

Methodology

Industrial Companies Survey 2012

Index

1. Introduction.....	3
2. Objectives and theoretical framework of the survey	3
3. Survey units	4
4. Survey scope.....	5
4.1. Population scope	5
4.2. Territorial or Geographical scope	5
4.3. Temporal scope.....	5
5. Design and sample	5
5.1. Definition of Populations to be sample.....	6
5.2. Type of sampling. Stratification	6
5.3. Size of the sample. Setting	7
5.4. Selection of the sample	7
5.5. Estimators.....	7
6. Variables and definitions.....	9
7. Information collection	16
7.1. Organisation of work.....	16
7.2. Computerised management of the samples file.....	16
7.3. Rate of non-response.....	16
7.4. Questionnaires model.....	17
8. Information processing.....	17
9. Dissemination of results	18

1. Introduction

The Industrial Companies Survey, implemented as of reference year 1993, provides basic information each year for the knowledge of the industrial situation and for the analysis of its main structural characteristics. Its methodology follows Eurostat recommendations, very specific in their regulations and directives, and at the same time, it offers a suitable analytical focus on the industrial reality it attempts to reflect.

In 2008, the Survey underwent a reform in order to adapt it to the new European Parliament and Council Regulation (EC) no. 295/2008 regarding the structural characteristics of companies (SBS), to the new National Classification of Economic Activities 2009 (CNAE-2009) and to the General Accounting Plan passed in November 2007.

The following sections describe, in the first place, the general methodological lines followed in planning the survey, its objectives, the unit system and research scope; subsequently, the sampling process and its design are referred to; this is followed by the definitions of the main variables published; and finally, the different phases of the survey development are commented briefly: information collection, processing, tabulation and dissemination of the results.

2. Objectives and theoretical framework of the survey

The main objective of the survey is to provide precise, reliable information in the shortest possible time frame, on the main structural characteristics and activity of the different sectors comprising the industrial activity of the economy, in such a way that both national and international information demands on this subject can be met.

In order to achieve these objectives, a specific set of plans is established, essentially responding to the following fundamental lines of action.

ADAPTATION TO EUROPEAN UNION REGULATIONS.

The Community integration objective is stated in two fundamental aspects with regard to the structural survey:

a) In the first place, the consideration of a survey model for multiple units, in which the company assumes the central role in agreement with European Community regulations, but in which, in order to cover the need to provide geographically broken-down information that will satisfy the growing demand for data on a regional level, as well as the interest in having reliable figures on the different branches of activity available to provide a suitable view of industrial activity, other complementary units have been included in the survey (both on an observation unit level and on an analytical one).

b) In the second place, in order to adapt to the European Nomenclature on Activities (NACE Rev. 2), the Industrial Companies Survey is designed, in terms of statistical division by sector and infrastructure, on the basis of National Classification of Economic Activities 2009.

THE FOCUS OF OBTAINING THE PRIMARY DATA

The primary data, in other words, that requested from the informant units, constitutes a fundamental part of any survey, since the precision and reliability of the final results depend to a large extent on the quality of the information obtained during the collection process. In this sense, the survey philosophy is to orient the primary data towards the viewpoint of the informant units, attempting to collect from them those characteristics or variables which they can provide, because they are directly available in their own management documents. The subsequent re-elaboration and analysis in order to obtain the derived variables of interest to fulfil the survey's own objectives and meet research demands is the responsibility of the statistician.

This purpose becomes clear in two aspects dealt with especially in the survey:

- In the first place, the adaptation of the main questionnaire variables to the General Accounting Plans criteria and regulations, which has required a detailed analysis of its different variables, in an attempt to combine the corporate accounting focus with the fulfillment of its different information needs.
- Secondly, the use of different questionnaire models, depending on the size of the company. The Spanish industrial sector is characterised by a great heterogeneity, not only in that referring to the diverse economic activities carried out by the different companies, but also in relation to the size of the productive units, which gives rise to the fact that they have different management and information systems, carry out different types of economic-financial transactions, etc., aspects which definitively make an homogeneous treatment of these units from the statistical viewpoint more difficult. In order to adjust the data requested (and its greater or lesser specification) to the characteristics of the unit, different questionnaire models have been designed, depending on the characteristics of each informant company.

3. Survey units

The basic unit used for the survey is the **industrial company**. A company is understood to be any organised unit which produces goods and services, and which has a certain degree of autonomy in making decisions, mainly when using the current resources that it has. The company may carry out one or more activities in one or more places.

For the purposes of the survey, a company is considered industrial if its main activity is included within Sections B to E of the National Classification of Economic Activities (CNAE-2009).

In the survey unit scheme, the company simultaneously assumes the roles of informant unit, that which facilitates the information requested in the survey, and of observation unit, that to which the data requested on the questionnaire refers.

However, despite the company being the central unit of the survey, the multiple objectives which are intended to be met with this research, and in particular, the need to offer regional data and data by branch of activity, have led to the configuration of a multiple-unit system in which, together with the company, other units are taken into account which complete the information system. These units are the industrial establishment (such as the observation unit) and the economic activity unit on a local level (such as the analysis unit).

An **establishment** is understood to be any company or part of a company, located in a determined geographical location (workshop, factory, etc.), and in which economic activities are carried out to which one or more persons in the same company dedicate their work. An establishment is considered industrial if its main activity is industrial.

The **economic activity unit on a local level**, for the purposes of the survey, is understood as that part of a company that carries out a given activity in a specific geographical location. The local activity unit is not the object of direct observation; it is an analytical unit whose data is obtained based on the information collected on both a company level and an industrial establishment level.

4. Survey scopes

4.1. Population scope

The target population of the survey study is the set of companies with one or more remunerated employees, and whose main activity is included in Sections B to E of the National Classification of Economic Activities (CNAE-2009), that is, the survey covering the extractive industries; the manufacturing industries; the supply of electrical energy, gas, steam and air conditioning; and the water supply, sanitation activities, waste management and decontamination activities.

The main activity of the company is understood to be that which generates the greatest added value. If this information is not available, the survey will use the activity that generates the greatest production value, or in its absence, that which requires the greatest number of employees.

4.2. Territorial or geographical scope

From the geographical viewpoint, the survey covers the entire country, except Ceuta and Melilla.

For the purposes of statistical use, the survey is designed to facilitate results on an Autonomous Community level, this being an especially interesting aspect for regional economic study and analysis.

4.3. Time scope

The survey is carried out annually. As to the information reference period, the data requested refers to the target calendar year of the survey.

Exceptionally, companies that function by season or campaign including two different years, and have their data accounted for this way, have referred the information to the season or campaign that ended in the said year.

5. Design and sample

5.1. Definition of populations to sample

The target population of the survey study has been divided into a series of strata, for the purposes of the sample design. The first variable used to define them has been the main activity of the companies. In terms of equivalence with the National Classification of Economic Activities (CNAE-2009), a four-digit level (class) from said classification has been used. Each of these classes has constituted an independent population, for sampling purposes. Within each of the classes studied, a limit of 50 employed persons has been established, in order to delimit the set of companies that have been studied by sampling. Thus, companies with more than 50 employees have been researched comprehensively, while companies with fewer than 50 employees have been studied by sampling. Nevertheless, comprehensive research has been conducted of certain strata, as long as the population size prevents the selection of a sample that could be considered representative. In this case, all the companies belonging to said strata, regardless of size, have been included in the survey sample.

5.2. Type of sampling. Stratification

The following variables have been used to establish strata formation:

- Type of activity (CNAE-2009 code, to four digits)
- Autonomous Community
- Company size bracket (according to the number of employed persons)
- Nature of the affiliate (if the affiliate is a foreign company or not)

As a result, each stratum is determined by the crossing of these three variables.

For the purposes of the sampling, and of the subsequent estimation process and calculation of elevation factors, the following size brackets have been defined:

<u>Size</u>	<u>Employed persons</u>
1	1-3
2	4-9
3	10-19
4	20-49
5	50 –99
6	100-249
7	250-499
8	500-999
9	1000 and more

5.3. Sample size. Allocation

Those companies with 50 or more employed persons have been researched comprehensively. For the remaining strata, a Neyman allocation has been carried out, prefixing the following relative errors of the employed persons variable:

- 1% (at the type of activity level)
- 5% (at the type and Autonomous Community levels)
- 20% (at the type, Autonomous Community and size levels)

The sample sizes thus obtained have increased, as necessary, to a minimum of 2 companies per stratum. In turn, and for the purpose of reaching more precise aggregated results, the outlying companies (in terms of turnover and employed persons) have been determined, within each group of strata, using statistical criteria, for the purpose of including them in the comprehensive part of the sample.

The final sample has comprised approximately 40,800 companies, resulting in a global sampling fraction of 30.52%. By sampling stratum, the sampling fractions have been the following:

<u>Stratum</u>	<u>Sampling fraction</u>
1 - 3 employed persons	17.6%
4 - 9 employed persons	26.5%
10 - 19 employed persons	38.1%
20 - 49 employed persons	65.1%

5.4. Sample selection

Within each stratum, the sample is selected by assigning a random number, which enables the coordination of the sample with other surveys.

The selection process is independent from one year to the next, that is, for a given stratum, the probability of a company being selected in year t is independent of whether or not it was selected in year $t-1$.

5.5. Estimators

Unbiased expansion estimators have been used in the stratified sampling, of the following type:

$$\hat{X}_h = \sum_{j=1}^{n_h^*} \frac{\hat{N}_h^*}{n_h^*} X_j + \sum_{k \neq h} \sum_{j=1}^{n_k^h} \frac{N_k}{n_k} X_j$$

where \hat{X}_h is the estimate of variable X in stratum h .

In the previous formula, the first sum represents the contribution of companies that have not changed stratum, and the second sum represents the contribution of units from stratum h that were initially selected in another different stratum k.

The number of companies of the stratum in the directory is adjusted, for calculating the estimates, based on the number of companies in the stratum that have closed down.

5.6. Sampling errors.

The relative sampling error is calculated from the estimator variance \hat{X} :

$$CV(\hat{X}) = \frac{\sqrt{\hat{V}(\hat{X})}}{\hat{X}} 100$$

where $\hat{V}(\hat{X}) = \sum_h \hat{V}(\hat{X}_h)$

and

$$\hat{V}(\hat{X}_h) = \hat{N}_h^* (\hat{N}_h^* - n_h^*) \frac{\sum_{j=1}^{n_h^*} (X_j - \bar{X}_h^*)^2}{(n_h^* - 1)n_h^*} + \bar{X}_h^{*2} \frac{\hat{N}_h^* (N_h - \hat{N}_h^*) (N_h - n_h)}{N_h (n_h - 1)} + \sum_{k \neq h} N_k (N_k - n_k) \frac{S_k^{h^2}}{n_k}$$

where

$$S_k^{h^2} = \frac{\sum_{j=1}^{n_k} X_j^2}{n_k - 1} - \frac{\left(\sum_{j=1}^{n_k} X_j \right)^2}{n_k (n_k - 1)}$$

6. Variables and definitions

For better comprehension and interpretation of the results presented on the website, the main variables published therein are defined below.

EMPLOYED PERSONS

Employed persons are understood to be the group of permanent and temporary employed persons who, during the reference year of the data, were carrying out paid or unpaid work for the company, and belonging to and being paid by said company. Persons with a leave of illness, paid holidays, unpaid occasional leave, etc., are included, as well as part-time workers (as long as they work more than 1/3 of the complete working day).

However, this does not include persons working for the company who are employed and paid by other companies or agencies; persons who are carrying out maintenance or repair work in some of the company premises or establishments and being paid by other companies; as well as persons on sabbatical or unlimited leave or retired persons. The members of the Board of Directors who are remunerated solely for their presence at Board Meetings, and those partners or other persons who work less than 1/3 of the working day, are also excluded.

Within the set of employed persons, a distinction is made between non-remunerated personnel and remunerated personnel, for the purposes of the survey.

UNPAID PERSONNEL

Persons who manage or actively participate in company work without a fixed remuneration or salary, and who work at least 1/3 of the normal working day. Active owners and partners, family aid and other non-remunerated persons are included.

PAID PERSONNEL

Paid personnel refers to the group of persons who work or perform tasks for a company in exchange for a set economic remuneration or wages. Both persons who carry out functions directly related to the company productive activities (workers, shop managers, officials, apprentices, etc.), and those other persons whose tasks are not directly linked to the productive process (salaried directors, managers, technicians, administrative and office personnel, substitutes, salespersons, etc.) are included.

HOURS WORKED

The hours worked refer to the total number of hours actually worked by the employed personnel during the survey reference year. This concept includes the hours really worked (both normal and overtime) during work periods; the time dedicated to the preparation of tools, elaboration of monitoring forms, etc. in the workplace; the duration of dead time that could have occurred in the workplace both due to the occasional lack of work and

stoppage of machines, accident, etc. and due to the time corresponding to brief breaks in the workplace (coffee break, snack, etc.). However, this must exclude those hours agreed on (and paid) but not worked as a consequence of leave due to illness, strikes, holidays, public holidays, etc., or breaks for meals, and the time spent commuting from the worker's home to the workplace, and vice versa.

NET SALES OF PRODUCTS

This concept includes the total value of the sales made by the company during the reference year, of finished or semi-finished products, as well as of sub-products, waste, packages or packaging. These terms are defined below:

- Finished products: goods manufactured by the company itself, in the productive process, or by third parties, in the form of subcontracted production, and which are intended for final consumption, or for use by other companies.
- Semi-finished products: goods manufactured by the company that are not normally intended for sale, until such time as they are earmarked for subsequent elaboration, incorporation or transformation.
- Sub-products: goods obtained during the productive process that have a secondary or accessory nature to the main manufacture.
- Waste: inevitably obtain, and at the same time as the products or sub-products, so long as they have intrinsic value and can subsequently be used or sold
- Packages: vessels or containers, normally intended for sale together with the product they contain.
- Packaging: covers or wrappings which are generally unrecoverable, intended to protect products or merchandise that are to be transported.

Sales are considered net, in other words once "rappels" on sales (discounts, etc that are based on achieving a certain volume of orders) and returns of sales (shipments returned by customers, normally due to not fulfilling the order conditions) have been discounted, as well as discounts caused by quality defects, delays in the order delivery period, etc., that have occurred subsequent to the issue of the invoice.

Sales of products will be considered at sale price, without including transport expenses or taxes levied on these operations.

NET SALES OF MERCHANDISE

This concept considers the full value of sales made by the company during the reference year, of all goods or merchandise purchased for subsequent sale without transformation (resale of merchandise in the same state in it was purchased).

Sales must be considered net, that is, once "rappels", returns and the like have been discounted.

Sales of merchandise will be considered at sale price, without including transport expenses or taxes levied on these operations.

PROVISION OF SERVICES

This concept considers the total income obtained by the company during the reference year as the entry for services (that are the object of ordinary company traffic) provided to other companies, persons or institutions. Due to its importance, under this heading, of note is subcontracting income, in other words, payments made to the company as a result of its participation, as a subcontractor, in the design or production of a certain production of a specific product from another company.

They are considered as the total amount excluding the taxes levied.

TURNOVER

Turnover comprises the total imports invoiced by the observation unit during the reference period, due to the sales of goods and services provided to third parties, considering both those carried out directly by the observation unit itself, and those coming from temporary subcontracts.

These sales of goods or services are accounted for in net terms, that is, including the expenses charged to the client (transport, packages, etc.), though invoiced separately, but deducting the discounts on sales by early payment, returns of sales or the value of packages returned, as well as the "rappels" on sales. This includes those taxes and fees levied on the goods or services invoiced by the unit, but excludes the VAT charged to the client, as well as the special taxes on those activities levied for them.

GEOGRAPHICAL DESTINATION OF SALES

This concept covers the distribution by geographical markets of the total turnover amount for the company. 3 geographical destinations are specified: Spain, other European Union countries and rest of the world.

TASKS PERFORMED BY THE COMPANY FOR ASSETS

This concept considers the company expenses for its fixed assets (intangible assets, material assets, real estate investments and material assets underway) using its own equipment and personnel.

This concept includes the production of capital goods or buildings, as well as large repairs and improvements carried out on existing ones in order to increase the useful life of the good, its production capacity or its performance. Also included in this heading is the balancing entry for expenses which correspond to the payments made to other companies as remuneration for work commissioned from them for research and development (off premises R&D expenses).

The work carried out by the company itself for its fixed assets is assessed at cost price, which is determined by adding, to the acquisition price of the raw materials and other consumption materials, the direct costs that are chargeable to the product, as well as the indirect costs that could reasonably affect the product in question.

SUBSIDIES, GIFTS AND LEGACIES

This concept considers the values that must be charged to the result of the year due to subsidies, gifts and legacies.

REMAINING OPERATING INCOME

In this section, income is requested that, forming a part of the operating surplus of the company, has not been included in the previous sections. Among these, the income obtained by the company corresponding to income from property leased, income from industrial property granted in operation, income from commissions, income from services to personnel and miscellaneous services income.

OPERATING INCOME

This is the total amount obtained as a result of aggregating different income linked to operation, obtained by the company during the reference year (net value of turnover; tasks performed by the company for assets; subsidies, gifts and legacies; and the remainder of operating income).

CHANGES IN THE STOCK OF RAW MATERIALS, OTHER SUPPLIES AND MERCHANDISE

The variation in raw material, supply and merchandise stocks is defined as the amount corresponding to the difference between the final stocks at the end of the reference year, and the initial stocks at the beginning of the year.

Stock variations are valued at acquisition prices.

PRODUCT STOCK VARIATION

The variation in product stocks is defined as the difference between the total value of the final stocks of those products at the end of the reference year, and the initial stocks thereof at the beginning of said year.

Stock variations are assessed at production cost.

NET PURCHASES OF RAW MATERIALS

This concept considers net purchases (that is, once "rappels" and purchase returns are discounted) of raw materials (goods acquired for transformation in the productive process) made by the company during the reference year.

NET PURCHASES OF OTHER SUPPLIES

This concept covers the net purchases of supplies (fuels, spare parts, packaging, office

material, etc.) by the company during the reference year.

NET PURCHASES OF MERCHANDISE

This concept considers the net purchases of merchandise (goods acquired for resale, without subjecting them to a transformation process) by the company during the reference year.

WORK CARRIED OUT BY OTHER COMPANIES

This is the expense corresponding to the work that, forming part of the production process, is taken care of and carried out by other companies. Due to its importance, within this heading, worth noting are expenses from subcontracting, that is, the payments made by the company to other companies as a result of their participation, as subcontractors, in the design or production of a given product.

PURCHASES AND WORK CARRIED OUT BY OTHER COMPANIES

This is the total value obtained as a result of aggregating the purchases of raw materials, supplies and merchandise, and the work carried out by other companies.

GEOGRAPHICAL ORIGIN OF THE PURCHASES

This concept covers the distribution, according to geographical origin, of the total value of purchases made by the company. Distinction is made between 3 geographical origins: Spain, other European Union countries and the rest of the world.

SALARIES AND WAGES

This includes all compulsory or voluntary quantities paid in cash or in kind by the company to all types of employed personnel (permanent and temporary) as remuneration for the work carried out by them.

These payments are accounted for by their gross value, that is, before making the deductions corresponding to social security and income tax charged to workers. The complete base salary is included; Complements in cash for overtime, seniority, qualifications, danger, incentives, attendance, residence, transport bonus, high cost of living, etc.; bonuses based on profits, Christmas bonuses and extra pays; remunerations in kind (valued according to the net cost they represent for the company) gratuitously supplied or at a reduced price to its employees as consumption (food products, fuel, housing, clothing, shares distributed, etc.); as well as social security quotas and income tax (personal work) payable by the workers, paid for by the company without subsequently discounting it from their wages.

This excludes compensation paid for the purchase of implements, tools or work clothes; current expenses for employee transport organised by the company; current expenditure

and subsidies for sports, cultural or recreational facilities; professional training expenses, medical check ups and improvements in workplaces. Compensation paid directly by the company to its employees for illness, unemployment, dismissal, accident, etc., are also not included. covered in a separate heading.

COMPENSATION

Compensation is understood as those payments made directly by the company to its wage earners, in cases of illness, unemployment, dismissal, accident, pension, early retirement, etc., complementing those payments made by insurance organisations, or replacing those not received by them due to not being affiliated with them.

This excludes compensation paid by the company to the workers in advance, which are payable by Social Security, and are therefore paid subsequently by this organisation.

SOCIAL SECURITY INCURRED BY THE COMPANY

This includes standard contributions to Social Security incurred by the company, in other words, the quotas paid by the company to Social Security for the different benefits issued by the latter (old age, disability, illness, maternity, work-related accident, professional illness, unemployment and family allowance).

OTHER PERSONNEL COSTS

This concept must include all personnel expenses recorded as such by the company and not covered in the previous sections. Among others, long-term benefits using contribution or defined benefit systems, benefits to personnel via wealth instruments and other social expenses, this last item includes expenses of a social nature made, in compliance with a legal regulation, or voluntarily, by the company, such as subsidies for commissaries and kitchens, maintenance for vocational training schools and institutions, study grants, life and accident insurance premiums, etc.

This does not include current maintenance expenses for these benefits.

PERSONNEL EXPENSES

This concept includes the total aggregated value of the payments made by the company during the reference year as salaries and wages, compensation, social security and other personnel expenses.

EXTERNAL SERVICES

This concept comprises the total value of the set of operating expenses of a diverse nature made by the company during the reference year, such as R&D expenses, leases and fees, repairs and conservation, independent professional services, transport, insurance premiums, banking services and the like, advertising, propaganda and public relations, supplies and other services.

REMAINING OPERATING EXPENSES

This section covers all expenses which, forming a part of the operating surplus, have not been included in the previous sections.

OPERATING EXPENSES

This is the total amount obtained as a result of aggregating different expenses linked to use, carried out by the company during the reference year (purchases and work carried out by other companies; personnel expenses; external services; and other operating expenses).

PROFIT OR LOSS FOR THE YEAR.

This concept considers the total amount of profit or loss for the company, received as a result of the development of company activity. This may be positive (profit) or negative (loss).

ACQUISITIONS OF ENERGY PRODUCTS AND WATER CONSUMPTION

This includes all purchases of energy products made during the reference year, so long as said products were acquired to be used as fuel. Energy products used as raw material or for re-sale without transformation must be excluded. The figure should only be given as a value. The energy products requested are gas, electricity and other fuels. Water consumption is also requested.

INVESTMENT IN MATERIAL ASSETS

Investment is defined as the real increase in the value of capital resources made by the company during the reference year. This refers to gross investment.

Real increase of productive resources is understood as the increases in value occurring in the different types of assets, with an origin in purchases of new or used goods from third parties; in its own product of assets, or in work carried out by the company itself or by third parties on previously-existing elements, for the purpose of increasing its production capacity, performance or useful life (acquisitions, improvements or production itself).

Investment operations are included in their full amount, considering purchases at acquisition prices, excluding deductible VAT, but including transport, installation costs, registration and notary expenses, and other non-deductible taxes. Work carried out by the company with its own resources is valued at cost price.

A distinction is drawn between investment depending on the type of good, with investment data provided on land, goods and constructions; technical installations; machinery; and other tangible assets.

INVESTMENT IN INTANGIBLE ASSETS

Included in this variable is expenditure on activated research and development; investment in computer applications; and other intangible assets, such as concessions, patents, licences, trade fund, similar rights, and others.

7. Information collection

7.1. Organisation of the work

The information is collected annually, through the INE Collection Units. Completing the questionnaire online is encouraged, though in any case, informants have other response channels available (fax, post, telephone). The collection units are also responsible for attending the telephone lines so as to answer informant questions, and for recording and filtering the questionnaires. Telephone contact is established with the companies where a response is not obtained by the established deadline, or the response is considered to be insufficient or inconsistent.

The data collection process for reference year t is carried out beginning in the second quarter of year $t+1$, and lasts approximately four months.

For the control of the fieldwork, this considers the different situations that may arise during the information collection. The company is considered to be surveyed if it has a main activity included in the survey population scope, a completed questionnaire has been obtained and the data is verified by the established completeness and consistency controls.

Moreover, in the information collection process, a series of incidences that prevent obtaining the questionnaire may occur. Its rigorous treatment is of great importance, as its analysis enables updating the survey framework and having influence on the treatment of the information (data processing). These are as follows: final delisting or closure, temporary closure or inactivity, erroneously included, outside of the scope, duplicated or unlocatable, refusal and non-response.

7.2. Computerised management of the sample file

The management of the company file in the sample, both to control the collection, and to update informant company data, is carried out via a computerised application established for that purpose, which facilitates guaranteeing the control and organisation of the whole process. The system allows supervising the collection continuously, integrating the collection and filtering processes, and guaranteeing an efficient control of the process from the beginning of the survey, as systematic questionnaire completion and interpretation errors may be detected in the initial phases of the survey, thus enabling their correction.

7.3. Non-response rate

The non-response rate, once the questionnaire collection phase was completed, was 5.1%

for the whole of the survey.

7.4. Questionnaire models

Four different models of the questionnaire have been designed, for the purpose of adjusting the information requested to the specific company characteristics.

- For companies with fewer than 10 employed persons, a reduced questionnaire (model 1) has been used, in which a set of basic characteristics and variables has been collected in order to comply with the survey objectives.
- For companies with 10 to 49 employed persons, a more complex and detailed questionnaire model (model 2) has been used, in which, together with the information requested in the basic model (the information from one model can be integrated perfectly into the other), the variables requested have been expanded, at times requiring greater detail in the information breakdown.
- For companies with 50 or more employed persons, and whose activity is included in sections B and C of CNAE-2009, a more detailed questionnaire (model 3) is used, especially in those sections relating to external services and investment. This questionnaire also includes the information on a company level, an additional section that collects information on the different industrial establishments of the company, and a percentage breakdown is requested, by industrial establishment, of its main variables.
- For companies with 50 or more employed persons, and whose activity is included in sections D and E of CNAE-2009, a specific questionnaire (model 4) is used, which in addition to the same company-related information collected by model 3, also includes a different section regarding territorial distribution, which considers the characteristics of these activities themselves.

8. Data processing

The initial stage for the information processing of the survey is carried out in parallel to the actual questionnaire collection, for the entire duration thereof. The articulated system is centred on three main aspects: a continuous updating process; a filtering of the questionnaire content, integrated in the recording; and a processing of the inter-provincial management of the company unit, and in particular, of the multi-location companies. Its global objective is to establish sufficient quality levels that will permit a significant simplification of the subsequent treatment of the information.

The recording of the questionnaire is carried out continuously by the informant units, through the Internet platform, and by the collection units themselves, establishing the control regulations necessary for guaranteeing a suitable level of quality throughout the process. This facilitates controlling, once in this phase, those errors that may affect the data obtained from the informant units.

Regarding each of the fortnightly files of questionnaire recorded and filtered by the Collection Units, an information coverage control is performed, for the purpose of guaranteeing the completeness of the data recorded, detecting duplicates and coverage errors, and at the same time, being able to carry out a first assessment of the quality of the variables covered. In addition, a new microfiltering process is carried out, focusing on the

detection and filtering of errors and inconsistencies in the identification variables for each record, as well as the filtering and imputation of content errors. Depending on the characteristics of each type of error, in certain cases, automatic imputation procedures are used. Similarly, the systematic errors detected in the analysis and studies carried out previously on the recorded data are corrected.

Once the microfiltering phase has finished, this proceeds with the elevation factors, to determine the estimates of the different variables. The last stage, before the tabulation and dissemination of the results, is obtaining the analysis tables in order to eliminate errors and inconsistencies detected via macrofiltering techniques.

9. Dissemination of the results

The data disseminated intends to offer basic and relevant information on the main results of the survey, which enable meeting the demand for information by its different users.

The dissemination of the statistical results is organised in the following levels:

- According to 12 activity groupings (47 variables).
- According to 20 activity subgroupings (47 variables).
- According to 100 activity sectors (25 variables).

Annex 1 presents the detailed groupings, subgroupings and activity sectors, and their equivalence with CNAE-2009.

Data is provided on both a national level (according to the three indicated levels) and broken down by Autonomous Community (8 main variables, according to activity grouping).

It is worth noting that the interannual variations taken from the results of this survey, may be due, on occasion (and to a greater or lesser extent), to changes in the structure of the corresponding reference populations (for example, changes in activity in specific companies, resulting in their assignment to an activity sector other than that of the previous year, etc.), and therefore, in some cases, the aforementioned variations must be directly associated with a change (increase or decrease), of the same magnitude, in the production activity of the group of companies from a specific sector or subpopulation.

It is important to point out, lastly, that the dissemination of the survey is not solely limited to the tables offered here or covered in the publication. Safeguarding the restrictions derived from statistical secrecy, or from the sample nature of the survey, the existing IT procedures enable dealing with personalised requests for aggregated data, which may be provided in the medium or format chosen by the user.

Annex 1. Groupings, subgroupings and activity sectors, and their equivalence with CNAE-2009

GROUPING	SUBGROUPING	CNAE-2009 (divisions)	SECTOR	CNAE-2009
Grouping 1: Mining and quarrying industries, energy, water and waste	1: Extractive and petroleum industries	05, 06, 07, 08, 09, 19	Sector 1: Extraction of coal (anthracite, soft coal and lignite)	05
			Sector 2: Petroleum and natural gas industries	06, 09, 19
			Sector 3: Extraction of rocks and metallic ores	07.08
	19: Supply of electricity and gas	35	Sector 97: Production, transport and distribution of electrical energy	35.1
			Sector 98: Production and distribution of gas, steam and air conditioning	35.2, 35.3
	20: Water and waste	36, 37, 38, 39	Sector 99: Collection, purification and distribution of water	36
			Sector 100: Sewerage, waste management and remediation activities	37, 38, 39
Grouping 2: Food, beverages and tobacco	2: Food products	10	Sector 4: Meat industry	10.1
			Sector 5: Fishing industry	10.2
			Sector 6: Processing and preserving of fruit and vegetables	10.3
			Sector 7: Oils and fats	10.4
			Sector 8: Dairy products	10.5
			Sector 9: Milling, starch and starch products	10.6
			Sector 10: Bakery and farinaceous products	10.7
			Sector 11: Sugar, coffee, tea and infusions and confectionery	10.81, 10.82, 10.83
			Sector 12: Other food products	10.84, 10.85, 10.86, 10.89
	3: Beverages and tobacco	11, 12	Sector 13: Animal feed	10.9
			Sector 14: Manufacture of alcoholic beverages	11.01, 11.02, 11.03, 11.04, 11.05, 11.06
			Sector 15: Bottled water and soft drink production	11.07
Grouping 3: Textile, clothing, leather and footwear	4: Textile, clothing, leather and footwear	13, 14, 15	Sector 16: Tobacco industry	12
			Sector 17: Preparation and spinning of textile fibres	13.1
			Sector 18: Manufacture of woven textiles	13.2
			Sector 19: Textile finishings	13.3
			Sector 20: Manufacture of knitted textile fabrics and products produced from textiles, except garments	13.91, 13.92
			Sector 21: Other textile industries	13.93, 13.94, 13.95, 13.96, 13.99
			Sector 22: Manufacture of garments	14.1
			Sector 23: Manufacture of fur items	14.2
			Sector 24: Manufacture of knitted and crocheted garments	14.3
			Sector 25: Manufacture of leather and fur and products thereof	15.1
			Sector 26: Manufacture of footwear	15.2

GROUPING	SUBGROUPING	CNAE-2009 (divisions)	SECTOR	CNAE-2009
Grouping 4: Wood and cork, paper and graphic arts	5: Wood and cork	16	Sector 27: Sawmilling and planing of wood	16.10
			Sector 28: Manufacture of sheets, boards and other wood panels	16.21
			Sector 29: Wooden structures and carpentry and cabinetwork pieces for construction	16.22, 16.23
			Sector 30: Manufacture of wooden containers and packaging	16.24
			Sector 31: Manufacture of articles of cork, straw and plaiting materials and other wood products	16.29
	6: Paper and graphic arts	17, 18	Sector 32: Manufacture of pulp, paper and cardboard	17.1
			Sector 33: Manufacture of paper and cardboard articles	17.2
			Sector 34: Graphic arts and reproduction of recorded media	18
Grouping 5: Chemical and pharmaceutical industry	7: Chemical industry	20	Sector 35: Manufacture of basic chemical products	20.1
			Sector 36: Manufacture of pesticides and other agro-chemical products	20.2
			Sector 37: Paints, varnishes, printing ink and mastics	20.3
			Sector 38: Cleaning and polishing items, soap, detergents, perfumes and cosmetics	20.4
			Sector 39: Manufacture of other chemical products	20.5
			Sector 40: Manufacture of man-made fibres	20.6
	8: Pharmaceutical industry	21	Sector 41: Manufacture of basic pharmaceutical products	21.1
			Sector 42: Manufacture of pharmaceutical specialities	21.2
Grouping 6: Rubber and plastic products	9: Rubber and plastic products	22	Sector 43: Manufacture of rubber products	22.1
			Sector 44: Manufacture of plastic products	22.2
Grouping 7: Various non- metallic ore products	10: Various non-metallic ore products	23	Sector 45: Manufacture of glass and glass products	23.1
			Sector 46: Manufacture of ceramic products, except those used for construction	23.2, 23.4
			Sector 47: Manufacture of ceramic products for construction	23.3
			Sector 48: Manufacture of cement, lime and plaster	23.5
			Sector 49: manufacture of elements made of concrete, cement and plaster	23.6
			Sector 50: Stone cutting, working and finishing	23.7
			Sector 51: Manufacture of abrasive products and non-metallic mineral products n.e.c.	23.9

GROUPING	SUBGROUPING	CNAE-2009 (divisions)	SECTOR	CNAE-2009
Grouping 8: Metallurgy and manufacture of metallic products, except machinery and equipment	11: Metallurgy	24	Sector 52: Manufacture of basic products in iron, steel and ferro-alloys	24.1
			Sector 53: Manufacture of steel tubes, pipes, hollow profiles and accessories	24.2
			Sector 54: Manufacture of other products for the primary transformation of steel	24.3
			Sector 55: Production of precious metals and other non-ferrous metals	24.4
			Sector 56: Casting of metals	24.5
	12: Manufacture of metal products, except machinery and equipment	25	Sector 57: Manufacture of metal structures and their components	25.11
			Sector 58: Manufacture of builders' metal carpentry and joinery of metal	25.12
			Sector 59: Manufacture of tanks, reservoirs and containers made of metal	25.2
			Sector 60: manufacture of steam generators, except central heating boilers	25.3
			Sector 61: Manufacture of weapons and ammunition	25.4
			Sector 62: Forging, embossing and drawing of metals; powder metallurgy	25.5
			Sector 63: Treatment and coating of metals	25.61
			Sector 64: General mechanical engineering by third parties	25.62
			Sector 65: Manufacture of cutlery and silverware, tools and hardware	25.7
			Sector 66: Manufacture of other metal products	25.9
Grouping 9: Electrical, electronic and optical material and equipment	13: Electrical, electronic and optical material and equipment	26.27	Sector 67: Manufacture of electronic components and assembled printed circuits	26.1
			Sector 68: Manufacture of computers and peripherals	26.2
			Sector 69: Manufacture of telecommunications equipment	26.3
			Sector 70: Manufacture of consumer electronics	26.4
			Sector 71: Manufacture of instruments and appliances for measuring, verification and navigation; manufacture of watches and clocks	26.5
			Sector 72: Radiation and medical and therapeutic equipment; optical and photographic instruments; magnetic and optical media	26.6, 26.7, 26.8
			Sector 73: Manufacture of engines, generators and electrical transformers, and of distribution and electrical control appliances.	27.1
			Sector 74: Manufacture of cables and cable devices	27.3
			Sector 75: Manufacture of lamps and electrical lighting equipment	27.4
			Sector 76: Manufacture of household appliances	27.5
			Sector 77: Manufacture of batteries and accumulators and other electrical material and equipment	27.2, 27.9

GROUPING	SUBGROUPING	CNAE-2009 (divisions)	SECTOR	CNAE-2009
Grouping 10: Mechanical machinery and equipment	14: Mechanical machinery and equipment	28	Sector 78: Manufacture of machinery for general purposes	28.1
			Sector 79: Manufacture of other general purpose machinery n.e.c.	28.2
			Sector 80: Manufacture of agrarian and forestry machinery	28.3
			Sector 81: Manufacture of machines-tools	28.4
			Sector 82: Manufacture of other specific purpose machinery	28.9
Grouping 11: Transport material	15: Motor vehicles	29	Sector 83: Manufacture of motor vehicles	29.1
			Sector 84: Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers	29.2
			Sector 85: Manufacture of components, pieces and accessories for motor vehicles	29.3
	16: Transport material, except motor vehicles	30	Sector 86: Naval construction	30.1
			Sector 87: Manufacture of railway and tramway locomotives and rolling stock	30.2
			Sector 88: Aeronautical and aerospace construction and military combat vehicles	30.3, 30.4
			Sector 89: Manufacture of other transport material n.e.c.	30.9
Grouping 12: Various manufacturing industries, repair and installation of machinery and equipment	17: Various manufacturing industries	31, 32	Sector 90: Manufacture of furniture	31
			Sector 91: Manufacture of jewellery, costume jewellery and the like	32.1
			Sector 92: Manufacture of sporting goods, games and toys	32.3, 32.4
			Sector 93: Manufacture of medical and dental instruments and supplies	32.5
	18: Repair and installation of machinery and equipment	33	Sector 94: Manufacture of musical instruments Various other manufacturing industries	32.2, 32.9
			Sector 95: Repair of metallic products, machinery and equipment	33.1
			Sector 96: Installation of industrial machines and equipment	33.2