

INSTITUTO NACIONAL DE ESTADISTICA

Fertility Survey 2018 Methodology

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Fertility survey 2018

1 Introduction

The Fertility Survey 2018 (EF2018) arises from the need to understand the determinants of Spanish fertility, given that it constitutes one of the most important demographic phenomena in the growth of populations and is one of the main causes of demographic change in recent decades.

The Fertility Survey 2018 of the National Statistics Institute continues the series of this type of surveys which took place in 1977, 1985 and 1999. This latest survey only interviewed women, but if we want to examine not only the fertility levels but rather the determinants, we need to incorporate men as target population for this survey. In addition, the educational and work trajectories of these women were not included, therefore the information collected was incomplete. Also, Spanish society has undergone substantial changes in recent years which have generated new social dynamics and demographics which need to be studied.

Therefore, the need to carry out a survey of this type, investigating both men and women, becomes apparent if we consider the demographic situation in Spain today, characterized by its low birth rate, which does not ensure the generational replacement, and also by the unequal situation of the Autonomous Communities in the face of demographic phenomena.

During the past decades with a low fertility rate, most of the developed countries have entered into a demographic regime characterized by a decline in the birth rate and the acceleration of the ageing of the population. In addition, a significant paradox has been that countries with societies that are more based on the traditional family are the ones who are presenting lower fertility levels.

Therefore, one of the main objectives of the Fertility Survey in the future should be to shed light on a fundamental aspect of our future: low fertility levels through which Spain is going through, which will have a direct impact on the future of our labour market, our systems of social protection, etc., as well as provide information on changes in family structures and on relationships/children and their influence on population fertility.

2 Objectives

The main objective of the future Fertility Survey 2018 is to identify the determinants of fertility, current, recent and expected for the future.

In addition, to provide information on changes in family structures, relationships/children and their influence on population fertility, which will assist in the development of population forecasts and projections.

The survey is intended to provide information for:

- The elements that determine the decision to have children (education level, income, conciliation, existence of aid, life as **a couple...)**.
- The reasons for not having children.
- Analyse changes in the family structure and dynamics: increase of unmarried partners, delay in the formation of a family, high proportion of individuals and couples without children. It is necessary, therefore, to include in the context of reproduction the plurality of unions as well as study the process of formation and dissolution.
- The relation between the delay in the residential and economic emancipation of young people and the delay in maternity/paternity. This implies an increase of infertility and an increase in assisted reproduction.
- The concept of reproduction to capture, not only its biological dimension, but also its social dimension, including adopted children and previous children of the spouse (residents or not).

However, fertility does not only involve women, so it is necessary to incorporate men as a target population of the survey for several reasons:

- Their labour and family histories as well as their reproductive aspirations have a direct impact on fertility.
- To provide a gender perspective.
- To know the family and reproductive behaviour of men.

Therefore, the aim is not only to obtain information on fertility but also to analyse all the elements influencing it, the relationship with the household structure and the socio-demographic characteristics of people who decide to have children (or not).

3 Survey scope

3.1 POPULATION SCOPE

The population scope of the survey is made up of women and men between the ages of 18 and 55 years, inclusive, that live in family homes. People of this age group living in institutions or collective establishments are excluded.

3.2 GEOGRAPHICAL SCOPE

The geographical scope includes the whole national territory.

3.3 TIME SCOPE

Data collection was carried out during 15 weeks from March 12th to June 25th, 2018.

The collection period established is the first half of 2018, and the reference period, i.e., the time to which the situation of the person being interviewed is referred to, is the week immediately prior to the date on which the survey is carried out to the interviewee.

4 Concepts, variables and definitions

4.1 CLASSIFICATION VARIABLES

Geographical features

AUTONOMOUS COMMUNITY OF RESIDENCE

We consider the 17 Autonomous Communities and the Autonomous Cities of Ceuta and Melilla.

Demographic and socio-economic characteristics

AGE

This feature is investigated for all members of the household as well as for the couple, children and parents of the interviewee.

SEX

This feature is investigated for all members of the household as well as for the couple, children and parents of the interviewee.

NATIONALITY

This feature is asked only to the adult person selected about themselves, their partner and their parents.

COUNTRY OF NATIONALITY

This feature is asked only to the adult person selected about themselves, their partner and their parents.

COUNTRY OF BIRTH

This feature is asked only to the adult person selected about themselves, their partner and their parents.

LIVING TOGETHER AS A COUPLE

This feature is asked only to the adult person selected in the case of living with a partner.

- Marriage
- Civil partnership
- Cohabitation

FAMILY RELATIONSHIP WITH THE SELECTED ADULT

This feature is investigated for all household members

- Adult selected
- Partner or spouse of the interviewee
- Biological child
- Partner's child
- Adopted child
- Foster child or ward
- Biological or adoptive father/mother
- Stepfather/stepmother
- Biological or adoptive father/mother of the partner
- Stepfather/stepmother of the partner
- Grandchild (either of the interviewee or of the partner)
- Grandparent (either of the interviewee or of the partner)
- Partner or spouse of a child
- Brother/sister of the interviewee
- Brother/sister of the partner
- Another relative
- Not a relative

LEVEL OF EDUCATION COMPLETED:

This feature is investigated for the adult selected, their parents and their partner or spouse.

It refers to the highest level of studies completed, so that in the case of a person who has studied a certain level without having completed it, he or she will be included in the previous level.

The classification used is the CNED-A 2014, which is the reference classification to collect information on the level of education of people, and it applies to both existing programs as well as those which no longer exist, but only to those which are formal education.

Formal education is the education which is institutionalised, intentional and planned by public and private institutions accredited for this purpose, which together constitute the formal educational system of the country. By definition, formal education programmes and the corresponding certificates are officially recognised.

The categories considered are:

- Below primary education
- Primary education
- First stage of secondary education and the like (with general or professional orientation)
- Second stage of secondary education and the like (with general or professional orientation)
- Post-secondary non-tertiary education

- Vocational training, plastic arts and design, and sports education of higher grade and equivalent; university-**specific degrees that require a bachelor's** degree, with a duration equal to or greater than 2 years
- University degrees of up to 240 ECTS credits, university diplomas, university-specific degrees of expert or specialist, and equivalent
- University degrees of more than 240 ECTS credits, university degrees, master's degrees and specialties in Health Sciences through the residency system, and equivalent
- Doctorate studies (PhD)

RELATIONSHIP WITH THE ECONOMIC ACTIVITY

This feature is asked to the selected adult about themselves, their partner (if they have one) and their parents. The situation in relation to the activity is collected on the basis of a self-assessment question.

- Working for others
- Working as a self-employed worker
- Unemployed
- Student
- Retired, early retirement, pensioner
- Unable to work
- Dedicated mainly to household chores
- Other type of inactivity

ECONOMIC ACTIVITY OF THE COMPANY

This feature is asked to the adult selected about themselves, about their partner (if they have one) and about their parents.

Economic activity is defined as the creation of value added through the production of goods and services. The sections of the National Classification of Economic Activities CNAE-09 (disaggregation to one digit) are considered.

OCCUPATION

This feature is asked to the adult selected about themselves, about their partner (if they have one) and about their parents.

It is encoded according to the National Classification of Occupations (CNO-2011) to two digits.

PROFESSIONAL SITUATION

This feature is asked to the adult selected about themselves, about their partner (if they have one) and about their parents. The professional situation is collected on the basis of a self-assessment question.

The categories considered for the interviewee are:

- Employer
- Business person without employees or self-employed worker
- Member of a cooperative
- Contributing family worker
- Public sector employee
- Private sector employee
- Other situation

The categories considered for the interviewee's partner (if that is the case) and his or her parents are:

- Self-employed worker
- Employed worker
- Unemployed
- Retired, pensioner, early retired, retired from a previous economic activity
- Unable to work
- Dedicated to household chores
- Other type of inactivity
- Doesn't know

TYPE OF EMPLOYMENT CONTRACT OR WORKING RELATIONSHIP

This feature is asked to the adult selected about themselves and about their partner (if that is the case). The type of employment contract or working relationship is collected on the basis of a self-assessment question.

- Permanent
- Casual/Temporary
- Without a contract

4.2 DEFINITIONS

Miscarriage: It is the loss of an embryo or foetus caused unintentionally.

Induced abortion: It is the loss of an embryo or foetus caused intentionally.

Contraceptive: Means or method to prevent pregnancy.

Hormonal contraceptive: Various contraceptive methods that release hormones (usually estrogen and progestin) which prevents pregnancy either by stopping ovulation (the release of an egg from one of the ovaries) or increasing the thickness of the mucus in the cervix which prevents the passage of sperm.

Cervical cap: Contraceptive method that consists of an implement that a woman places at the wombs entry to prevent the entry of sperm.

Timed intercourse: Assisted reproduction technique that consists in synchronizing women's ovulation with sexual intercourse.

Coitus interruptus: Contraceptive method that consists in removing the penis from the vagina before ejaculation to prevent the sperm from fertilizing the egg.

Female condom: Plastic tube with a flexible ring at each end to help it stay in place in the vagina. It is covered with a lubricant inside and outside.

Cohabitation: Living or inhabiting with one or more persons in the same place.

Desire to have children: Refers to the children that the person interviewed would like to have if they could choose the exact number of them, regardless of whether they can achieve it or not, and of the children they already have.

Diaphragm: Contraceptive device consisting of a slender and flexible part with the form of a disc which is placed in the cervix and which prevents the entry of sperm.

Copper IUD: Safe and effective method of birth control that is used to temporarily prevent a pregnancy. It is made of flexible plastic, has a vertical and a horizontal branch in the shape of a T. The vertical branch is surrounded by a copper wire, which prevents the passage of sperm. It is placed within the matrix, using a special tube designed for this purpose.

Full-term pregnancy: The one that occurs after 40 weeks counted from the first day of the last menstrual period until the estimated date of birth, with a normal range between 37 and 42 weeks.

Failed pregnancy: A pregnancy that has not come to term either by spontaneous or induced abortion.

Planned pregnancy: The one which is the result of desire and/or prior planning.

Infant school: An educational centre based on the training skills as well as the development of social, cognitive, psychomotor aspects, etc. Education is prioritized over custodial care, which is not to say that in these places children are not attended to in their basic needs (diapers, eating, playing), but rather that there is an educational routine which is combined with care and both spaces are well defined and separated.

Spermicide: Chemical substance that inhibits mobility or kills sperm.

Vaginal sponge: A contraceptive method which consists of a small round plastic foam sponge, which possesses a soft and smooth consistency. It is placed at the bottom of the vagina before sex. It covers the cervix with spermicide to prevent pregnancy.

Legal marital status: Classification of the legal or de jure status, which does not have to coincide with the de facto status. With the following values: Single, Married, Separated, Divorced, Widowed.

Sterilization: Method by which a living being becomes infertile and sterile avoiding its reproduction.

In vitro fertilisation (IVF): Assisted reproduction technique in which the aim is for a spermatozoon to fertilize the egg outside the woman's body, in a laboratory.

Surrogacy: A practice through which a woman conceives a child for another person or couple.

Day care: Place where children are cared for, that is, it makes their time there enjoyable with playful goals.

Biological child: The child who is genetically descendant of their parents.

Net monthly income: A person's monetary earnings for one month after deducting all taxes or other deductions.

Artificial insemination: An assisted reproduction technique in which the sperm is introduced in the vagina by mechanical means.

Intention to have children: It refers to the children that the person interviewed thinks to have in reality. The survey gives a reference period of the next 3 years, so that the person interviewed mentally places their intentions.

Intracytoplasmic injection (ICSI): An assisted reproduction technique that consists in the fertilization of the oocytes by injecting a spermatozoon into their cytoplasm through a micropipette, after obtaining and preparing the gametes in order to obtain embryos that can be transferred to the maternal uterus.

Vaginal lavage: Contraceptive method that consists of the introduction into the vagina of pure water or a solution of water that contains an antiseptic product, medicine or vinegar.

Tubal ligation: Sterilization procedure for women which consists of the constriction of the fallopian tubes by means of two ligatures.

Ogino method: A record consisting of taking into account the women's fertile days to find out when she can get pregnant or avoid it.

Adoptive mother/father: It is the man or woman who has adopted a person that has not been begotten by him/her, to establish a paternal/maternal-child relationship with identical or similar legal ties to those resulting from procreation.

Biological mother/father: The man/woman who has contributed half of the genetic structure of the child.

Common-law marriage: An affective union of two individuals, regardless of sexual orientation, in order to cohabit in a stable way, in an affective relationship similar to a marriage.

Alimony: That includes all the necessary expenses for food, housing, clothing, education and medical care.

Maternity/paternity leave: The right of all workers to take a leave of a few days in the case of the birth or adoption of a child in order to facilitate their care.

Morning-after pill: An emergency female contraceptives to be taken orally. These drugs are used to prevent unwanted pregnancies, including teen pregnancy, to be taken from the first hours up until 3 days (72 hours) after unprotected sex.

Tenure status of dwelling: Form through which the occupation of the dwelling is enjoyed.

Intimate relationship: Affective bond between two people of romantic type.

Sexual relationship: Physical contact mainly with the object of giving and/or receiving sexual pleasure, or for reproductive purposes.

Usual residence: Place where a person normally spends the daily periods of rest, without taking into account temporary absences for leisure trips, vacations, visits to family and friends, business, medical treatment or religious pilgrimage. However, it should be pointed out that a person will be considered as usual residence only in one place:

- Those who, according to the above definition, had usually resided in it for a continuous period of at least twelve months.

- Those who, according to the previous definition, had established their usual residence in it less than twelve months ago but had the intention of staying there for at least one year.

Professional situation: This feature defines the form taken by the employment relationship of the employed population with the company where they work referred to their main occupation.

Usable floor area of a dwelling: It is considered useful area in square meters to the one included within the exterior walls of the house. Therefore, not only the surface destined to rooms but also the surface of corridors, halls, bathrooms and other spaces that are not considered a room are included.

Household chores: Unpaid activities carried out for the maintenance and wellbeing of the household and its members, including routine activities such as food preparation, washing and ironing clothes, making the shopping and also other activities such as repair, maintenance, care of plants and animals or administrative procedures, including the search for employment.

Basal body temperature: It is the lowest temperature that the body reaches at rest (normally during sleep). Using the method of basal temperature one can know the fertile days of a woman's menstrual cycle.

Assisted Reproduction Treatment: A set of techniques and medical treatments aimed at favouring pregnancy in the case of fertility problems in males, females or both.

Vasectomy: Surgery that removes the vas deferens of the male sex organs for sterilization.

5 Questionnaire

For the elaboration of the questionnaire, a working group was set up with experts in demography from the Higher Council for Scientific Research (CSIC), the Center for Demographic Studies of Barcelona (CED) and INE. The final objective was to incorporate all the considerations that in the opinion of the group could influence a priori in the decisions of fertility of the people. Another objective was that the fertility survey of 2018 had some comparability with the previous surveys carried out in Spain as well as with similar surveys carried out in other countries.

During this process, a dozen questionnaires used in recent researches in other countries were thoroughly analyzed, especially the questionnaire of the United Nations project "Generations and Gender Survey" that has been used by many countries.

Thus, the Individual Questionnaire is a document designed in order to gather information relating to people between the ages of 18 and 55, on the dimensions and determinants of fertility which are the subject of research: Conjugal, reproductive and labour retrospective biographies, as well as the educational background and socio-demographic characteristics of the interviewee, their partner, ascendants and descendants and about their values, beliefs and attitudes.

This questionnaire must be completed by interviewing only the selected man or woman. That is to say, the informant of this questionnaire is the person who is the subject of the interview, selected in accordance with the established rules, not admitting the proxy interview.

The detailed questionnaire is published on the INE website separately for women and men.

The questionnaire consists of 10 blocks of questions to ask the interviewee about themselves, their partner, their children, their parents and all people living in their household. Of these blocks, 9 are common for both men and women, while for the block relative to fertility, two different sets of questions have been elaborated, one for men and another for women

The blocks which constitute the basic questionnaire are:

0. Identification of the person selected

In this block, one the selected person is asked to check their pre-filled data in the questionnaire. It is about the basic identification data of the person that come from the population frame (Padrón). In case there is something that is not correct, the interviewee must modify it.

1. Biographical data

In this block, information is requested about their marital status, country of birth, the date on which they established their residence in Spain for the last

time in the event of being born abroad, nationality, if they have some type of recognized disability and identity document.

2. Household (household members and relatives)

In this block, information is requested from all household members on key demographic variables: age, sex, relationship to the interviewee, disability and identity document. In addition, other variables will be requested such as type of household, household income and difficulty in making ends meet.

3. Housing unit

In this block, information is requested on the basic characteristics of the dwelling: square meters of floor space, distribution of housing, tenure status, the date on which they began to reside in the dwelling and the degree of satisfaction it brings the interviewee.

4. Parents or family of origin

Information is requested on the maternal/paternal figures of the interviewee. For each of them it is asked: if the interviewee still lives with them, age, sex, country of birth, nationality, educational level, if the respondent stopped working to take care of them or his/her siblings, if he or she lived with them at the age of 15 and working status when the interviewee was 15 years old and currently. In this block, information will also be provided on the number of siblings of the interviewee, age at which the mother had her first child, whether the parents divorced and at what age did it happen, and in the event that he or she has left the family home, the date of said emancipation of the family home and date when he/she acquired total economic independence from parents.

5. Relationships

Information is requested from their current partner, if that is the case, starting by specifying if they live together in the same household or not, and also gathering information on their socio-demographic characteristics, the degree of satisfaction of the relationship, sharing of domestic tasks, if they have children or not, alimony, relationship with respect to income, as well as intentions of cohabitation, marriage, etc. It includes a section on four relationships (maximum) with who he/she have lived with or have had children with in order to rebuild their conjugal as well as their reproductive retrospective biography.

6. Children

In this section, information is collected relating to all the children of the interviewee (biological children, adoptive or foster), children of the couple, etc., including the children who do not live in the home. For those who live with children under the age of 14 years, they will be asked about the distribution of childcare tasks in the home as well as the use of different alternatives. Regardless of whether the interviewee has children or not, he

or she is asked about whether and how the state should encourage the birth rate.

7. Fertility

There will be two different blocks, one for men and one for women, but the only difference is the gender used in the wording of questions and in that the questions relating to pregnancy in the case of men will always refer to the woman who is or has been pregnant with his child.

This block is structured in 5 sub-blocks for women and 4 sub-blocks for men: current pregnancy, pregnancies history (only for women), fertility, contraception and desired fertility.

In these sub-blocks information will be collected on the current pregnancy, if it is the case, on the pregnancies they may have had, inquiring if they are or have been desired or not, if they occur or have occurred at the desired time and otherwise gather information on the reason for such a delay. Information will be collected on treatments of assisted reproduction, contraception and desired fertility, emphasizing in this case on the reasons and barriers which have led them to comply or not.

8. Studies

Information on the level of studies completed by the interviewee is requested, as well as if they have ever had to interrupt them and if they are currently enrolled in any kind of studies.

9. Occupation and income

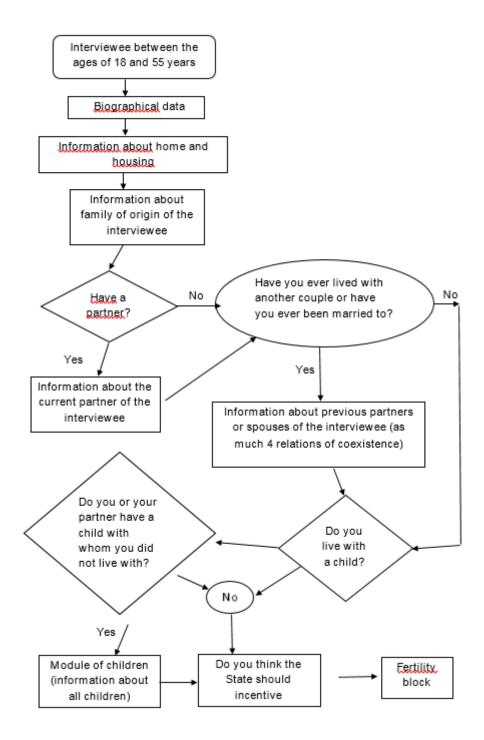
Information is requested on the relationship with their current job, occupation and employment status, type of contract, length of the working day, workers under their charge and activity of the company, as well as the their level of income. It includes a section containing information concerning the dates, professional situation, type of contract and reason for changing employment for the four previous longest lasting jobs as well as their first job. As well as their periods of unemployment, the age at which they reached a stable employment situation, if that be the case, and on the most valued aspects of a job.

10. Values, orientations and attitudes

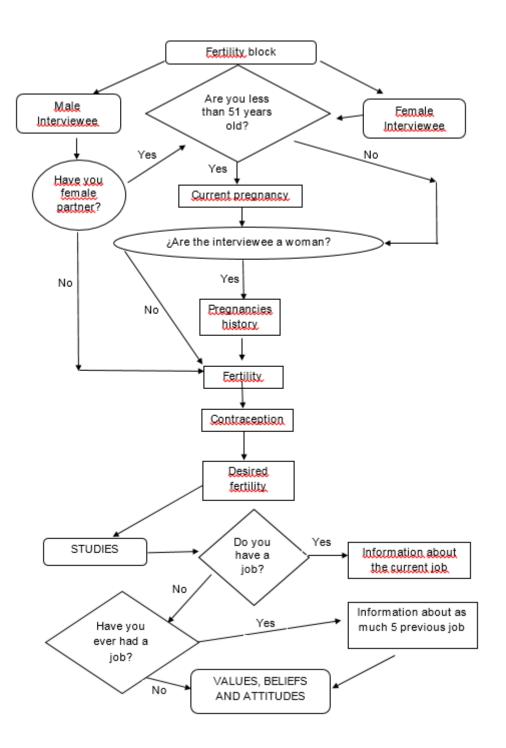
In this block, the respondent is asked to provide information on his or her values, attitudes and beliefs, in order to be able to classify him or her in a certain group accordingly (religious beliefs, gender attitudes, attitudes towards children and types of family).

The diagram below illustrates the design and the flow of the 2018 Fertility Survey questionnaire.

Basic diagram of the design of the 2018 Fertility Survey questionnaire



Basic diagram of the design of the 2018 Fertility Survey questionnaire (continuation)



6 Sample design

6.1 TYPE OF SAMPLING

Two independent samples are considered, a wider range of women, and a second one, smaller, of men.

In both cases, an independent sample will be selected in each Autonomous Community. To do this, a stratified two-stage sampling will be used, in which the first-stage units are geographics areas (census tracts), and the secondstage units are people between 18 and 55 years of age, resident in the firststage units which have been selected.

The framework for the selection of the sample shall be made up of the list of census tracts and the list of people from the Continuous Register available at the time of the sample selection (February 2017).

The first-stage units (census tracts) are stratified within each Autonomous Community in accordance with the size of the municipality to which they belong to. Subsequently, a sub-stratificacion is performed within each stratum, using the socio-economic information available, from the last census.

According to this criterion, the following strata are established for the sample of women:

Stratum 0: Municipalities with more than 500,000 inhabitants.

Stratum 1: Provincial capital municipalities (except from the previous ones that belong to stratum 0).

Stratum 2: Municipalities between 100,001 and 500,000 inhabitants (except from the previous ones that belong to stratum 1).

Stratum 3: Municipalities between 50,001 and 100,000 inhabitants

Stratum 4: Municipalities between 20,001 and 50,000 inhabitants

Stratum 5: Municipalities between 10,001 and 20,000 inhabitants

Stratum 6: Municipalities with less than 10,000 inhabitants

In some autonomous communities it has been necessary to put together some contiguous strata, either because there are no municipalities in any of them, or because the population is too small and therefore would not correspond to a proportional allocation.

For the men sample stratification was not directly used, although the previous stratification was taken into account in the selection of the enumeration areas.

In parallel, the Statistical Institute of the Autonomous Community of Navarra (Nastat) made an increase of the sample used for this survey. The sample design of this increase was also commissioned by the sampling unit of INE, following the same methodological characteristics and the same size as that one established by the INE for that community.

Nastat carried out the data collection of information in the increase of the sample in Navarra following the criteria established by INE for this survey and including the use of the same electronic questionnaire and the same application for monitoring the collection.

Once the information of the effective samples obtained by each statistical institute was collected, the sampling unit of INE carried out different studies, obtaining as a result that both samples come from the same population, so they are totally homogeneous.

6.2 SAMPLE SIZE. ALLOCATION

It has been established a theoretical sample size of 25,000 women and 5,000 men. The purpose of this theoretical sample is to obtain an effective sample capable of providing reliable estimates at Autonomous Community and national levels, of women and mend respectively.

As this is a two-stage sampling, the theoretical sample is distributed as follows:

- Women: 1,825 tracts and 14 women per tract
- Men: 510 tracts and 10 men per tract

The 510 tracts in which the sample of men will be collected will be a subsample of the 1,825 tracts selected for the sample of women. This facilitates the comparability of results, and also reduces the field work budget.

The sample initially designed for the Autonomous Community of Navarra has doubled as a result of the increase of the sample undertaken by Nastat.

Distribution of the sample of tracts

The tracts of the sample of women are distributed by Autonomous Community, by means of a balance between uniform and proportional to the population size.

The tracts of the sample of men are distributed in proportion to the population size of each Autonomous Community.

The sample increase in Navarra is distributed in the same way as the INE sample, so the total number of sample sections in which the total sample is collected in Spain is 1,886 in the case of women and 517 in the case of the men.

		Sample of tracts		
	Autonomous Community	Women	Men	
01	Andalucía	241	92	
02	Aragón	69	15	
03	Asturias, Principado de	62	11	
04	Balears, Illes	65	13	
05	Canarias	90	23	
06	Cantabria	60	6	
07	Castilla y León	101	27	
08	Castilla - La Mancha	90	22	
09	Cataluña	204	81	
10	Comunitat Valenciana	154	55	
11	Extremadura	64	12	
12	Galicia	112	30	
13	Madrid, Comunidad de	186	71	
14	Murcia, Región de	73	16	
15	Navarra, Comunidad Foral de(*)	122	14	
16	País Vasco	92	24	
17	Rioja, La	61	3	
18	Ceuta	20	1	
19	Melilla	20	1	
00	Total Nacional	1.886	517	

(*)The number of sections in the Comunidad Foral de Navarra includes the sample extension indicated above.

6.3 SAMPLE SELECTION

Sample of Women

The census tracts (first-stage sampling units) will be selected within each stratum with a probability proportional to its size. Prior to the selection, an ordering of the same is done by substratum and province.

The people (second-stage sampling units) are selected in each census tract with equal probability by systematic sampling with random start and after being sorted by age.

In this way approximately self-weighted samples are obtained by stratum.

Sample of Men

The tracts are selected with equal probability in the sample of women for tracts

in each Autonomous Community. Prior to the selection, the sections of each community are ordered by stratum, sub-stratum and province.

The people (second-stage sampling units) are selected in each tract with equal probability by systematic sampling with random start and after sorting by age.

In this way approximately self-weighted samples are obtained by Autonomous Community.

6.4 ESTIMATORS

To estimate the main features of the survey the following types of estimators are considered:

- Estimator for variables related for women
- Estimator for variables related for men

In both cases, unbiased expansion estimators are used and then calibrated according to information from external sources.

The estimators have been calculated at the autonomous community level.

Estimator for the sample of women

1. Estimator based on the design of the sample

The probability of belonging to the sample of a woman i in section S of stratum h is given by

$$P(m_{ish}) = K_h \cdot \frac{P_s}{P_h} \cdot \frac{r_s}{M_s} \approx K_h \cdot \frac{M_s}{M_h} \cdot \frac{r_s}{M_s} = \frac{K_h \cdot r_s}{M_h}$$

where:

- K_h Number of sections of the sample of women in stratum h
- P_s Population in section S of stratum h
- P_h Population in stratum h
- M_s Population of women in section S of stratum h
- M_h Population of women in stratum h
- r_s Number of women selected in each section

The elevation factor from the sample design for women i of stratum h is obtained from the inverse of the previous probability, that is:

$$f_i = \frac{M_h}{K_h.r_s}$$

2. Calibration techniques

The previous factor will be replaced to adjust the distribution of some characteristics estimated with the sample to the information coming from external sources, using the CALMAR software.

These are the auxiliary calibration variables that have been used in each autonomous community:

• Age groups. The following age groups have been considered:

18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-55

- Population totals of women by province
- Nationality (Spanish/ foreign)

The population totals corresponding to these auxiliary variables come from the Population Figures referred to May 1st, 2018.

Using the factors from the calibration process (f_i^c) , the estimates of the totals of the objective variables (Y) of the survey are obtained by means of the following expression:

$$\hat{Y} = \sum_{i \in S} f_i^c y_i$$

Estimator for the sample of men

1. Estimator based on the design of the sample

The probability of a section of the simple of men is:

$$P(S) = K_h \cdot \frac{P_S}{P_h} \frac{J}{K}$$

Where:

- K_h Number of sections of the sample of women in stratum h
- P_S Population in section S of stratum h
- P_h Population in stratum h
- *J* Number of sections of the sample of men in the community
- *K* Number of sections of the sample of women in the community

As in each autonomous community, the affixation of the sample of sections of women by stratum has been done in a strictly proportional way, we will have:

$$K_h = K.\frac{P_h}{P}$$

And therefore:

$$P(S) = K_h \cdot \frac{P_S}{P_h} \frac{J}{K} = K \cdot \frac{P_h}{P} \cdot \frac{P_S}{P_h} \frac{J}{K} = J \cdot \frac{P_S}{P_C}$$

The probability of belonging to the sample of a man i in section S of stratum h is given by:

$$P(v_{is}) = J \cdot \frac{P_S}{P} \cdot \frac{r_s}{V_S} \approx J \cdot \frac{V_S}{V} \cdot \frac{r_s}{V_S} = J \cdot \frac{r_s}{V}$$

Where:

- V_S Population of men in section S
- V Population of men in the autonomous community
- r_s Number of men selected in each section

Note: The notation v for men is used, to distinguish it from the stratum h.

The elevation factor from the sample design for man v_i of a community is obtained from the inverse of the previous probability, that is:

$$f_i = \frac{V}{J.r_s}$$

2. Calibration techniques

Calibration techniques are applied to the above factors using the CALMAR software:

• Age groups. The following age groups have been considered:

18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-55.

• Population totals of men by province

The population totals corresponding to these auxiliary variables come from the Population Figures referred to May 1st, 2018.

Using the factors from the calibration process (f_i^c) , the estimates of the totals of the objective variables (Y) of the survey are obtained by means of the following expression:

$$\widehat{Y} = \sum_{i \in S} f_i^c y_i$$

6.5 SAMPLING ERRORS

The Jackknife indirect method is used to calculate the sampling errors of the main characteristics investigated.

This method is based on the formation of subsamples, each one obtained by eliminating a primary unit from the total sample. The estimation of the variance of the estimator has the expression:

$$\hat{V}(\hat{X}) = \sum_{h} \frac{(n_{h} - 1)}{n_{h}} \sum_{j \in h} (\hat{X}_{(hj)} - \hat{X})^{2}$$

where:

 $\hat{X}_{(hj)}$ is the estimate of the characteristic **X** when the primary unit j of stratum h is removed from the sample.

 \hat{X} is the estimate X obtained with the entire sample.

 n_h is the number of primary units in stratum h.

The theory of sampling determines that in the interval between

$$\left(\hat{X} - 1.96\sqrt{\hat{V}(\hat{X})} , \hat{X} + 1.96\sqrt{\hat{V}(\hat{X})}\right)$$

there is a 95 percent confidence that the true value of parameter X is found.

Finally, the relative sampling error or coefficient of variation is calculated according to the expression:

$$C\hat{V}(\hat{X}) = \frac{\sqrt{\bar{V}(\bar{X})}}{X}$$

7 Information collection

7.1 DATA COLLECTION METHOD

The information was collected by a company external to INE through a sequential multi-channel procedure: CAWI, CATI and CAPI.

CAWI (Computer Assisted Web Interviewing): a method that is used for the gathering of information via the Internet so that the questionnaire is completed by the own respondent..

CATI (Computer Assisted Telephone Interviewing): a method that is used for the gathering of information through telephone interview with interviewer.

CAPI (Computer Assisted Personal Interviewing): a method that is used for the gathering of information through a personal interview with an interviewer at the home of the respondent through a tablet-type portable computer.

It started requesting collaboration through a web questionnaire (CAWI), for which the selected person had seven days to complete the questionnaire completely, followed by a telephone claim phase with the possibility of an interview (CATI) and finally a personal interview with an electronic questionnaire in a laptop (CAPI) for those people who had not collaborated at the time of launching this data collection method.

The interviewer in the CAPI visit requested the necessary information to complete the electronic questionnaire. It could complement the interview, if necessary, with telephone calls to complete missing data or correct erroneous data.

The proxy interview was not accepted (that another person provides the data of the selected person) but it was allowed, in case of inability to answer of the selected person, that another person will help him to give the information.

The field works (data collection, inspection, monitoring and first filtering of the information) have been carried out, under the close supervision of INE and the company awarded the contract publicized by INE.

Before starting the data collection work, INE staff gave training courses to the area managers of the company in charge of the data collection. These people were also responsible for the training of the personnel in their charge in the respective zones.

In these courses, the methodological and theoretical concepts of the content of the survey, the handling of the portable devices and the rules for completing the questionnaire were explained. The procedure for administering the questionnaire, the rules for conducting the interview, the rules for carrying out the fieldwork, the incidents in the selection and its treatment, the support for the presentation with practical assumptions were also explained. It was detailed the use of the tracking application and the control of the field work and the procedure for downloading the information.

The training courses were supported by the Interviewer's Manual for the EF2018, which comprehensively incorporated the information collection procedure. It also explained to the interviewers the importance of their mission and the importance during data collection of different features such as communication and management of the factors that influence the collaboration of people and the quality of responses

In addition, a toll-free telephone number was provided through which the informants could establish contact for different reasons (clarifying doubts, requesting a telephone interview, etc.).

In order to verify on the ground the good progress of the collection of information, the company in charge of the collection periodically inspected the visits made by the interviewers.

In addition to these periodic inspections, other occasional inspections were carried out in those places where it was considered appropriate.

The main purpose of the inspection was to verify that the interviewers performed their work correctly in the original interview, following the established rules, verifying in particular that the assignment of incidents have been correct and correcting the errors that have been committed.

In addition to the previous inspections carried out by the company in charge of the collection, telephone inspections were carried out by INE, in order to corroborate the quality of the completed data and the fulfillment of the tasks responsibility of the company awarded the tender. INE also carried out a series of inspections during the CAPI interview phases, in order to review and improve the codification of the incidents that occur during the data collection, the quality of some of the completed data and to try to recover some units that had been classified, by mistake, as a refusal to collaborate.

7.2 ELEMENTS OF DATA COLLECTION

In all three cases (CAWI, CATI and CAPI) a computer-assisted questionnaire is used, which incorporates range, flow, completeness and validity controls which are in operation during collection.

The computer application of data collection was prepared by the external company under the close supervision of INE.

In addition to the electronic questionnaire and the computer application of monitoring and inspection, other instruments were used to collect information such as:

- Letter of presentation of the survey for the people selected in the sample in which their collaboration is requested.
- Letter of announcement of visit of an interviewer for the people selected in the sample who have not answered by CAWI or CATI.
- Information sheet of the objectives and usefulness of the survey, confidentiality of the data provided, etc., that the interviewer must deliver to the households.
- Credentials of interviewers and inspectors.
- Sketch or map of the section. It is a document of help to define on the ground the section under study.
- Roadmap that carries printed information to help the interviewer to alocate and contact the people selected in the sample.
- Visiting flyers. One to conduct the interview and another to complete data. These forms are used when the person who can provide the information required is not found in the selected dwelling or when the interviewer has contacted the selected person, obtaining some of the information and needs a new interview to complete the one that has not been completed. They basically consist of a letter stating that an interviewer has visited his home and, since he has not been able to establish contact, the date on which said interviewer will repeat the visit.
- Interviewer's Manual.

7.3 INCIDENTS IN THE DATA COLLECTION AND ITS TREATMENT

From the initial sample of 31,570 people selected for the EF2018, an effective sample of 17,175 completed questionnaires was obtained.

Units that have not been able to obtain information have been assigned an incidence depending on the different situations that an interviewer can meet. The different incidences contemplated and the treatment defined for each of them are described below.

Every person, according to the situation in which they are at the time of doing the interview, is classified in one of the following types:

1) Surveying person: The person selected for the sample with which they are contacted and at the time of the interview is within the scope of study. The consideration of a person as surveyed will be the previous step to carry out the interview.

2) Person not surveyed, who in turn can be:

- <u>Unreachable housing (IL)</u>: The dwelling cannot be located at the address shown in the list of selected persons, either because the address is not correct, the dwelling does not already exist or for other reasons in the case of a personal interview - <u>Unreachable person (PI)</u>: The selected person does not reside in the address that appears in the sample's people list. Those who are displaced from the family home, in which they are registered, for work reasons or because they have been emancipated are also considered to be untraceable, provided that this displacement is considered definitive. On the other hand, students who are studying in a different location from the one in which they are registered and those who are temporarily displaced due to work, are not considered untraceable, but absent.

However, the case in which the selected person is located in a different postal address is not considered unreachable and this difference may be attributable to an error in transcribing the data when filling in the Padrón.

- Inaccesible housing unit (IN):
 - CATI Interview: All the telephones that are available for that dwelling are erroneous, or do not correspond to the dwelling and other contact telephones cannot be obtained. This incidence does not change the status but the unit will be assigned to the CAPI stage.
 - CAPI Interview: It is the one that cannot be accessed to conduct the interview due to weather or geographical causes, for example, when there are no passable routes to reach it.
- <u>Empty dwelling (V)</u>: This incidence occurs when the dwelling is uninhabited or is a seasonal or secondary dwelling.
- <u>Housing other purposes (OF)</u>: The dwelling in which the selected person theoretically resides is not dedicated to family residence, but is entirely dedicated to other purposes.
- <u>Person out of scope or not possible to survey (NE)</u>: Those who are outside the scope of study are classified as such. Included here are selected persons whose age, as of February 1, 2018, is outside the range 18-55 years.

All these incidents are considered incidences of the framework.

Once the interviewer has located the selected person and verifies that he / she is within the scope of the study, that is, that he / she is a person possible to survey, the following incidences of polls can be presented:

- <u>Surveyed (E)</u>: When the selected person answers the questionnaire and it is 'completed'.
- <u>Absent (A):</u>
 - CATI Interview: The interviewer contacts someone in the dwelling who informs him that the selected person will be absent throughout the survey period and a contact telephone number is not obtained.
 - CAPI Interview: This incident occurs when the selected person is absent and will continue to be absent during the entire period of the

field work in the section without the possibility of contacting it. People who are interned in a health hospital or penitentiary will be framed in this incident, as it is considered that their displacement of the family home is not definitive, but temporary.

- <u>Not contacted (NC):</u> It occurs when you cannot contact anyone in the house in the established period. This incidence does not change the status and is assigned by the application once that period has ended.
- <u>Negative (N)</u>: This case occurs when the person selected or who answers the phone, in the CATI case, refuses to collaborate, which may be an initial negative or a subsequent denial, after having begun to collaborate. The selected person refuses to provide the required information.
- <u>Disabled (IC)</u>: The selected person is unable to respond to the interview, whether due to disability, illness, ignorance of the language or any other circumstance.
- <u>Previously selected person (SA)</u>: The selected person is contacted, but indicates that they do not intend to collaborate because they were previously selected (less than three years ago) in some other population survey, having collaborated in it. This incidence includes the cases of those people who do not want to collaborate because they were previously selected and have collaborated in some other population survey (less than three years ago).

7.4 DATA COLLECTION INDICATORS

31,570 units were initially investigated and 17,175 people were finally surveyed, who represent a 54.4% response rate on the total sample.

If we take into account the 7,014 incidences of the framework detected in the data collection process (22.2%), the resulting survey sample was 24,556 units, with which the actual response rate of the survey was almost 70%.

Among the incidences of non-response, it highlights the percentage of refusals (15.5%) and the person not contacted (10.7%).

The distribution of the incidents produced during the data collection of information and the response rates were as follows:

Framework Incidents:

Initial sample	Surveying person	Unlocatable housing	Unlocatable person	Inaccessible housing	Empty housing	Housing other purposes	Non respondent
31.570	24.556	256	6.032	18	545	62	101
100%	78%	1%	19%	0%	2%		0%

Surveys incidents:

Respondent	Surveyed	Absent	Not contacted	Negative	Disabled	Selected person previously
24.556	17.175	467	2.623	3.807	478	6
100%	70%	1,9%	10,7%	15,5%	1,9%	0%

Regarding the distribution of respondents by data collection channel, 55.7% of the questionnaires were self-completed by the interviewees via internet and 30.2% were collected through a personal interview.

	Collection channel					
Surveyed	CAWI	CATI	CAPI			
17.175	9.558	2.428	5.189			
100%	55,7%	14,1%	30,2%			

8 Processing of information

The collection using an electronic questionnaire (CAWI / CATI / CAPI) allows to carry out a first edit of the data by means of the control of errors implemented in the collection application that allows the detection of some inconsistencies and provides warnings of strange values when the answers are provided. It also contains implemented flow controls, valid values and consistency of most of the variables so that the correction / confirmation of a large part of the information is done at the same time of the self-completion by the respondent, in CAWI, or by the interviewer at the same time of the interview, in CATI or CAPI.

Even so, the questionnaires presented errors and incomplete information that has been refined or imputed, depending on the case.

The processing of the information consists of the following phases:

- Coverage phase and initial checks: in this phase a process of control of ranges, flows, inconsistencies, validations, control and elimination of duplicates was carried out. Likewise, a control of the structure of the questionnaire and of the flow between blocks was carried out.

- Quality Control Phase: It was checked that the information collected does not contain inconsistencies or serious errors implemented in the questionnaire and if they exist, they were given a solution.

- Cleaning and Imputation Phase: It consisted on the detection of inconsistencies that have not been included in the electronic questionnaire, as well as the obtaining of marginal tables, variable analysis tables, treatment of dates, imputation of missing data, etc.

The correction of possible non-consistent or lost values is done automatically and, exceptionally, manually.

The imputation of missing data through automatic imputation has been carried out by applying the DIA program, based on the Fellegi & Holt methodology.

All these tasks were carried out by the corresponding unit Information and Communication Technologies (SGTIC) of INE in collaboration with the promoter service.

Additionally, INE sampling area unit was responsible for calculating:

- Calculation of elevation factors and estimators: To estimate the characteristics of the sample, ratio estimators will be used to which weighing techniques will be applied.
- Calculation of sampling errors: For the main variables of the study and disaggregations, the coefficients of variation shall be calculated. These tables are published, together with the methodology to replicate their calculation and apply it to any other variable.

9 Tabulation Plan

The tabulation plan provides for the inclusion of statistical tables of results for the analysis objectives of the survey.

Results are provided at the national level both for men and women and at the autonomous community level only for women.

In both territorial levels, the tabulation has been structured into 12 chapters for women and 11 for men.

The main topics investigated in the tables have been:

- 1. Demographic characteristics of residents in Spain from 18 to 55 years old according to the number of children, age, nationality, place of birth, marital status, degree of urbanization of the municipality of residence and type of children (biological, adopted, foster and the couple).
- 2. Family of origin of residents in Spain from 18 to 55 years old according to the number of children, to the number of siblings, to whether their parents are separated or divorced and according to the type of family they had in their childhood.
 - 3. Studies of residents in Spain from 18 to 55 years of age depending on the number of children according to the level of education completed, field of studies when they are higher, relationship between the age at which they had their first biological child and at a higher level of education they have completed and in the case of women it is also analyzed if they have interrupted their studies for reasons of maternity according to the level of studies they were studying and their age.
 - 4. Occupation and income of residents in Spain from 18 to 55 years old according to the number of children based on the current employment situation and the one they had at the time of having their first biological child, the number of years they have been working in the same job, those who have it, and the number of years they have been unemployed, for those who do not have it, public or private sector, for employees and the most valued aspect of a job according to whether they have children or not
 - 5. Family structure and dynamics of residents in Spain from 18 to 55 years of age according to the number of children based on the number of people with whom they live and the type of household, useful surface area and housing tenure, monthly expenditure for the payment of the same. Information is also provided on whether or not the interviewees have enjoyed maternity / paternity leave with at least one of their children and for those who live with children under 14 years of age, who is mainly responsible for each of their care, what alternatives parents use to take care of their children outside school hours and the frequency

with which they use them and monthly expenditure that involves the use of these alternatives.

- 6. Relationship of residents in Spain from 18 to 55 years of age according to the number of children depending on their sentimental situation, duration of the relationship, type of coexistence and type of union, for those who currently have a partner. It also relates the number of children with the educational level and the current employment situation of both members of the couple, when they have it, and of themselves when they do not have it.
- 7. Current pregnancy of women resident in Spain from 18 to 55 years of age who are pregnant. This information is offered only for women. Information is provided on the level of studies, employment and sentimental situation, the number of previous children they have and their age.
- 8. Birth control. This section provides information on the contraceptive methods used by residents in Spain from 18 to 55 years of age, the one they have used most frequently throughout their lives and if they have undergone any intervention or medical treatment that prevents them from have biological children and why.
- 9. Assisted reproduction. This section offers information on the use of assisted reproduction techniques by residents in Spain from 18 to 55 years old.
- 10. Birth barriers and incentives. This section provides information on all those conditions that face residents in Spain from 18 to 55 years when making the decision to have children or not having them and how the incentives that claim the state in terms of birth.
- 11. Desired fertility. In this section we study the fertility wishes of residents in Spain from 18 to 55 years from a general point of view, but also about their short-term fertility intentions.
- 12. Delay in the maternity/paternity. This section quantifies the number of people who have delayed their maternity / paternity with respect to what they considered the ideal age among residents in Spain from 18 to 55 years and the reason for this fact.

Together with this tabulation plan, the microdata files of the survey are published and can be used by several statistical packages. On the other hand relative sampling errors or coefficients of variation in percentages of some tables were also provided.

10 Dissemination of the results

For this survey, INE has made two types of publications:

1. RESULTS PREVIEW.

On November 28th, 2018, a set of statistical tables were distributed on the INE website, together with a press release, which constituted the first advance in the results of the survey.

In this advance of results, only part of the questionnaire focused on the desired fertility the barriers and incentives that people find when making their decisions about their fertility and the use of assisted reproduction nowadays were exploited. In this way, the set of statistical tables that were published on the web was structured in four chapters:

- Demographic characteristics
- Social characteristics
- Characteristics of the partner
- Fertility

Results were published for women and men, but only at the national level. And in both cases tables of absolute figures and tables of relative figures were offered.

2. DETAILED RESULTS.

On April 9th, 2019, the set of statistical tables covering the fundamental objectives of the survey at the national and regional levels were disseminated on the INE website, accompanied by a press release.

The detailed results have been structured in 12 chapters:

- Demographic characteristics
- Family of origin
- Studies
- Occupation and income
- Family structure and dynamics
- Relationship
- Current pregnancy (only for women)
- Birth control
- Assisted reproduction
- Birth barriers and incentives
- Desired fertility
- Delay in the maternity/paternity

As it was done in the advance, results were published separately for women and men. And in both cases tables of absolute figures and tables of relative figures were offered.

We have also published tables of relative sampling errors or coefficients of variation in percentages for some tables.

3. MICRODATA FILES

On April 9th, 2019, the final microdata files were also published, which constitute the basis for answering information requests that require specific and detailed exploitations.

The content of these files were adjusted to what is established in the Law on the Public Statistical Function with respect to the confidentiality of individual data.

Its dissemination was carried out in an electronic publication format through the INE website.

In addition to the log design and valid values of the variables, a compressed file containing microdata files prepared to be treated directly with R, SAS, SPSS, STATA and any other program using the TXT or CSV versions were provided.

The microdata files for this survey are composed of three data files corresponding to the individual questionnaire, the children table (which contains information about all the children of the interviewee, if applicable) and the household table (which contains information about all those people who live in the same home with the interviewee, if this is the case).

11 ANEX: Classifications

1. NATIONAL CLASSIFICATION OF ECONOMIC ACTIVITIES 2009 (CNAE 2009) to one digit.

- 1 Agriculture, livestock breeding, forestry and fishing
- 2 Extractive Industries
- 3 Manufacturing Industry
- 4 Electricity, gas, steam and air conditioning supply
- 5 Water supply, sewerage, waste management and decontamination activities
- 6 Construction
- 7 Wholesale and retail business; repair of motor vehicles and motorcycles
- 8 Transport and storage
- 9 Accommodation
- 10 Information and communications
- 11 Financial and insurance activities
- 12 Real estate activities
- 13 Professional, scientific and technical activities
- 14 Administrative and support services activities
- 15 Public Administration and defence, compulsory Social Security
- 16 Education
- 17 Health and social services activities
- 18 Artistic, recreational and entertainment activities
- 19 Other services
- 20 Private households with employed housekeeping staff; activities of households as producers of goods and services for their own use
- 21 Activities of extraterritorial organisations and bodies

2. NATIONAL CLASSIFICATION OF OCCUPATIONS 2011 (CNO-11) to two digits.

- > Directors and managers
 - 1 Members of the executive branch and legislative bodies; directors of the Public Administration and organisations of social interest; Executive Directors
 - 2 Directors of administrative and commercial departments
 - 3 Production and operations directors
 - 4 Directors and managers of retail trade companies
 - 5 Directors and managers of other service companies not classified under other Headings
- Technical and scientific professionals and intellectuals with high-level professional knowledge
 - 6 Health professionals
 - 7 Primary, secondary and post-secondary education teaching professionals
 - 8 Other teaching professionals
 - 9 Professionals in physics, chemistry, mathematics and engineering sciences
 - 10 Legal professionals
 - 11 Specialists in Public Administration and company organisation and marketing
 - 12 Professionals in information technologies
 - 13 Professionals in social sciences
 - 14 Culture and performing arts professionals

- > Technicians; support professionals
 - 15 Technicians in sciences and engineering
 - 16 Supervisors in mining, manufacturing industry and construction engineering
 - 17 Health technicians and professionals in alternative therapies
 - 18 Support professionals in finances and mathematics
 - 19 Representatives, commercial agents and similar
 - 20 Support professionals for administrative management; armed forces and security services technicians
 - 21 Support professionals for legal, social, cultural, sports and similar services Information and communications technology (ICT) technicians
- > Accounting, administrative and other office employees
 - 23 Accounting, finance services, and production and transport support services employees
 - 24 Employees of libraries, postal services and related
 - 25 Other administrative employees not in customer service
 - 26 Employees in travel agencies, receptionists and telephone operators, cashiers and similar (except tellers)
 - 27 Other administrative employees who perform customer service tasks not classified elsewhere
- > Workers in catering, personal, and protection services and trade salespersons
 - 28 Owners who are waiters and cooks
 - 29 Workers in catering
 - 30 Clerks in shops and stores
 - 31 Traders store owners
 - 32 Sellers (except in shops and waredwellings)
 - 33 Cashiers and grossing (except banks)
 - 34 Works in the care of people in health services not classified under other headings
 - 35 Other workers to care for the people
 - 36 Workers in catering,
 - 37 Health service and personal care workers
- Skilled agricultural, livestock, forestry and fishing sector workers
 - 38 Skilled mixed livestock and farming workers
 - 39 Skilled workers in livestock activities, (including poultry, bee-keeping and the like)
 - 40 Skilled mixed livestock and farming workers killed workers in forestry, fishing and hunting
- Craftspersons and skilled workers in manufacturing industries and construction (except installation and machinery operators)
 - 42 Workers in structural works of construction and related sectors
 - 43 Workers finishing of buildings and facilities (except electricians), painters and allied
 - 44 Welders, sheet-metal workers, structural-metal assembly workers, blacksmiths, toolmakers and related similar
 - 45 Machinery mechanics and repairers
 - 46 Specialized workers in electricity and electro-technology
 - 47 Precision Mechanical in metals, ceramicists, glaziers, craftsmen and workers of graphic arts
 - 48 Manufacture of machinery for the food, beverage and tobacco industry

- 49 Workers in wood, textile, clothing, leather, leather goods, footwear and other operators in offices
- > Installation and machinery operators and assemblers
 - 50 Fixed installation and machinery operators and assemblers
 - 51 Assemblers and assemblers in factories
 - 52 Locomotive Engineers, operators of agricultural machinery and heavy equipment, and sailors
 - 53 Drivers of vehicles for urban transport or by road
- ➤ Basic occupations
 - 54 Domestic Workers
 - 55 Other cleaning staff
 - 56 Food preparation assistants
 - 57 Urban waste-pickers, street vendors and other elementary occupations in services
 - 58 Agricultural, forestry and fishing labourers
 - 59 Construction and mining labourers
 - 60 Manufacturing labourers
 - 61 Labourers of transport goods and un-loaders
- ➤ Military occupations
 - 62 Military occupations

3. NATIONAL CLASSIFICATION OF EDUCATION 2014 (CNED-14) in the classification of programmes by educational levels (CNED14-P) to one digit.

Observation: The CNED-P is the reference classification to obtain information about the studies in the course, and therefore its scope covers the current programs, both in a formal and non-formal education.

- 1 Below primary
- 2 Primary education
- 3 The first stage of secondary education and similar (with general or professional orientation)
- 4 The second stage of secondary education and similar (with general or professional orientation)
- 5 Post-secondary non-tertiary education
- 6 Vocational training, and design arts and sports activities of higher grade and equivalent; university qualifications that require a bachelor's degree, with a duration equal to or greate than 2 years
- 7 University degrees of 240 ECTS credits (Bologna), university graduates, university's own expert or specialist qualifications and equivalent.
- 8 University degrees of over 240 ECTS credits (Bologna), university graduates, master and specialisation degrees in Health Sciences through the residency system and equivalent
- 9 Doctoral studies

10 Non-formal education