INE

Delineation of complex companies in the INE

Automatic profiling algorithm methodology

Department of Methodology of Statistical Production

CCD Unit

1. Background

Our economies are undergoing increasing processes of globalization. The interdependence of markets and the continuous transfer of technology are behind the push for more standardized procedures for the entire international statistical community. Large economic actors normally operate under hierarchical structures, made up of large numbers of legal units located in different countries. The way that business groups are organised legally differs substantially from their operational structures. The growing gap between the two organizational concepts makes it very difficult to accurately identify the economic activities carried out by these large corporations and the production actually active in the market.

The production processes exerted by the groups are normally distributed among several legal units responsible for certain functions or production factors. Under these conditions, it is very difficult to determine the role that each entity actually plays within the group and, consequently, the compilation of data at that level is difficult to interpret. The use of the legal unit as an approach to the company concept does not offer an image adapted to the real world and therefore it is necessary to change this practice progressively.

In this complex context, it is critical to adopt a uniform interpretation of the concept of *statistical companies* and their related units. Without this foundation, it will not be possible to achieve real consistency in the system of production, neither within nor between countries.

The European Statistical System has progressed quickly in recent years. The *Statistical Units* Task Force was created in 2014 in order to develop an approach for the correct delineation of enterprises, which in turn was consistent with the definition of *Regulation 696/1993 on statistical units*, currently in effect.

The output delivered by the TF materialised into a set of methodological principles and operational rules. This material was adopted by the BSDG (Business Statistics Directors Group) and the DMES (Directors of Macroeconomic Statistics) and set out explicitly in the document: *Joint notice of intention BSDB/DMES on Statistical Units, implementation plan and operational rules*.

2. Towards a methodological solution for a conceptual definition of *companies*

The *company* is the reference for the statistical unit model and plays a core role in the production of economic data. The operational rules adopted focus on aspects of organisational structure, autonomy and market orientation. In this revised definition, three basic situations are set out. The concept of the company can correspond to:

- An independent legal unit
- A group of companies
- Part of a group of companies

The latter case requires specific methods in order to adequately define a specific combination of legal units within a group. In this context, the *profiling* methodology

has been recognized as the best method to achieve this, i.e. to form companies applying the methodological principles and operational rules identified in the *Notice of intention*.

This methodology is based on analysing the legal, accounting and operational structure of a business group, with a view to establishing the companies operating within it, their links and the most efficient structures for the collection and processing of economic data.

For large and complex groups, *manual profiling* should be applied in different forms (intensive, minimal) according to the relative size of the group. There is a finely detailed manual that guides all phases of the procedure. Available from

https://ec.europa.eu/eurostat/cros/system/files/essnet-esbrs1_del-wp3-a1.22a_guidelines-profiling.pdf

This method entails a high investment and requires a highly qualified team. For this reason, the vast majority of groups will have to submit to *automatic profiling (AP)* techniques, implementing the operational regulations as much as possible.

This document describes the methodology that has served as the basis for the development and implementation of a *specific AP algorithm*. It consists of a set of principles and systematic rules, which over the last four years have been proposed, evaluated and agreed jointly by the Department of Methodology (CCD Unit), the Subdirectorate of Business Statistics and the Department of National Accounts.

The application of this algorithm at the level of CCD enterprise groups is a critical activity for the entire national system of economic production. The results generated will give a complete view of complex companies and their economic importance within the whole of businesses in Spain. This new statistical base, formalised at an additional level of information within the CCD system, will make it possible to incorporate it appropriately into the statistical production chain, whether according to the classic survey method or other types of operations.

3. The target population of the CCD; preparing microdata

Until now, the CCD system was made up of a relational database composed of three levels of information:

- L_1.- Legal units (ULE)
- L_2.- Local units
- L_3.- Groups of companies, strictly speaking, groups of ULEs

Profiling techniques are applied directly at the third level, i.e. hierarchical structures of ULEs organized vis-a-vis relative control. For the rest of the units, it is assumed that *Company = ULE.*

The number of ULE groups is not particularly large, compared to the total. However, they have considerable economic relevance given the dominance of large units. The

exhaustive character of the sample selection and the process derived from the economic data in the statistical production chain merit, therefore, special attention.

In the case of the CCD, the units involved in groups represent *slightly more than 3%* of the total population. However, they account *for 43% of the total number of employees and more than 66% of total turnover.*

The profiling algorithm needs some prerequisites to be implemented. The statistical units that make up the target population and certain variables already operational in the system must be captured and properly organised.

4. The principles of the algorithm

The rules adopted to combine ULEs have taken as a reference the documentation introduced in the first section and the similar experiences developed by other INEs.

All methodological principles and derived decision rules have been proposed, discussed and agreed in the **Task Force on Statistical Units,** created by the INE Board of Directors and made up of representatives of the CCD, Sample Design, Field Work, Producers and National Accounts Units.

The principles adopted are presented below:

- Groups as a whole are heterogeneous and their impact on the economy differs according to their size and complexity. A **simplified version** of the algorithm (**PAS**) will be developed for small or simple groups and a complex **version (PAE)** will be applied to the rest. As a group evolves and grows, it is more likely to develop various autonomous production processes. In these cases, the algorithm will look for conditions of homogeneity based on clusters of productive units corresponding to the National Classification of Economic Activities (CNAE, *Clasificación Nacional de Actividades Económicas)* Groups. This approach is intended to align with the accounting information reported by large multinationals, based on the IFRS concept of Operating Segments.

- **Market/non-market criteria**. All the ULEs that will make up the statistical companies producing market statistics must also be considered market. The Institutional Sector Code will be a critical variable in business creation processes. A unit will be defined *SI_MERCADO* if it is classified as S11, S12 or S14. It will be considered *NO_MERCADO* if it is classified as S13, S15 or S2.

- **Auxiliary activities and/or ULEs**. It is possible to verify the existence of these types of activities and the units that carry them out. Based on the guidelines contained in the introduction to the 2009 CNAE Classification, and on our own experience in manual profiling, a list of activities identified as potentially auxiliary has been defined in ANNEX I. A ULE is considered potentially auxiliary if its main activity is listed and coexists in the group with other ULEs classified in other activity codes, hereinafter referred to as *productive*.

- **Vertical integration**. Activities within a group are usually organised with a high degree of integration. In the production process, intermediate products can be generated, which in turn are used in the elaboration of the final product, until its sale to the market. A distinction will be made between events of *progressive* vertical integration (raw material - intermediate product - final product) and *regressive* integration (final product - distribution). Two or more ULEs shall be considered as potentially vertically integrated if they develop combinations of activities according to ANNEX II.

- The lists in the previous Annexes are neither exclusively national (agreed and used by other statistics bureaus) nor official. No supranational organization has assumed it with that status. Therefore, changes may occur in the future and we hope that some international agreement will be reached for their common use.

- If a ULE is potentially classified in the previous categories and meets certain *criteria of non-relevance* with respect to the set of ULEs of the group, these categories will be definitively classified and must be combined with other productive units of the group.

- **Holdings and Headquarters**. They are units with very specific functions within groups (CNAE codes 6420 and 7010) and whose analysis presents some ambiguity. After various consultations with Eurostat and considering the needs of Producers and National Accounts, these activities will be considered *productive.*

The transition from these principles to deterministic rules has been preceded by an impact assessment. The conditions and thresholds linked to the aspects of complexity, size or non-relevance of special activities were defined in an application specifically designed for SBS producers. The result of this analysis has made it possible to definitively set all the rules of the algorithm.

This application also allows the algorithm to be applied to the different corporate group frameworks of the CCD. There is a user's manual available describing all its functionalities.

5. The algorithm in practice

STEP 1.- Define the profile of the group and assign the profiling method

A group is considered *simple* when its activities have a certain degree of homogeneity. In particular, if any of the following conditions are met:

- It only has one activity at the Class level (4 digits); or
- It has two activities but one single activity at the Group level (3 digits); or
- It has two activities at Group level but one of them is *not relevant.* This means that both employment and turnover linked to that activity account for less than 15% of the group's total employment and turnover.
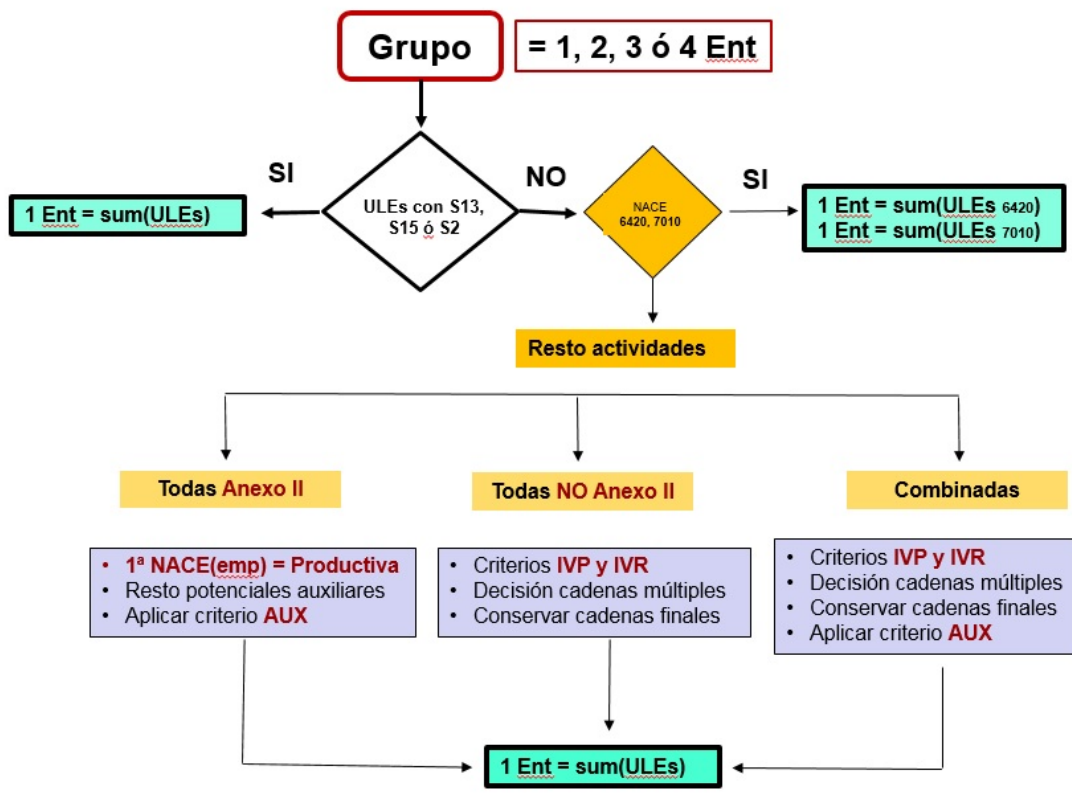
A group is considered *small* when it has fewer than 50 employees.

The *simple or small* groups will be processed with the simplified version of the algorithm (PAS) and all others through the complex version (PAE).
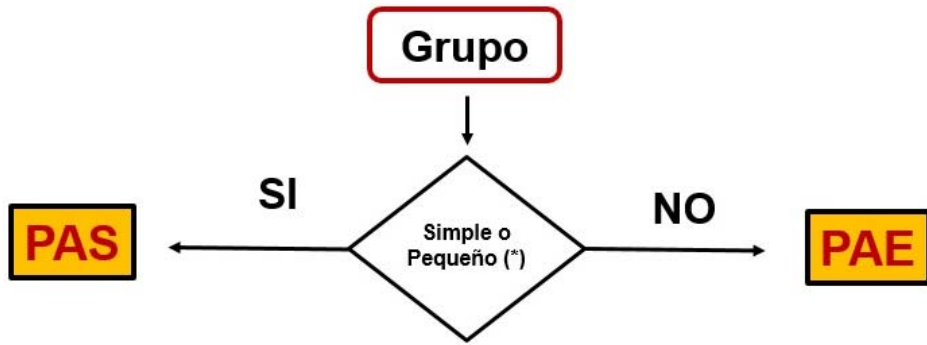
(*) Actividades homogéneas o menos de 50 asalariados en España

STEP 2.- Rules for Simplified Automatic Profiling (PAS)

Rule 1.- SI_MERCADO / NO_MERCADO Clustering

For NON-MARKET Clusters, the cases of auxiliaries and vertical integration will not be analysed. All ULEs are considered productive (TIPO_ULE=P) and only one company is generated.

Rule 2.- SI_MERCADO Cluster Analysis

2.1 There are Headquarters and Holdings (7010 and 6420)

Independent companies are generated for each code, formed by the combination of these ULEs. All of them will be considered as productive by default.

2.2 Remaining activities

2.2.1 Coexistence of potentially auxiliary (ANNEX II) and productive activities

2.2.1.1. Existence of potential *progressive* vertical integration.

According to ANNEX III_1, there is at least 1 ULE with upstream activity and at least 1 ULE with downstream activity, both in the same row.

To avoid ambiguities, first analyse the existence of relations 1 (U): n (D). If yes, take the activity (D) with the highest turnover. It will be identified as the candidate to receive the U units.

Once a single D has been set, the U activities are analysed, and the following rule applies:

- If $\sum$ ULEs_U turnover < $\sum$ ULEs_D turnover: or
- Both sums = zero

ULEs_U are definitely vertically integrated in ULEs_D.

Assign TIPO_ULE=U to the first and TIPO_ULE=D to the second.

Otherwise, they are all considered productive. TIPO_ULE=P is assigned to all of them.

2.2.1.2. Existence of potential *regressive* vertical integration.

According to ANNEX III_2, there is at least 1 ULE with commerical activity and at least 1 ULE with industrial activity, both in the same row. In addition, it should be verified that the units of industrial activities have not previously been vertically integrated (TIPO_ULE<>U).

In order to avoid ambiguities, first analyse whether a given commercial activity coexists with several industrial ones potentially integrated. If so, take the activity with the highest turnover, which is identified as a candidate for integration.

Then apply the following rule:

- If *(($\sum$ ULEs_Com turnover > $\sum$ ULEs_Ind turnover) AND ($\sum$ ULEs_Com turnover < 2 $\sum$ ULEs_Ind turnover))*; or
- Both sums = zero

ULEs_Com are definitely integrated in ULEs_Ind.

Assign TIPO_ULE= C to the first and TIPO_ULE=I to the second.

If the industrial ULEs have already been previously classified as TIPO_ULE=D (they incorporate upstream activity), they will be recoded to TIPO_ULE=X (complete chains where progressive and regressive vertical integration is combined).

Otherwise, they are all considered productive. TIPO_ULE=P is assigned to all of them.

2.2.1.3. Determination of auxiliary activities.

Once the vertical integration analysis has been completed, this last section delimits the activities and units that are *truly* auxiliary.

Previously, based on our experience profiling manually, some specific cases will be verified. For example, legal units with potentially auxiliary activities for which information is available a priori and which must necessarily be considered productive (metropolitan management companies, ICT companies that sell to the market, etc.). Another relevant case corresponds to groups controlled by the Public Administrations: In these cases, all of its 49th Division subsidiaries are considered productive.

After these first checks, *the relative importance of each potentially auxiliary activity in relation to the* company *as a whole* will be evaluated. The degree of importance will be determined according to the invoicing and employment thresholds of the ULEs involved, with respect to the company as a whole.

CODE	THRESHOLD_WORK	THRESHOLD_CNEG
4941	20	20
53	20	20
5210	20	20
5224	20	20
5229	20	20
61	20	20
62	20	20
6311	20	20
702	30	30
69	30	30
821	20	20
73	20	20
7420	20	20
822	20	20
823	20	20
7830	20	20
682	20	20
6832	20	20

Then apply the following rule:

- If $((\sum \text{ULEs\_Aux turnover} > X\% \sum \text{ULEs\_Tot turnover}) \text{ OR } (\sum \text{ULEs\_Aux employment} > Y\% \sum \text{ULEs\_Tot employment})$

ULEs_Aux become productive and are assigned TIPO_ULE=P.

If this is not the case, that is, if they do not pass both thresholds, they are considered definitely auxiliary and are assigned TIPO_ULE=A.

In particular, when the turnover and employment of the company's total ULEs are both zero, the ULEs will definitely be considered auxiliary.

2.2.2 All activities are different from ANNEX II

Potential cases of vertical integration are verified, as in 2.2.1.

2.2.3 All activities are listed in ANNEX II

Activities are taken at the 4-digit level and ranked by employment. The first activity is considered, by definition, productive. For the rest of the activities, from greater to lesser importance, the auxiliary activity criteria according to 2.2.1 are applied.

At the end of the process, there will always be at least one final productive activity and possibly auxiliary activities. If there is zero employment, use turnover as an alternative criterion. If turnover is also zero, rank the activities from lowest to highest and take the first as productive.

Rule 3. Final generation of variables for PAS companies

Depending on the cases, a group of companies under the PAS may be divided into 1, 2, 3 or 4 companies. The way to obtain the variables for this new statistical unit is described below:

- **Identification (ID_EMP).** In the case of a single company, it will be identified as NIFGRU_000 / DUNGLOB_000 according to the type of group we are considering. The first case corresponds to groups with national control and the second to groups with foreign control. In the case of several companies, a sequential number concatenated with NIFGRU / DUNGLOB will be assigned: NIFGRU_001, NIFGRU_002,…/ DUNGLOB_001, DUNGLOB_002,... The size criterion will be followed, in descending order.

- **Economic activity (CNAE1_EMP, CNAE2_EMP and CNAE3_EMP).** Up to three Classes codes ranked by importance according to the use of the ULEs with these codes (PCT_CNAE1_EMP, PCT_CNAE2_EMP and PCT_CNAE3_EMP). The activity codes of the Group's productive ULEs (i.e. TIPO_ULE= D, I, X or P) are taken into account.

  For progressive (TIPO_ULE=ULE) and regressive (TIPO_ULE=C) integration cases, the use of the integrated ULEs must initially be assigned to the receiver activity. Then calculate the activity hierarchies and the corresponding percentages. The use of auxiliary activities is not considered in the hierarchy.

If employment does not allow you to rank (for example, 50-50), turnover is taken alternatively to identify the order of occurrence of activities, always respecting the percentages based on employment. CNAE1_EMP will never be empty.

- **Size by employment (ASAL_EMP, POCUP_EMP)**. Calculated from the sum of data of all its ULEs.

- **Size by number of subsidiaries (NULES_EMP)**. Total number of ULEs belonging to the company, regardless of which type.

- **Size by turnover (CNEG_EMP)**. Calculated from the sum of data from ULEs with TIPO_ULE= D, P, or C. Turnover of auxiliary ULEs is never considered. For cases of vertical integration, the following nuances should be considered
  - Chains: U-D. The turnover of D is the only one taken, since U figures as part of the production process in the generation of the final product.
  - U-X-C or I-C chains. The turnover of C is taken exclusively as it is the one that delivers the output to the market.

- **Legal Form, Institutional Sector, Name, Province and Municipality. (FLEGAL_EMP, SI_CODE_EMP, NAME_EMP and PROMU_EMP)**. They will be taken directly from the ULE with CNAE1_EMP activity. If there are several, the one with the highest employment and, in the case of equal employment, the one with the highest turnover, will be taken. The Legal Form variable of the company will be the first letter of the fiscal ID (NIF) of that ULE.

- **Activity status and start year (STATUS_EMP, INICIO_EMP)**. The activity status of the company is generated directly on the basis of the activity status of the group to which it belongs:
  - If CLAVEGRU=B, then STATUS_EMP=B
  - If CLAVEGRU=A, then STATUS_EMP=A

The year in which the company starts its activities coincides with that of the group (INICIO_EMP=INICIOGRU) if the Group is De-listed. Consequently, all corresponding companies are De-listed.

If the group is active, INICIO_EMP=MIN (AÑO_SIT) is based on the company's ULEs. In this case, if the Group is active and only has one company, INICIO_EMP=INICIOGRU automatically.

STEP 3.- Rules for Simplified Automatic Profiling (PAE)
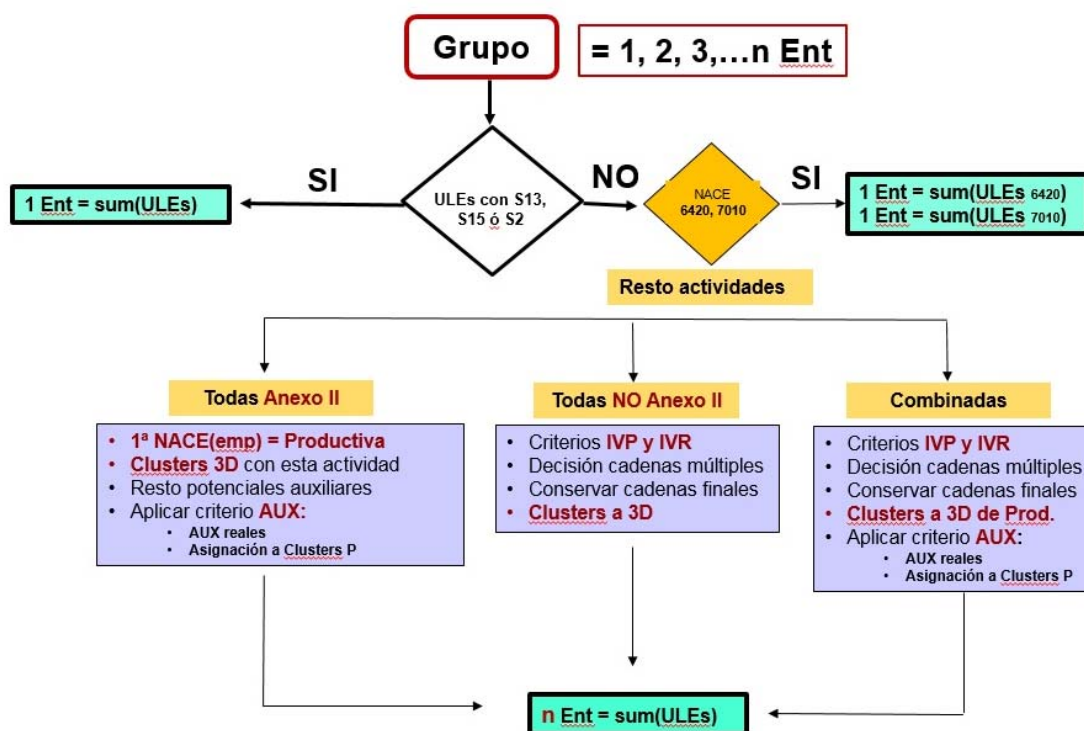
Rule 1.- SI_MERCADO / NO_MERCADO Clustering

For NON-MARKET Clusters, the cases of auxiliaries and vertical integration will not be analysed. Each ULE is considered productive (TIPO_ULE=P) and sets are generated at the level of CNAE Groups, with each set configured as a different company.

Rule 2.-SI_MERCADO Cluster Analysis

3.1 There are Headquarters and Holdings (7010 and 6420)

Independent companies are generated for each code, formed by the combination of these ULEs. All of them will be considered as productive by default.

3.2 Remaining activities

3.2.1 Potentially auxiliary (ANNEX II) and productive activities coexist

3.2.1.1. Existence of potential *progressive* vertical integration.

According to ANNEX III_1, the same PAS conditions apply.

3.2.1.2. Existence of potential *regressive* vertical integration.

According to Annex III_2, the same PAS conditions apply

As a consequence of these processes, we have ULEs already characterized with TIPO_ULE= U, D, P, I, C, or X. In all cases of vertical integration, it is essential to preserve the chains in order to correctly define the company's characteristics.

3.2.1.3. Initial formation of Clusters.

Sets are generated at CNAE Group level for the productive ULEs (TIPO_ULE= P, D, I, X), each set being made up as a different company. The units resulting from progressive or regressive integration (TIPO_ULE= U, C) are assigned to their corresponding unit (TIPO_ULE = D, I, X). These clusters are still provisional as the potentially auxiliary activities have yet to be analysed and may undergo variations.

3.2.1.4. Analysis of auxiliary activities and final formation of Clusters.

According to Annex II, the activities and corresponding potentially auxiliary ULEs are identified. You then determine whether they correspond to actually auxiliary activities and, if so, you define a procedure for the assignment of your ULEs to the clusters of production units.

First, the same preconditions already established for the PAS (the initial four paragraphs) will be checked. If any of the following cases is verified, they will directly be considered Productive and we will return to the beginning. Provisional clusters of productive ULEs (TIPO_ULE = P, D, I, X) are regenerated at the level of NACE Groups.

Let K be the number of clusters generated and S be the number of potentially auxiliary ULEs. Cases that may arise:

- **K=1**. In this case, the potentially auxiliary S ULEs are treated identically to the PAS. For each activity, all units are considered, and the same threshold conditions of the table are evaluated. If a certain potentially auxiliary activity exceeds the thresholds, it will become productive along with its ULEs.

  In this case, it will be necessary to regenerate the production clusters at NACE Group level. This process can cause the existence of more than one (K>1), depending on the level of coincidence of the codes. If that is the case, we would move on to the next section.

  In other situations, these new production units can be integrated into the initial cluster if their activities coincide with 3 digits. If only one productive cluster persists, the ULEs identified as definitely auxiliary would be integrated into it (TIPO_ULE=A).

- **K>1**. In this case, we then define a systematic procedure for assigning ULEs.

  - ✓ We arrange the K clusters, in descending order according to the sum of employees of the units involved (if equal, use the turnover).

- ✓ Potentially auxiliary activities are ordered according to the same criterion. Within each activity, their ULEs are ranked on a descending basis by employment (if equal, use turnover).

- ✓ For each activity, the potentially auxiliary ULEs are compared with the production clusters, entity by entity. If the number of auxiliary ULES is greater than K, the surplus ULEs are compared with the existing ones from highest to lowest:

  - ✓ If no ULE exceeds the pre-established thresholds, that activity and all its corresponding ULEs are considered auxiliary (TIPO_ULE=A). Each ULE is integrated into its comparison object cluster. When a cluster is compared with several potentially auxiliary ULEs, the sum of the turnover\employment of those ULES is used to determine the thresholds.

  - ✓ If any ULE exceeds the thresholds of its cluster, all of its ULEs for that activity become productive (TIPO_ULE=P) and a new cluster should be formed. If there is already one with the same NACE group, they are integrated into the pre-existing one.

This process is repeated until there are no remaining potentially auxiliary ULEs that have not been categorized definitively.

3.2.2 All activities are different from Annex II

Potential cases of vertical integration are checked, as in 3.2.1., and form clusters of productive units.

3.2.2 All activities are listed in Annex II

Activities are taken at the 4-digit level and ranked by employment. The first activity is considered, by definition, *productive* and a cluster is generated at the level of NACE groups. For the rest of the activities, the auxiliary activity criteria of section 3.2.1.4. are replicated, starting with K=1.

Rule 3. Final generation of variables for PAE companies

These rules are identical to the PAS companies.

6. Verification and final recording of data

The results of this algorithm have been reviewed at both the micro and macro levels, with the participation of all the Units of the *Task Force on Statistical Units.*

The micro method has been analysed by means of standard lists, identified according to predefined cases and containing systematically selected specific cases. The initial

basic information (groups and ULEs) as well as the final (Groups, ULEs and Companies) were listed for all of them.

With respect to macro analysis, the application designed for the algorithm includes a utility that generates predefined tables, according to the following criteria:

- *Analysis units:*
    - o Groups, Subsidiaries (ULEs) in Groups, Companies in Groups, Employment, Turnover
- *Classification variables:*
    - o Group Type (Domestic, Truncated national, Truncated foreign)
    - o Stratum of Group Subsidiaries
    - o Stratum of companies in the group
    - o Stratum of employees of the Group
    - o Stratum of employees / turnover of the unit (Subsidiary or Company)
    - o Activity (Divisions) of the unit (Subsidiary or Company)
    - o Type of combination produced in the group (1. Group=company, 2. No Subsidiaries of the combined group, 3; Other cases)

The results of the algorithm are finally stored in a database, forming a supplementary level of information within the CCD System.

ANNEX I. Potentially auxiliary activities (NACE Rev.2)

DISTRIBUTION & LOGISTICS	**4941, 53, 5210, 5224, 5229**
ICT SERVICES	**61, 62, 6311**
MANAGEMENT CONSULTANCY	**702**
ADMINISTRATIVE & MANAGEMENT FUNCTIONS	**69, 821**
REAL STATE	**682, 6832**
MARKETING, SALES AND AFTER SALES SERVICES INCLUDING HELP DESKS AND CALL CENTRES	**73, 7420, 7830, 822, 823**

ANNEX II Potentially vertically integrated activities (NACE Rev.2)

II_1. Progressive vertical integration

UPSTREAM	DOWNSTREAM
011	103
011	104
011	106
011	107
011	1081
011	1085
011	109
011	12
012	104
012	1082
012	11
0149	101
other '014'='014' except '0149'	101.
other '014'='014' except '0149'	105.
other '014'='014' except '0149'	1085.
other '014'='014' except '0149'	15.
015	10
021	161
022	161
031	102
031	1085
032	102
032	1085
051	191
051	192
052	191
052	192
061	192
062	192
0710	2410
0721	2013
0721	2446
0729	244
081	23
0891	2015
0892	192
0893	1084
0893	239
1011	1013
1011	1420

1012	1013
106	107
131	1320
131	143
132	139
132	141
1511	1512
1511	1520
1610	162
162	17
162	31
1711	172
1712	172
2016	222
2017	221
2311	2312
2311	3250
2312	3250
2313	8292
2410	242
2410	243
2410	25
2410	28
2441	3212
other '24': '24 ' except '241', '244'	25.
other '24': '24'' 241', '244'	28.
2611	262
2611	263
2611	264
2612	262
2612	263
2612	264
271	28
2811	30
2812	28 except 2812, 2813 2815.
2813	28 except 2812, 2813 2815.
2813	29
2815	28' except 2812, 2813 2815.
293	291

II_2. Regressive vertical integration

Wholesale trade activities	Industrial Activities
45.1 with Motor vehicles	291
45.3 with Other motor vehicle components, parts and accessories	2932
45.4 with Motorcycles	3091
46.21 with Grains, raw tobacco, seeds and livestock feed	106, 1091, 1200
46.24 with Hides and skins	1511
46.31 with Fruits and vegetables	103
46.32 with Meat and meat products	101
46.33 with Dairy products, eggs and edible oils and fats	104, 105
46.34 with Drinks	110
46.35 with Tobacco products	12
46.36 with Sugar, chocolate and confectionery	107, 1081, 1082
46.37 with Coffee, tea, cocoa and spices	1083, 1084
46.38 with Fish, shellfish and other food products	102, 1092
46.39 with Non-specialized food, beverages and tobacco	106, 1085, 1086, 1089
46.41 with Textiles	13
46.42 with Clothing and footwear	14, 15.2
46.43 with Household appliances	18.2, 26.4, 27.5
46.44 with Porcelain, glassware and cleaning products	20.41, 23.13, 23.14, 23.41
46.45 with Perfumery and cosmetics	20.4
46.46 with Pharmaceutical products	17.22, 21, 32.5
46.47 with Furniture, carpets and light fixtures	27.4, 31.02, 31.03, 31.09
46.48 with Watches, clocks and jewellery	26.5, 32.1
46.49 with Other household items	15.02, 16.29, 17.23, 17.29 18.11, 18.12, 30.92, 32.2, 32.3 32.4, 32.99
46.51 with Computers, peripheral equipment and software	26.2
46.52 with Electronic and telecommunications equipment and components	26.1, 26.3
46.61 with Agricultural machinery, equipment and supplies	28.3
46.62 with Machine tools	28.4
46.63 with Mining, construction and civil engineering machinery	25.1, 25.29, 28.1, 28.22, 28.25 28.91, 28.92
46.64 with Machinery for the textile industry and of sewing and knitting machines	28.94
46.65 with Office furniture	31.01
46.69 with Other machinery and equipment	26.6, 27.1, 27.2, 27.3, 27.9 28.29 ,28.93, 28.95, 28.96 28.99, 30.1 ,30.2, 30.3
46.71 with Solid, liquid and gaseous fuels and related products	05.1, 19.2
46.72 with Metals and metal ores	07.2, 24.1, 24.4 ,24.5
46.73 with Wood, construction materials and sanitary equipment	08.1, 16.1, 16.21, 16.22, 16.23 16.24, 16.29, 20.3 ,23.11, 23.12, 23.2 23.3, 23.42, 23.5, 23.6 ,23.7
46.74 with Hardware, plumbing and heating	24.2, 24.3 ,25.21, 25.7, 25.9 32.91
46.75 with Chemical products	08.9, 20.2, 20.3 ,20.5 ,23.9
46.76 with Semi-finished products	17.1, 17.21 ,20.1, 20.6, 22.1 22.2