise has been associated with its purely legal definition, the "*legal unit*" i.e. a legal person or a natural person that performs a production function. Economic globalisation and the way multinational groups organise themselves have led to increasingly complex organisations and to a growing gap between their organisation in terms of legal units and their economic structures.

2.   This is why, several European National statistical Institutes (NSIs) have decided to go beyond the legal unit and to produce statistics on *enterprises* in the economic meaning. According to the European Regulation 696/93, "*the enterprise is the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources*".

3.   The delineation of the enterprise as a statistical unit is done by *Profiling*. The definition of Profiling is provided by the Eurostat Business Registers Recommendations Manual: "*Profiling is a method to analyse and maintain 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*".

4.   When a legal unit is not controlled by a group, it forms by itself an enterprise provided that it is active, i.e. it generates turnover, employs staff or makes investments. Groups can be organized in one or several enterprises, as a group may consist of only one enterprise (as a whole) or it can represent a diversified conglomerate with several business segments having a "certain level of autonomy" (and thus several enterprises may have to be delineated in them).

5.   The benefits of Profiling have been explained in several conference papers and articles, for example (Insee 2015) or (Xirouchakis Hecquet 2018). Profiling provides a number of benefits:

> - Getting a better view of the internal economic structure of the groups and the implementation of enterprises as relevant economic players;

> - Getting a better view of the size and sector concentration of the economy and more relevant economic data;

> - Avoiding double counting of the non-additive variables between the groups' legal units;

> - Improving the quality of business statistics by monitoring the largest groups on an individual basis. In particular, for these largest groups, Profiling includes meetings or exchanges with the groups' representatives (generally accountants) to decide with them the delineation of the enterprise(s) within the group and to improve data collection.

6.   When Profiling is carried out by the NSI team within the national economy, we refer *to national Profiling*. In the European Statistical System, significant efforts have been invested during the last years to systematize national Profiling. Nowadays, several countries have Profiling teams with regular activities (such as France, Italy, the Netherlands or the UK). All the European NSIs are actively implementing national Profiling, with the great majority participating also in the collaborative process of European Profiling.

B. European Profiling

7. Nowadays, many groups, even small ones, have many legal units or branches[2] in different countries. It is in this sense that statisticians call them "MNE groups".

8. Therefore, cooperation between European NSIs and Eurostat is required to understand the business model and the structure of MNE groups. To organize such cross-country collaboration, Eurostat has encouraged the European NSIs to cooperate to ensure high quality statistical output and to address inconsistencies coming from different national practices, tools, and sources.

9. *European Profiling* activities started in 2009. European profiling focuses on the largest and most complex MNE groups located in Europe. It is carried out collaboratively by national profilers of the country where the global decision centre (GDC) of the MNE group is located (the GDC profilers), together with national profilers of the other countries where the group is present (the partner profilers). As a result, the profilers of the different NSIs where the MNE group is present reach a consistent understanding of the MNE group by this cross-country collaborative work. European Profiling also ensures consistency between the European and the national level, at least as regards group perimeter, activities, employment and turnover.

10. The method of European Profiling, the roles and responsibilities of the GDC and partner profilers are further explained in Annex 1. An example of delineation of a complex MNE group in enterprises is illustrated in Annex 2.

C. The ESBRs project

11. In 2013, Eurostat and the European Statistical System (ESS) also launched *the European system of interoperable statistical business registers (ESRBs)* project. This project focuses on registers to address inconsistencies coming from different practices in national statistical business registers and lack of harmonised approaches. It also aims at implementing common standards, IT tools, and remote access facilities.

12. One of the most important deliverables of the ESBRs project is the EuroGroups Register (EGR) 2.0. This important system contains today more than 120.000 of the largest multinational groups, their characteristics, legal unit structure, along with data on employment, turnover and activities of their constituent legal units.

13. European Profiling activities were included within the framework of the ESBRs project. An Interactive Profiling Tool (IPT) to support European Profiling was developed. It is a secure platform, which allows the NSIs' Profiling teams to create, exchange and share the process resulting from their collaborative work.

14. As the deliverables of European Profiling are stored in the IPT, this platform can be used as a database containing only the large and complex MNE groups located in Europe, which have been profiled. It is the quantitative results on the MNE groups stored in this database that are presented in this paper.

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[2] A branch is a local unit without separate legal entity, located in a country, which is dependent on a foreign group. In the methodology of European Profiling, branches are treated like legal units. This is compliant with the Business registers recommendations manual and with the National Accounts principles (ESA95 and SNA93). However, to simplify the wording of this paper, we use the one word "legal unit" as a generic term that may also refer to a branch.

II.   Results from the European database on profiled MNE groups

### A.   Profiling practices are quite homogeneous among the NSIs

15.   The analysis concerns 241 MNE groups stored in the IPT. They were profiled collaboratively by 19 European NSIs within the scope of 3 grants co-financed by Eurostat in 2015, 2016 and 2017[3]. These MNE groups employ together 6.5 M employees and control 28,176 legal units. Half of these groups are involved in more than 16 countries. A quarter of them are involved in more than 35 countries.

16.   An enterprise delineated at global level through European Profiling is called a "*Global Enterprise*" (GEN). European Profiling of these 241 MNE groups resulted in 692 GENs, with one third delineated into only one GEN. The number of GENs per group regularly increases as less and less groups are concerned, to a maximum of 8 GENs to only 9 groups (see Chart 1). In each of the 3 grants, all the participating NSIs delineated the number of GENs per group in quite similar proportions. This is a potential important result, which indicates good homogeneous Profiling practices among the NSIs.

17.   This also reveals an interesting economic result on the large and complex MNE groups in Europe. In the smallest countries (in demographic of economic terms), groups are generally smaller. However, even in these smallest countries, one can find highly complex conglomerates engaged in very different businesses and which provide a significant number of GENs.

Chart 1
Number of global enterprises (GENs) among the profiled 241 MNE groups

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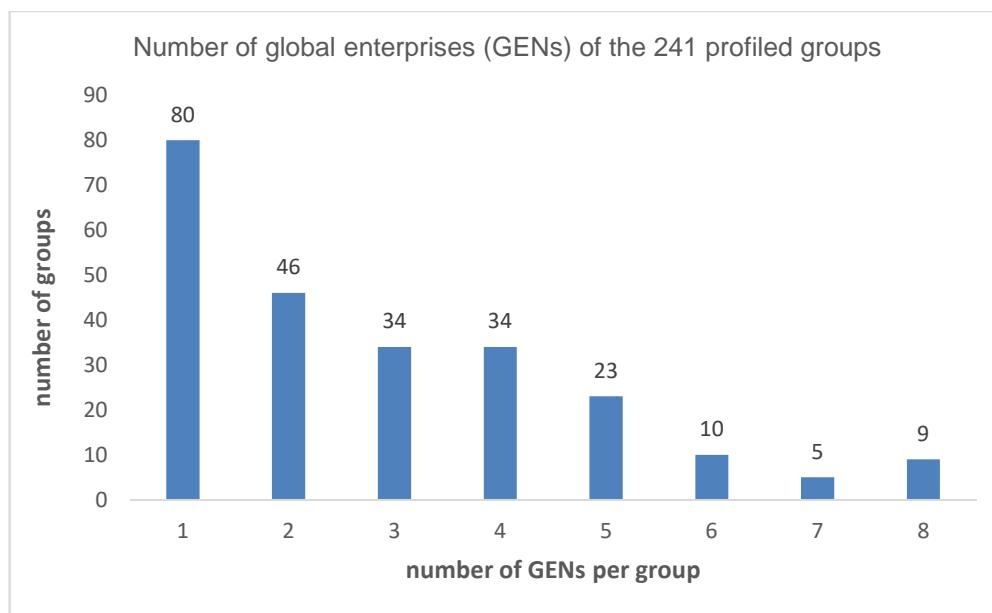
[3] In addition to these 19 NSIs which participated within the scope of these grants, 7 other NSIs participated in testing. Large MNE groups often reorganise their internal structure (in terms of legal units or enterprises). These changes have to be regularly updated in the scope of the activity which is called "follow-up profiling". 290 MNE groups have been profiled with IPT (at least once) until now. For each group, the profile and the data used in this study are those of the most recent year.

Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

B. The largest multinational groups are present in more countries

18.   The size of a group and the number of countries in which it operates are strongly connected. This clearly appears on Table 1, in which we compare the size of the MNE groups with the median number of countries in which they operate worldwide. Half of the MNE groups with 50,000 employees or more operates in 36 countries or more. Opposed to them, half of the MNE groups with less than 5,000 employees operate in 8 countries or more. This observation is consistent with those of the EGR. It is also consistent with the results of the Outward FATS survey, which monitors the foreign affiliates of the multinational groups of each European country[4].

Table 1
Indicators on the MNE groups' structure according to their size

Groups by size:	Number of groups	employees / group	median of countries involved	Legal units / group	Groups of 1 GEN (%)	GENs /group
less than 5,000 employees	83	2.313	8	33,8	30	2,7
5,000 to 9,999 employees	52	7.443	17	74	36,5	2,7
10,000 to 49,999 employees	78	24.491	32	158,9	29,4	3,1
50,000 employees or more	28	143.854	36	326,1	32,1	3
All	241	27.043	16	92,6	33,1	2,9

Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

19.   There is logically a good correlation between the number of the countries in which the groups are established and the number of their legal units (0,69), since the location in a country is reflected by the creation of a legal unit. However, the correlation between the size and the number of the legal units is just medium (0,53).

20.   Above all, as it appears in the two right-hand columns, the number of GENs does not exhibit connection at all with the size of the groups. In the same way, there is no correlation between the number of GENs and that of the countries in which the groups are present.

C. The internal structure of a MNE group is greatly determined by its activity

21.   In fact, the size of a group does not determine its delineation in GENs, because the latter is greatly determined by its activity. To a lesser extent, the number of legal units per group also depends on the activity. These differences clearly appear on Table 2.

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[4] It has to be noticed that the MNE groups treated through European Profiling were chosen as very large and complex. Indeed, they are involved in far more countries than the small or medium multinational groups. For example, according to the Outward FATS survey, half of the small or medium multinational groups with a French GDC are involved in 2 other countries or more (Dauré, Fesseau, 2019).

Table 2
Indicators on groups' internal structure according to their main activity

	Number groups	employees / group	Groups of 1 GEN (%)	GENs / group	Legal units /group	employees /GEN	employees /legal unit
Manufacturing: C	132	22.851	32,6	2,7	117,4	8.333	195
Electricity, Gas: D	13	18.849	7,7	4,8	114,7	3.890	164
Construction: F	10	14.688	70,0	2,2	118,6	6.732	124
Wholesale trade : 46	7	3.830	42,9	1,7	35,9	2.234	107
Retail trade: 47	16	53.655	31,3	3,1	109,1	17.520	492
Business to Business: M, N, JA, JC	19	49.731	47,4	1,7	123,5	28.633	403
All	197	26.591	34,5	2,7	114,3	9.686	233

Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

.Focusing on the industries for which we have a significant number of groups, there remain 197 groups, employing 5,2 Mio employees. Among them, 132 have a main activity in manufacturing (section C), employing 3 Mio employees. Notwithstanding the limitations of the sample, the results show that the internal structure of the groups (in terms of the number of GENs and the number of legal units) is above all linked to the activity. These results agree with those of other studies carried out on the impact of Profiling at national level by several NSIs.

22.	Manufacturing groups have more complex structures than those performing trade or those delivering Business to Business services or B-to-B (divisions JA and JC, sections M and N[5]). They are more frequently delineated in more than one GEN. Above all, they have more legal units. A legal unit in a manufacturing group employs only half the employees in a B-to-B group, only 40% of employees than in a retail trade group, which means a more complex structure in manufacturing groups.

23.	Electricity and Gas groups (section D) distinguish from the other activities by their very large number of GENs. This is due to productive as well as legal reasons. In particular, in the scope of the European competition policy, the different activities included in this section have to be separate in different groups or different GENs that exchange at market prices. Besides, these groups also perform other activities as elaborated below.

24.	Construction groups (section C) have many legal units, but 70% consist of only one GEN. In our sample, they are far smaller than groups performing manufacturing, retail trade or B-to-B. However, the average numbers of their legal units is very close to those of the groups performing these activities. Actually, it often happens that construction groups create a legal unit during the project time of a building site. Construction groups also use to create joint ventures especially dedicated to the project when they intervene together at a construction site.

25.	Trade and B-to-B groups are less complex regarding their internal structure. Groups performing wholesale trade (division 46) are smaller, since they need fewer employees to operate on the markets. Groups performing retail trade (division 47) have many employees

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[5] Division "JA" represents "Publishing, audio-visual and broadcasting activities"; Division "JC" represents "IT and other information services". Section M represents "Professional, scientific and technical activities"; Section "N" represents "Administrative and support activities". The division "JB", which represents "Telecommunications". It is excluded because its consumers are rather private individuals than businesses.

with direct contact with customers. In the same way, B-to-B groups have many employees who work in direct contact with client businesses.

26.   Another interesting observation stems from the two tables below. These tables compare the employment distribution of MNE groups with different activities in terms of GENs and in legal units.

Table 3.a
Employment distribution (percentage) in manufacturing and construction groups in sample

| | Manufacturing groups (C) | | Construction groups (F) | |
| | employment distribution (in %) | | employment distribution (in %) | |
	in GENs	in LeUS	in GENs	in LeUS
C: Manufacturing	95,2	75,2	1,6	7,0
D: Electricity Gas	0,2	0,1	0,0	0,0
F: Construction	0,5	1,6	90,9	73,4
46: Wholesale trade	0,6	10,9	1,4	0,2
47: Retail trade	0,1	1,0	0,0	0,0
H: Transportation	0,1	0,9	0,0	0,4
JA, JC, M, N : B. to B.	2,2	6,0	4,3	10,0
Others	1,1	4,4	1,8	8,9
All	100,0	100,0	100,0	100,0

Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

27.   These tables reveal the reasons for the higher internal complexity of manufacturing and construction groups. Manufacturing groups have ancillary GENs and legal units to design, produce and sell their products. In particular, the weight of ancillary legal units performing wholesale trade within manufacturing groups is very high. To a lesser extent, manufacturing groups have employees in B-to-B to devise the products (R&D, engineering). In the same way, construction groups have ancillary GENs and legal units in B-to-B (architecture, services to building and landscape) as well as in real estate (line "Other").

In contrast, retail trade and B-to-B groups have less ancillary activities since they are in direct contact with customers. As a result, employment in these groups is almost exclusively focused on the main activity.

Table 3.b
Employment distribution (percentage) in retail trade and B-to-B groups in sample

| | Retail trade (47) | | B-to-B groups (JA,JC,M,N) | |
| | employment distribution (in %) | | employment distribution (in %) | |
	in GENs	in LeUS	in GENs	in LeUS
C: Manufacturing	1,3	1,6	0,0	0,4
D: Electricity Gas	0,0	0,0	0,0	0,0
F: Construction	0,2	0,3	0,0	2,1
46: Wholesale trade	0,6	2,2	0,0	0,4
47: Retail trade	95,3	90,8	0,0	0,2
H: Transportation	0,0	0,7	0,0	1,0
JA, JC, M, N : B. to B.	1,9	2,2	99,9	92,0
Others	0,7	2,2	0,1	3,8
All	100,0	100,0	100,0	100,0

Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

28.   The consolidation of the groups towards their main activity increases at GEN level, in particular for manufacturing and construction groups. The results of the profiling activities are illustrated by the shift in employment from the ancillary activities to the main activity and result in a different picture of the economy. Shifting from the legal units to the GENs improves the relevance of the units used to measure MNE group's activities. In practice, many legal units within groups lack of autonomy or even, sometimes, substance. They have been formed as a result of takeovers, for tax/administrative or internal reasons or strictly management-related objectives. Their only economic significance resides in their interaction with other group entities. Examples include legal units that perform specific phases of the production process or are set up to manage an enterprise group's entire workforce. Others, instead, report production activity even with zero employees.

29.   The shift from one unit of analysis to another also changes the distribution in terms of sectors of activity. Several NSIs carried out studies of impact (Alonzi, Migliardo 2018, Béguin, Hecquet 2015). All these studies conclude that the enterprise view increases the weight of manufacturing and construction. Besides, by integrating all the legal units that form a group, we also get a more realistic vision of economic performance, since all the units contributing to the functioning of the enterprise are now taken into account.

III.   The example of electricity-producing MNE groups

A.   For electricity-producing groups, Profiling provides a very different vision of the activity

30.   It is very interesting to see an example of how the picture of electricity-producing units is modified and improved through Profiling. Our sample includes 12 MNE groups performing electricity production (NACE 3511) as their main activity. Besides, as mentioned in paragraph 2.3, electricity and gas groups control many legal units and provide many GENs. Hence, as it appears on Table 4, the employment distribution varies a lot according to the different units.

Table 4
GENs and employment distribution (percentage) for the electricity-producing groups in the sample

	GENs of the 12 groups number	employment distribution (in %) in GENs	in LeUS
C: Manufacturing	0	0,0	5,2
D: Electricity Gas	34	76,0	61,3
F: Construction	1	4,4	5,6
46: Wholesale trade	1	0,6	0,8
47: Retail trade	0	0,0	0,0
H: Transportation	0	0,0	2,4
JA, JC, M, N : B. to B.	10	5,7	15,2
Others	10	13,4	9,5
All	56	100,0	100,0

Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

31.   These 12 MNE groups employ around 214,000 employees. They are classified in only one 4 digit NACE (3511). They were delineated in 56 GENs of 21 different NACE. They control as much as 1,450 legal units of 139 different NACE[6].

32.   Groups producing electricity provide many GENs classified in B-to-B. They also provide many GENs in the line "Others" which includes the mining activities. Moreover, the electricity-producing groups or GENs have many employees in secondary, upstream or ancillary legal units. Indeed, only 61% of their staff is employed by legal units with a principal activity in electricity or gas.

33.   This result appears on the two charts below which compare the employment distribution in GENs and in legal units. These two charts also illustrate how the GENs delineated through European Profiling are more relevant to analyse the MNE groups' activities.

B.   The GENs delineated through Profiling reveal business models and synergies

34.   European Profiling delineates GENs, which have an economic meaning, that is to say they have a certain degree of autonomy in decision-making. These GENs are also market oriented. They are generally associated within the group that controls them according to an economic logic. Their association within a same group is meaningful in terms of productive process, business model or market synergies.

35.   The European profilers make sure that the GENs fulfil the criteria for being enterprises. In their own national Profiling, the profilers of the NSIs follow the same criteria to delineate their national enterprises.

36.   The criteria for being an active enterprise are those defined in the *Business registers recommendations manual (2010)* and in the "*Notice of intention of the Business Statistics Directors Group and the Directors of Macroeconomic Statistics* (2015). According to the *Notice*, "*An enterprise is deemed as active in a certain period if it generates turnover, employs staff or makes investments in the period*". Actually, each of the 56 delineated GENs within the electricity-producing groups has its own human resources, factors of production, and identified managers.

37.   Besides, each of these 56 GENs is also "market-oriented", which means that they sell their products to other economic players in a market transaction at market prices. This occurs in two cases:

38.   - The simplest case is when the GEN sells its production to external customers, outside the group that controls it.

- However, the experience of Profiling found that a GEN may also fill this criterion if it sells its production to other GENs of the same group, on an equal footing. It means that the GEN sells its production at the same market prices to others GENs of the group as to external customers. To describe this situation, the financial statements of the group often quote the accounting "arm's length principle".

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[6] The NACE of the legal units is assigned by the NSIs and stored in their business registers on the basis of their device of national sources, following the European recommendations for classification. The NACE of the GENs is assigned by the GDC profilers, in discussion with partner profilers (see paragraph 1.2 and Annex 1).

39.   For each of the MNE groups, the profilers checked that all these criteria are fulfilled in delineating the GENs. By looking at the chart from left to right, one may be convinced that this is really the case. One may also better understand the business model of electricity-producing groups.

Chart 2
Employment distribution (percentage) of the electricity-producing MNE groups in GENs
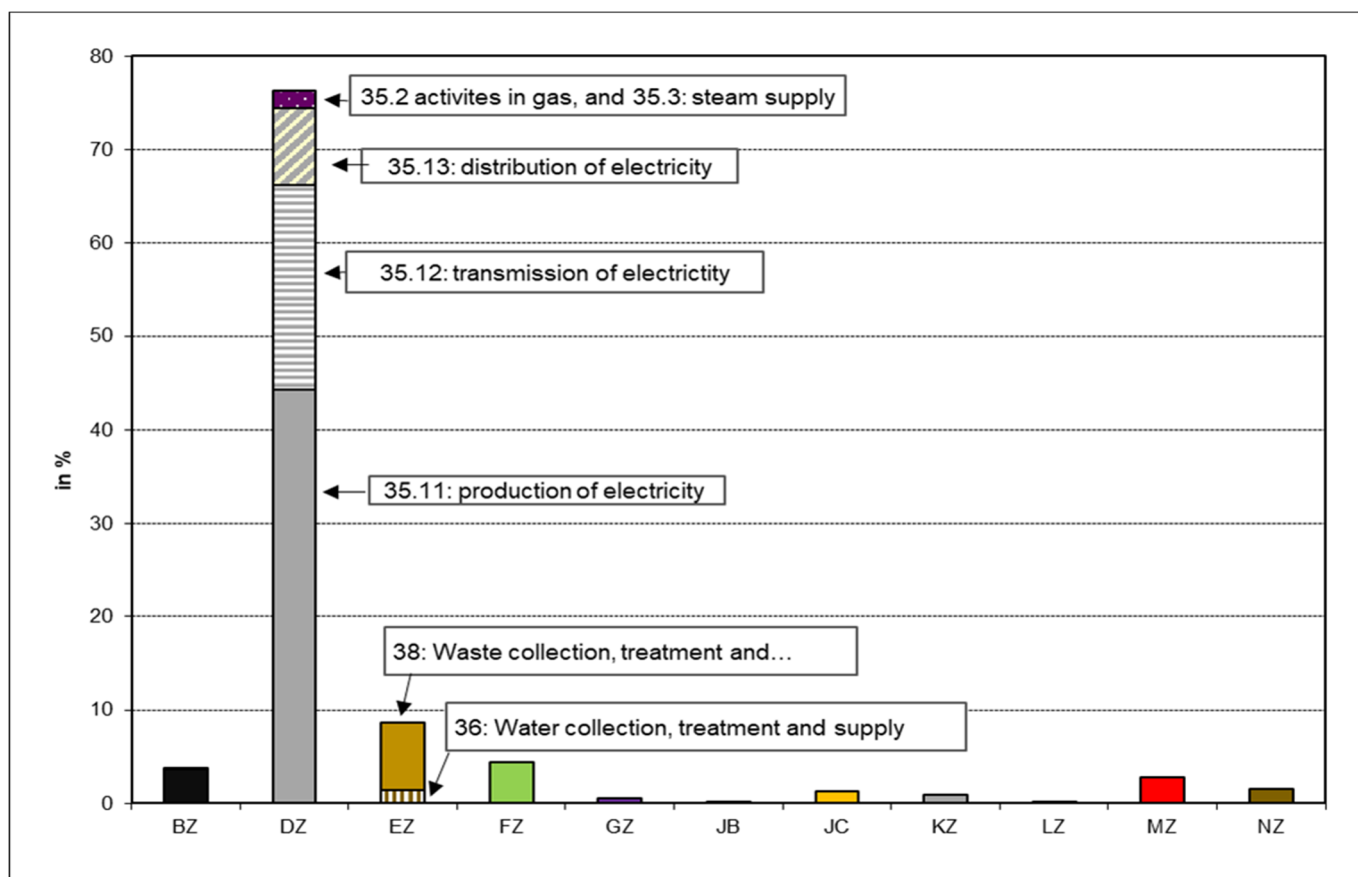
Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

40.   On the left side, the first column "BZ" represents employment in mining of coal" (05.1) and its support service activities (09.1). Indeed, some electricity-producing groups control GENs in these activities. As the productive chain has never to be interrupted, the electricity-producing groups buy the coal from their own mining GENs, but also exchange

with those of their competitors. As a consequence, even if these mines are an upstream activity, one can be sure that the "arm's length principle" is well respected[7];

41. The second column "DZ" represents employment in electricity and gas. A few GENs appear in gas and steam supply. The GENs producing electricity (3511) account for the highest share in employment. Other GENs are distinguished according to their role in the productive process: transmission (3512), distribution (3513) and trade (3514). Actually, in line with the rules of the European competition policy, these GENs have to be separate and to trade at market prices. There is no doubt that they fulfil the criteria for being enterprises;

42. The third column "EZ" represents for a small part water distribution (division 36) but mainly waste collection (division 38). Electricity-producing groups are involved in these activities in the scope of market synergies. As they negotiate procurement contracts with municipalities, some groups have also diversified activities;

43. The fourth column "FZ" represents the employment in construction, mainly in electrical installation (4321). Similarly to the ones performing mining, one can trust that these GENs fulfil the criteria for being enterprises;

44. The column "JC" represents employment in "computer programming activity, consultancy and related activities" (62). Actually, some electricity-producing groups create dedicated GENs to invest in e-mobility start-ups or digitalization (see the example in Annex 2);

45. The last column "MZ" represents the "professional, scientific and technical activities". The column "NZ" represents the "administrative and support services activities". As it often happens in diversified conglomerates, electricity-producing groups provide GENs that represent headquarters. They also provide GENs that perform technical or support services. These GENs sell their services to the rest of the group according to the accounting "arm's length principle". They also employ a sufficient number of persons to be considered as enterprises in line with the guidance provided by the *Notice of Intention*.

46. All the other columns represent only very small shares of the employment[8].

47. In summary, in this vision resulting from European Profiling, the measurement of the MNE groups' activities is relevant in economic terms. The groups are without doubt the most relevant units for strategic and main financial decisions. However, the profiled GENs are the most relevant units to monitor the usual process of production, that is to say, as in the EU Regulation 696/93, "the allocation of the current resources":

- Unlike the legal units, each GEN may be seen as a relevant economic player, with an economic substance, market–oriented and with "a certain degree of autonomy".

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[7] Since the beginning of European profiling, around twenty Oil & Gas MNE groups have been profiled. This common experience showed that Oil & Gas groups are also organised in a vertically integrated productive process similar to that of electricity-producing groups. They combine the following segments: Upstream, Downstream, Sales to customers. Like for the electricity-producing groups, the Upstream segments fill the criteria for being enterprises. In particular, they do business with the rest of the group, but also quite constantly and for a significant part with those of their competitors on spot markets to adjust the needed quantities.

[8] The other sections which were not named previously in this paper are: "GZ": Wholesale and retail trade; repair of motor vehicles and motorcycles; "KZ": Financial and insurance activities; "LZ" Real estate activities. As explained in footnote 4, the division "JB", which represents "Telecommunication" is isolated because, as its consumers are rather private individuals than businesses, it is more relevant to separate it from B-to-B activities.

-The GENs illustrate the business models better than the group level. For example, the electricity-producing MNE groups may include GENs in mining or construction because of the productive process. Transmission, distribution and trade of electricity have to be separate. Some electricity-producing groups have GENs in waste collection, because of market synergies when they negotiate procurement contracts. Some groups diversify themselves in digital services in relation with electricity.

C. The legal units reflect the legal internal structure of the groups

Contrary to the vision in GENs, which reveals business models or productive synergies, the picture in legal units reflects the legal internal structure of the groups. This clearly appears in Chart 3, which departs significantly from the previous one.

Chart 3
Employment distribution (percentage) of the electricity-producing MNE groups in legal units
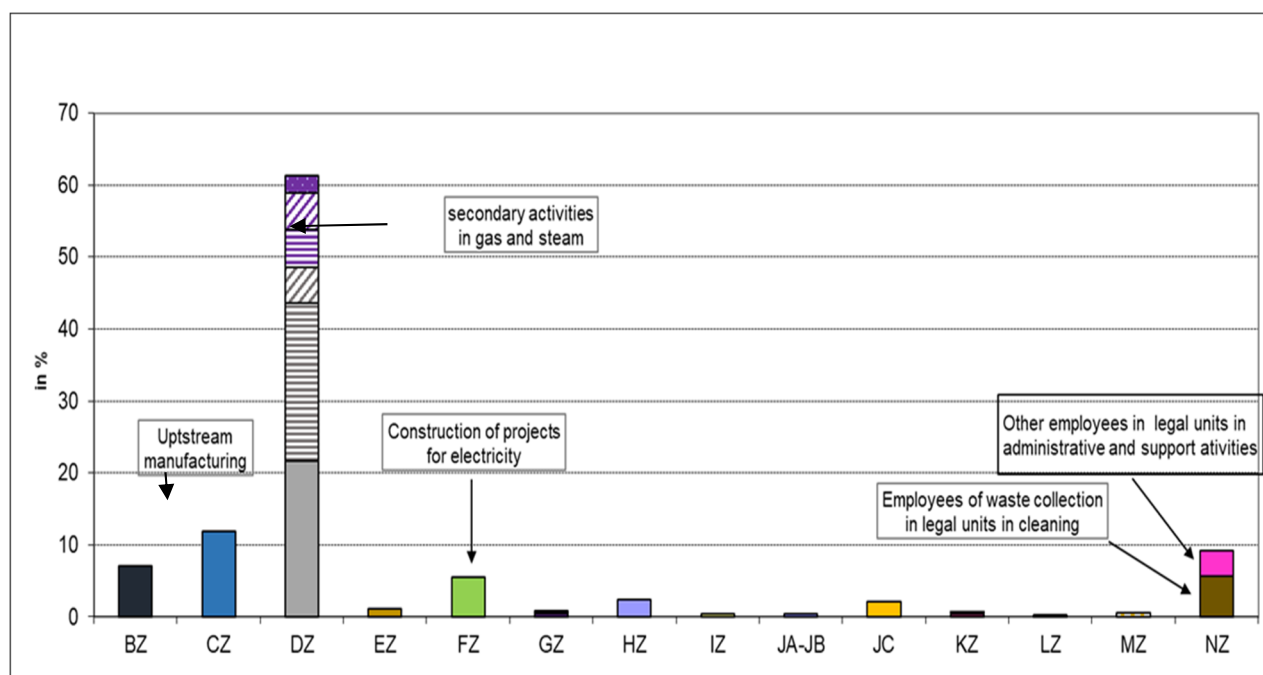
Source: Eurostat, results of the 2015-2016-2017 grants on European Profiling

48.   Comparing Chart 3 to Chart 2, one immediately notices the following differences:

49.   Employment in manufacturing activities ("CZ") has now a significant share (12% of the total employment). It represents upstream activities dedicated to other GENs. The main activities are the following: repair and installation of fabricated metal products, machinery and equipment (33.1); manufacture of structural metal products (25.1), which are in fact integrated in the construction of projects for electricity. These upstream manufacturing activities are not identified as GENs in the groups' economic structure after profiling. Besides, they are not at all market-oriented.

50.   Gas activities also increase and occupy 12% of the total employment. As their share is far larger than in GENs, one can see that they are in fact secondary activities of the GENs classified in electricity. Indeed, electricity GENs often offer in parallel the supply of gas to their customers. As a result, electricity GENs are involved in gas transportation, trading and stream supply. These secondary activities in gas are rarely identified through GEN in the groups' managerial structures. However, they are market-oriented.

51.   The third change is the sharp fall of waste collection (in "EZ"), for the increase of "NZ", which includes the cleaning activities. For legal or social reasons, the workers who

perform waste collection are employed by legal units classified in cleaning (81.2). This change poses the most severe problem, since the process of production, employment, customer and market circumstances differ considerably between waste collection and cleaning activities.

52. In summary, compared to the previous picture in GENs, the view in legal units gives a distorted view of the real group activities. The business models and market synergies are lost. This vision also fully skews the distribution between sectors.

D.   Enterprises are more relevant than legal units to monitor the MNE groups' activities

53. This example of electricity-producing groups illustrates that, compared to the one in legal units, the implementation of the enterprise through Profiling definitively improves the appropriate reflection of the MNE group's activities in our statistics.

54. On the one hand, one argument that could be raised in favour of the legal units is that they provide a more detailed breakdown of the different activities. In the previous example, the case of the secondary activities in gas, which are without doubt market-oriented, would be the most convincing.

55. On the other hand, the three following arguments support the case for the utilization of the enterprise rather than of the legal unit.

- Firstly, the advantage of the legal unit in revealing secondary activities can be preserved with the utilization of the unit enterprise. At national level, some NSIs have already implemented surveys on the different (principal and secondary) activities at the level of the enterprises, which they delineated through national profiling. Besides, in the scope of grants on automatic profiling launched by Eurostat, several NSIs successfully experimented and confirmed that they are able to reconstitute, through algorithms, the different activities of the unit enterprise from the information available on the legal units. A similar result would then be possible for the GENs. Indeed, each GEN is stored in Eurostat's database with its full legal-unit perimeter. Through an analogous principle, it would be possible to reconstitute the different activities of the GEN from those of its legal units;

- Secondly, the activities revealed by the legal units are those which are identified from a legal point of view in the groups' internal structure. Nothing ensures that these activities are the most relevant to understand the groups' activities nor the productive system. For example, in electricity-producing groups, there may be other upstream or ancillary activities more relevant that those in manufacturing, but which are not identified at the legal unit level. The legal structure in legal units may also widely differ between groups and between activities. Do the results presented on the Tables 3.a and 3.b reflect functional and economic differences between the groups of different industries, or just legal differences in their internal structures? In the example of electricity-producing groups, the classification in legal units with a NACE in cleaning of the employees who perform waste collection greatly biases the economic view.

- Last but not least, the vision of the size concentration remains a very powerful argument. In our example of electricity-producing MNE groups, there are 12 economic players taking strategic and major financial decisions. There are 56 economic players "with a certain level of autonomy of decision making for the allocation of the current resources". However, there are not 1,450 small economic

players (legal units) with an economic meaning in the main activity in which they are classified.

IV.   Conclusion

56.   As a conclusion, the quantitative results on MNE groups and the detailed analysis of electricity-producing groups show that the implementation of the unit enterprise through European Profiling improves the view of MNEs groups' activities:

-    With the legal units, statisticians depend on the group's internal organisation in legal entities. Many groups' legal units lack of autonomy or even, economic substance. For example, large manufacturing groups have a significant number of legal units in wholesale trade whose only objective is to sell their production. There may be a big difference between the activity performed in reality and the classification of the legal unit, as shown by the case of employees in waste collection within electricity-producing group. The view in legal units leads to biases in terms of sector distribution and underestimates the size concentration;

-    Through Profiling, statisticians define enterprises with an economic meaning. These enterprises have an economic substance since the means needed to perform the production (employment and capital) are now integrated. Each enterprise may be distinguished from the others according to the criteria of a "certain degree of autonomy" and market orientation. The delineation of enterprises within a group reveals its business model, productive or market synergies;

-    In addition to these general improvements of the implementation of the unit enterprise, European Profiling provides further benefits. Through their collaborative work, profilers of different countries reach cross-border consistency. They achieve a common understanding of the activities and structure of MNE groups, at global level and in the different countries. They also share experiences, findings and common tools.

57.   This is why The European Statistical System will continue to develop Profiling at national and at European level.

Annex 1

The method of European Profiling, roles and responsibilities of the NSIs

58.   As mentioned in 1.2, European profiling is carried out collaboratively by national profilers of the country where the global decision centre (GDC) of the MNE group is located (the *GDC profilers*), together with national profilers of the other countries where the group is present (the *partner profilers*).

The *GDC profilers* have the responsibilities to:

- collect the perimeter of the group in terms of legal units;

- delineate the group's global enterprise(s) i.e. the GEN(s), within the group. This delineation is done through a top-down approach, starting by a global view of the group (see Annex 2);

- assign the legal units to GEN(s) (for the resident legal units and, as much as possible, for the non-resident ones);

- collect data at GEN level (consolidated turnover, employment and NACE activity);

- collect data for their resident enterprises (consolidated turnover, employment and NACE activity);

- collect and insert data for their resident legal units: turnover, employment and NACE activity.

The *partner profilers* have the responsibility to:

- confirm or update the national legal unit perimeter;

- decide on the structure of the national enterprises, and delineate them during the process of profiling;

- link the national enterprises to the group GENs in the best way to reflect national needs and reality;

- collect data for their national enterprises (consolidated turnover, employment and NACE activity);

- collect and insert data for their resident legal units: turnover, employment and NACE activity.

59.   When there is a comprehensive dialogue and a meeting between the GDC profilers and group representatives (generally consolidators or accountants), we talk about "*intensive profiling*". When there is an analysis of the group without contact with its representatives, or contacts only by mails and conference calls with its representatives on very general aspects regarding delineation in GENs or enterprises, we usually talk about "*light profiling*". Intensive profiling is encouraged for the largest and more complex MNE groups. Indeed, dialogue with group representatives highly improves the quality of profiling.

60.   The methodology of European Profiling was updated in 2017, to provide a better linking between European and national needs. It allows more flexibility to the partner profilers to link their national enterprises to the GENs and to update their national legal unit

perimeter. In any case, GDC profilers and partner profilers have to collaborate for the delineation of the GEN(s) and the important decisions on the perimeter or the national enterprises. They also have to work together to coordinate the communication with the group representatives. In the same way, within each NSI, profilers have to consult with their colleagues of the other domains of business and economic statistics (such as FATS statistics or National Accounts).

A recommendations manual, which offers practical guidance on European Profiling, will be published in 2019.

Annex 2

The European Profiling of an electricity-producing MNE group

61. This real but anonymized example of a particular group illustrates the method to delineate the GENs in the process of European Profiling.

62. This delineation is done through a top down approach. It means that it starts from a view of the group at the global level to delineate one or several GEN(s). The GDC profilers start by checking the group's website and its financial statements. In Europe, when a group is listed on a stock exchange, it has to publish its financial statements according to the International Financial Reporting Standards (IFRS). These standards include in particular the rule IFRS 8. This rule is useful for delineation because it obliges the groups to present themselves in the "business activities in which they are engaged". Profilers usually start by checking this segmentation, but this is only a starting point. They have to depart from this segmentation if the segments do not meet the criteria for being a GEN. Besides, in the scope of European Profiling, it is greatly recommended that the GDC profilers validate the delineation with the group's representatives.

63. In this example, the financial statements present the group in 5 business segments. At the end of the process, GDC and partner profilers agreed that each of these segments meet the criteria for being a GEN:

- In the financial statements, each of the 5 segments is presented with the elements of a Profit & Loss, but also with the elements of a balance sheet (assets and liabilities). For each of them, a dedicated manager can be identified in the organisational structure. The financial statements also explain that each segment trades at market prices, with customers outside the group, but also with the others segments. Therefore, one may consider that each segment meets the criteria needed for being a GEN;

Chart 4
Employment distribution (percentage) of an electricity-producing group in GENs
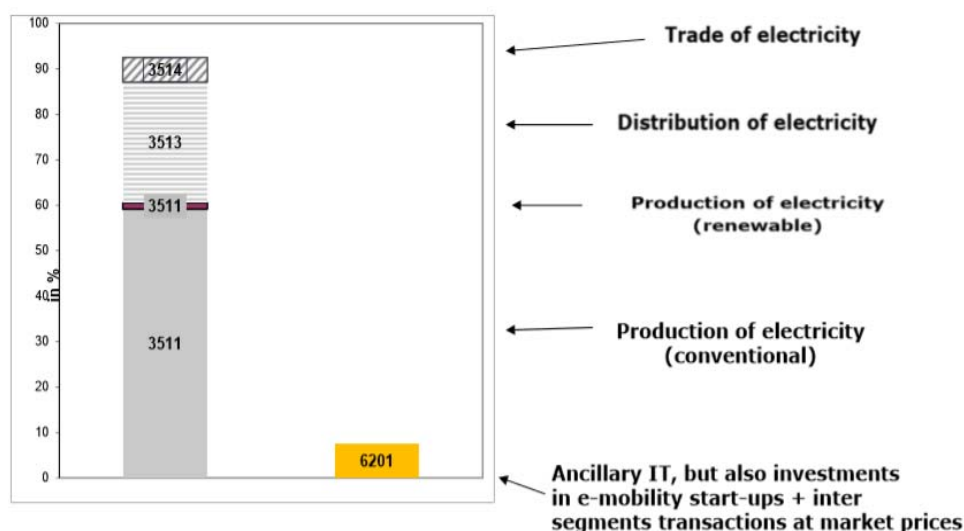
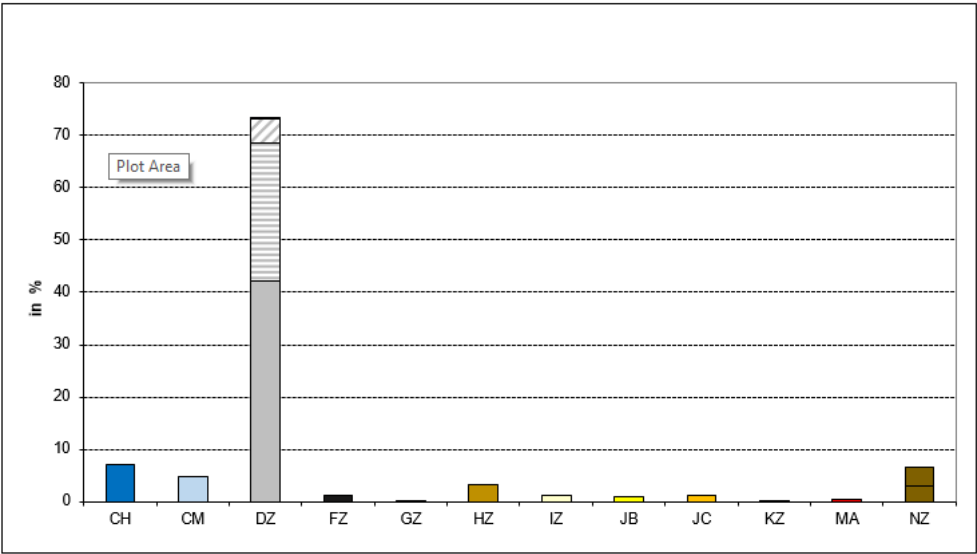Source: Eurostat, results of the 2016 grant on European Profiling

- The separation of distribution, trade and production in separate GENs is not surprising. This may be explained by productive reasons and by the legal rules of the European competition policy. The delineation of 2 different GENs producing electricity is interesting. In fact, one of these 2 GENs performs conventional production, while the other one performs renewable production. This delineation in 2 GENs is logical from an economic point of view, following the criteria for delineation: distinction between the managers, employees, capital needed, markets and prices. In legal units, this distinction would be invisible, as these 2 methods of production are classified under the same NACE;

- The last segment represents the rest of the group. The financial statements explain that it includes the headquarter and IT services performed for the group but that all these intra-group services are paid at market prices too. Besides, this segment also includes IT innovations dedicated to external customers, such as new projects in digital start-ups. At the end of Profiling, this segment was classified in "computer programming activities" (6201), since this activity accounts for its larger share.

64. Therefore, each GEN of this group is relevant as an economic player, which may be distinguished from the others (within or outside the rest of the group) and which does business with them. This vision in GENs shows very clearly the business model of the group. It highlights the shares of the traditional activities and those started in the scope of new projects.

65. This group controls some 60 legal units of 2 dozens of NACE. The vision in legal units is far less interesting. Instead of the business model, what appears now is the share of some ancillary activities, which are not identified as economic players and which do not trade at market prices:

- in "CH", manufacture of structural metal products (inputs for the construction of projects for electricity);

- in "CM"; repair and installation of fabricated metal products, machinery and equipment;

- in "HZ"; transportation and storage.

Chart 5
Employment distribution (percentage) of an electricity-producing group in legal units

Source: Eurostat, results of the 2016 grant on European Profiling

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