INSTITUTO NACIONAL DE ESTADISTICA

Survey on the Labour Insertion of University Graduates

SLIU-2019

Methodology

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1. Introduction: SLIU rationale and background

The Survey on the Labour Insertion of University Graduates aims to understand the different aspects of the transition process from the university to the labour market.

This is the second labour insertion survey of university graduates that the INE has carried out - the first was carried out in 2014.

The European Commission has already proposed as a strategic plan in the communication "Europe 2020. A strategy for smart, sustainable and inclusive growth" the setting of objectives for this decade. These included, among others, employment for 75% of people aged 20 to 64 and the development of a knowledge and innovation-based economy. This knowledge society demands graduates in higher education with skills that meet labour market needs. It must also be taken into account that administrations must adequately plan their policies and the lines of action that they are going to carry out. For this, it is essential to have the necessary information to make an adequate and proportional diagnosis of the current situation. Undoubtedly, information on the employability and labour market insertion of university graduates is basic information that must be taken into account.

On the other hand, it is essential that students, as direct recipients of higher education, have verified data on the employability for the degrees they wish to pursue. This will contribute positively to having a more efficient and balanced university system by adapting student preferences and the needs of the labour market, and avoiding a lack of alignment between the offer of university degrees and job offers. This will translate into an improvement in unemployment rates, and will allow students to adapt their profile to the real needs of the job market, while also avoiding personal frustrations.

Monitoring the graduates of official university education can provide adequate information for decision-making, both for students, when choosing degrees, and for teachers and public administrations, when preparing the corresponding educational policies. This is the motivation for carrying out a study to assess the influence of university education in the labour insertion process.

This study aims to investigate the transition of graduates to the job market; to obtain data and references on the quality of labour insertion for graduate of Spanish universities; and to understand the conditions with which they enter the labour market, the suitability of their studies for the work they do, and the type of contract or mobility - in short, a set of indicators that provide an understanding of this group's situation and allow that to be related with the degree type.

On the other hand, the General Office of Universities has the legal obligation to incorporate a set of indicators into the Integrated University Information System (IUIS), which will be used by evaluation agencies in the monitoring and accreditation of university degrees. Among these are the indicators related to labour insertion. In other words, it is necessary to have a basic set of indicators that measure job placement and access to the job market for university graduates. The SLIU provides an approximation to these indicators.

In 2012, the Spanish network of university quality agencies (REACU) worked on a set of key labour insertion indicators that they presented to the University Commission for the Regulation of Oversight and Accreditation (CURSA), in order to assess their possible incorporation into the monitoring protocol. These indicators will be used to monitor graduates of official university, master's and doctorate degrees. Along with these key indicators, some voluntary indicators and a questionnaire model for conducting job placement surveys were included, so that it can be used by universities, agencies and other entities.

The objective of these labour insertion indicators is to increase the public information available to society and future students.

SURVEY ON LABOUR INSERTION OF UNIVERSITY GRADUATES

At the international level, many countries have conducted periodic surveys some time (some for 10 years or more) in order to analyse the labour market insertion of higher education graduates. This type of survey is aimed at graduates a few years out from graduation.

Taking into account the number of times that the analysed individuals are contacted, there are two types: surveys that are directed to the individuals only once, and those that interview them a second time a few years later to analyse their evolution and as well as to provide a longitudinal perspective. Among the countries that use the first method are Italy (*Indagine sull´inserimento professionale dei laureati*) and Sweden (*The labour market for the highly educated*). The second method is used by the United Kingdom (*Destination of leavers from higher education longitudinal survey*), France (*Génération*) and Canada (*National Graduates Survey*).

At the national level, almost all universities carry out this type of study on a regular basis. However, the variety of content and methodologies means that results from different universities are not comparable with one another. At the regional level, some Autonomous Communities have studies on the job placement of graduates at their universities that allow for comparisons.

As for international studies that provide comparable data, in 2008, the National Agency for Quality Assessment and Accreditation (ANECA) published the research project report “The Flexible Professional in the Knowledge Society: New Demands in Higher Education in Europe”, better known as Reflex. It forms part of the 6th Framework Program of the European Union, which analyses the job placement of university graduates.

Thirteen European countries participated in this project: Italy, France, Austria, Germany, the Netherlands, the United Kingdom, Finland, Norway, the Czech Republic, Switzerland, Belgium, Estonia and Spain. The Research Centre for Education and the Labour Market of the University of Maastricht was in charge of the management and coordination of the project at the European level, while in Spain it was prepared by ANECA in collaboration with the Centre for Studies in Management of Higher Education of the Polytechnic University of Valencia (CEGES).

The data provided came from a survey conducted on European university graduates from the class of 1999-2000, five years following the completion of studies. Thus, about 40,000 graduates were surveyed throughout Europe and more than 5,500 in Spain, where 48 universities from different Autonomous Communities participated.

2. SLIU Working Group

In order for the survey to reflect the real needs of the main users, a multidisciplinary Working Group has been created in which the General Office of Universities of the Ministry of Universities, the Sub-Secretary of Statistics and Studies of the Ministry of Education, and INE Professional and Technical Training have participated. In the Working Group has determined the Survey objectives, the geographic and degree level for which significant estimates are required, questionnaire content, and another series of methodological aspects mainly related to the method of obtaining information.

Regarding the collection method, two types of information have been taken into account: objective data (degree obtained, first job, current occupation, time elapsed before finding a job...) and subjective data (adaptation of studies to employment, difficulties in finding employment, skills acquired, reasons for geographical mobility,...). Highly reliable administrative sources have been used for the former, with direct surveys being the most appropriate for the latter. This has led to a combined data collection method: records and direct surveys.

3. Objectives of the survey

GENERAL OBJECTIVE

The primary objective is to determine the employment situation of university graduates (including 1st and 2nd cycle graduates) and university master's degree graduates, as well as the various aspects of their job placement process: that is, access to the job market.

SPECIFIC OBJECTIVES

The specific objectives that this survey hopes to achieve are:

- Obtain information on the insertion and access to the job market for graduates of Spanish universities: type of job they enter into, time elapsed between the completion of studies and access to the job market, reasons why this temporary gap occurs, the level of training required to occupy the job, how they got the job, jobs performed during their university training period (including internships in companies).
- Obtain information on the evolution of the employment situation for the population with university studies. Obtain details regarding the first job following completion of university studies: type of job, occupation, level of training required, etc.
- Obtain information on the suitability of studies for the labour market. For this, we use as a proxy the subjective assessment made by the university population of the work performed with respect to the level of training and the area of study most appropriate for said work.
- Provide information, in terms of employability, for the different fields of study. This information is required by students when deciding the degree (field) they want to

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study, as well as the type of university in which they enrol. The educational authorities also require this type of information to carry out adequate teaching planning.

- Analyse the university population's periods of unemployment and work inactivity, paying special attention to the reasons that have caused them, the training throughout life, and the contribution of said training in professional development.
- Measure the degree of mobility of university graduates in accessing the job market.

4. Research scopes

POPULATION SCOPE

The population scope of the survey is made up of university graduates (including 1st and 2nd cycle graduates) and master's degree graduates from the Spanish university system.

GEOGRAPHICAL SCOPE

The territorial scope is the entire Spanish territory, that is, graduates from Spanish universities.

TEMPORAL SCOPE

To determine the temporal scope, it has been taken into consideration that, in order for the relationship with the labour world to stabilize, around three years are needed following the conclusion of studies. This means that at the time of the survey at least three years should have passed since completion of studies. Taking this into account, it has been decided that the academic classes to be studied are university graduates (including 1st and 2nd cycle graduates) and master's degree graduates in 2014; that is, the reference period or time frame to study the labour insertion of graduates is the 2013-2014 academic year.

Data collection was carried out in the period between July and December 2019.

5. Characteristics of the statistical process

This project not only stands out for its statistical relevance, but also for the methodology that has been applied in its elaboration since the most recent improvements introduced in the statistical production processes have been put into practice: web collection to optimize data collection and reduce the cost, and use of administrative records to improve the selection framework, reduce the burden of informants, obtain auxiliary information for the estimation and purification processes, as well as reduce the cost.

All this has led to the use of a combined data collection method: administrative records and direct surveys.

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5.1 USE OF ADMINISTRATIVE RECORDS

The administrative information sources that have been used in this statistical operation have been the Integrated University Information System (General Secretariat of Universities), the Affiliations and Contribution Bases files (Social Security), the Contracts and Occupational Training files (State Public Employment Service - SEPE), the State Base for Persons with Disabilities (IMSERSO-CERMI-MSCBS), and the Register of Inhabitants and the Register of Spaniards Residing Abroad (INE).

– *Integrated University Information System (IUIS)*

The General Secretariat for Universities has an information system, the Integrated University Information System (IUIS), in which universities and autonomous communities participate. This system covers the information needs of all agents of the educational system (Ministry, Autonomous Communities, universities, students, professors and researchers, quality agencies) and can be used for statistical purposes. The IUIS information covers various subject areas: academic (studies, access, enrolment, graduates, performance, mobility), scholarships and grants (scholarship holders, structure), mobility (Erasmus, Seneca and others) and economic and research. It has made it possible to obtain part of the information that is investigated in the SLIU regarding the dimensions of the university environment and education, meaning it is not necessary to collect it directly from the interviewees. Furthermore, the IUIS has constituted the framework for the selection of the sample to be investigated in the Survey. For this survey, university graduates (including 1st and 2nd cycle graduates) and master's degree graduates from the 2013-2014 academic year were taken as the observation unit.

Royal Decree 861/2010, of July 2, which modifies Royal Decree 1939/2007, of October 29, in the fourteenth additional provision, provides for the creation of an integrated information system that provides coverage for the information needs of the entire Spanish university system. The exact wording of this provision is as follows:

> "Fourteenth additional provision. Information on the Spanish university system .
>
> The General Office for Universities, with the prior agreement of the General Conference on University Policy, will promote and coordinate the creation of an integrated and general information system in which the Universities and autonomous communities will participate. This system will make it possible to cover the information needs of the Spanish university system as a whole and will provide the National Agency for Quality Assessment and Accreditation (ANECA) and the evaluation bodies determined by the Law of the Autonomous Communities, the information necessary to carry out the procedures related to the monitoring and accreditation of official university degrees, provided for in this royal decree. Said information system will be provided the personal and material resources available to the General Office of Universities."

INE access to IUIS information has been formalized through the signing of a Collaboration Agreement between the INE and the General Office of Universities,

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as both institutions consider it beneficial for their respective purposes. The General Office of Universities has given the INE access to the database of people registered in the Integrated University Information System in which the graduates in the 2013-2014 academic year appear.

- *General Social Security Treasury Registers*

  The administrative information provided by Social Security is contained in the Affiliations file and in the Contribution Bases file. The data on Social Security affiliation and the characteristics of said affiliation, on the contribution accounts of all the schemes and of self-employed workers and the data on contribution bases have been extracted from these files. All this has made it possible to obtain part of the section of the questionnaire relating to the process of incorporation into employment.

  The INE sent the TGSS the identifiers of the SLIU graduates sample. The Treasury returned the following files:

  1. Identification data file corresponding to the persons in the requested sample. Through its content and using similarity measures, it was verified that the identification returned by the TGSS corresponded to the correct persons.

  2. Registration file referring to the persons identified in 1. It has provided the EILU sample with the characteristics of their various contracts throughout the reference years.

  3. File of accounts and contribution bases referring to the persons identified and who have provided information related to said bases.

  Access by the INE to information from the SS is contemplated in the Collaboration Agreement between the SS and the INE on statistical matters, in force since 2007.

- *State Public Employment Service Registers*

  The administrative information provided by the SEPE is contained in the Contract file and in the Occupational Training file. Information has been obtained on the contracts and the professional occupation carried out, which has served to refine and codify the occupation both in the first job and in the current job. Information has also been obtained on the training courses received and their results.

- *State Database of Persons with Disabilities*

  The BEPD contains the data of all persons residing in Spain who have requested the assessment of the degree of disability, considering as persons with disabilities all those recognized as having a degree of disability equal to or greater than 33% (requirement to access certain benefits, tax benefits, discounts on social contributions, parking cards and others). The file provided by the IUIS has been crossed-referenced with this Database to find out the number of graduates that are included in it.

  Access by the INE to BEPD information is contemplated in the Collaboration Agreement between the INE - IMSERSO - CERMI - MSCBS.

– *Register of Inhabitants and Register of Spaniards Residing Abroad (PERE)*

The administrative information provided by the population register and the PERE has been used to obtain postal addresses and other social variables. Due to the group to which the survey is directed (university graduates and master's degree graduates in the 2013-2014 academic year) a part of the sample was not residing in the national territory. In order not to lose the valuable information provided by residents outside of Spain, it has been decided to use the register of Spanish residents abroad. For this, the postal shipments were made to the address they had abroad.

5.2 SAMPLE DESIGN

The objective of the survey is to provide information on the insertion and access to the job market of university graduates and Master's degree holders. To this end, the characteristics under study are the professional career, the adequacy of the title to the position, and the effect of the economic crisis on the process of access to the job market.

The survey should provide estimates, with the following levels of disaggregation for each of the two target populations:

a) College graduates

- National level by field of study and sex (202 cells)
- Autonomous Community and CNED-2014[1] (488 cells)
- Type of university, branch of study and sex (38 cells)
- College and sex (152 cells)

b) Master's degrees

- Scope of study and sex (144 cells)
- CNED-2014 [1] and Autonomous Community (170 cells)
- Type of university, branch of study and gender (40 cells)
- College and sex (156 cells)

5.2-1 Sampling framework

The framework used to select the sample is made up of the group of graduates from Spanish universities in 2013 and 2014, as well as master's degree graduates in the same years.

The graduate frame file contains around two hundred and thirty thousand records and the Master file contains about sixty thousand records, each of them with:

- Identification variables
- Variables that define the levels of disaggregation required for the estimates
- Additional information on date of birth, sex and nationality.

[1]National Classification of Studies to two digits

5.2.2 Type of sampling

The sample must represent the target population with regard to the variables that are the object of study, according to the different levels of disaggregation required. For this purpose, a random sample is selected using a one-stage sampling without replacement and with equal probabilities. The selection is made in each of the estimation domains considered, according to the procedure described later.

5.2.3 Sample size and distribution

To make a decision on the final size, various scenarios were raised.

In a first approximation to the sample size, the level of the autonomous community and the two-digit degree categories were considered in each one of them.

A sample (m.a.s.) *of 100 graduates in each cell*, allows estimating a proportion *=0.2* with a coefficient of variation *CV=0.2*, which provides a 95% confidence interval (0.12; 0.28). In this way, a first sample size of 53,000 university graduates was reached.

But not all the categories are present in all the Autonomous Communities, so taking an average number of 15 categories, we can reduce the previous size to **31,000 graduates**.

A second approximation to the sample size was obtained by studying the distribution of the graduate population according to the different variables considered in the disaggregation objectives of the estimates.

Based on the number of graduates per domain of estimation, it seemed reasonable to consider the following sampling fractions:

Average sampling fraction	Interval of graduates by group
100	0-20
70	20-50
50	50-100
30	100-200
15	200-500
10	More than 500

Taking into account the previous statements, the sample size ranges from:

1. National estimates by university degrees: Sample size of 29,000 graduates.

2. Estimates at the Autonomous Community and CNED level. Sample size of 40,000 graduates.

From both approaches, a sample size of around 32,000 graduates was decided.

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To reach this size, a theoretical sample size of **42,000 graduates** was deemed necessary.

In order to reach the size of the master's degrees, similar reasoning has been carried out, reaching a theoretical sample size of **17,000 master's degree graduates**.

To distribute the sample of each of the groups, among the multiple domains that are the object of estimation, we started from the classification that provides a greater number of cells for which estimates must be provided. That is, the one corresponding to point 2 in both cases.

The total sample was distributed according to this classification, and subsequently the part that was necessary for the other three classifications to contain sampling units in all their estimation cells was redistributed.

The estimation cells corresponding to the aforementioned classification are of very different sizes, ranging from one to more than four thousand units. Therefore, the following criterion was considered to *establish an allocation that provides estimates of similar precision in all cells*.

$$\sigma(\hat{p}) = \sqrt{\frac{pq}{n} \cdot \frac{N-n}{N}} = \sqrt{\frac{pq}{f} \cdot \frac{1-f}{N}}$$

With this expression we obtain that in a cell of average size *N=2,000* if a sampling fraction *f=0.05 (m.a.s.)* is used, a proportion p=0.1 is estimated with a standard deviation of 0.029, that is, with a 95% confidence interval (0.043, 0.157).

Since this precision criterion is considered adequate, the way to keep it in estimation cells of different sizes was studied below.

To maintain the same precision in another cell of size *N'*, a sampling fraction *f'* must be used which will be given by:

$$f' = \frac{1}{1 + \frac{1-f}{f} \cdot \frac{N'}{N}}$$

In this way, a proportion *p* is estimated with equal precision in a cell of size *N* with a sampling fraction *f*, as in a cell of size *N'* with a sampling fraction *f'*.

The following table shows the sampling fractions obtained for estimation cells of different sizes:

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N	Sampling Fraction *(f)*	Sample size	$\sigma(\hat{P})$(p=0,1)
3000	3%	102	0.029
2000	5%	100	0.029
1000	10%	95	0.029
750	12%	92	0.029
500	17%	87	0.029
200	34%	69	0.029
100	51%	51	0.029
50	68%	34	0.029
20	84%	17	0.029
10	91%	9	0.029
5	95%	5	0.029
1	99%	1	0.029

Taking into account all the above, the theoretical sample was distributed by communities as shown in the following table:

	College graduates		Graduates Master's degree	
Autonomous community	**Framework**	**Theoretical Sample**	**Framework**	**Theoretical Sample**
National Total	233,626	42,321	60,047	17,624
Non-face-to-face universities	6,629	1,345	2134	819
Andalucía	35,449	4,591	8,815	2,258
Aragón	6,154	1,818	909	412
Asturias, Principado de	3,753	1,398	758	398
Balears, Illes	1,990	948	647	302
Canarias	5,794	1,743	731	365
Cantabria	1,896	787	399	249
Castilla y León	21,919	3,613	3,388	1,406
Castilla - La Mancha	5,493	1,413	611	335
Cataluña	33,262	4,835	8,254	2,422
Comunitat Valenciana	25,561	3,669	8,187	1,792
Extremadura	3,451	1,279	751	294
Galicia	10,003	2,288	3,227	842
Madrid, Comunidad de	48,392	6,531	13,048	3,164
Murcia, Región de	7,850	1,964	2,114	734
Navarra, Comunidad Foral de	3,162	1,080	848	389
País Vasco	10,026	2,277	2,319	836
Rioja, La	2,842	742	2,907	607

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5.2.4 Selection of the sample

a) College graduates

A simple random sample of this group has been selected in each cell defined by *autonomous community and CNED-2014 (two digits) with a sampling fraction (f')*corresponding to the formula in the previous section. This selection is made by systematic sampling with equal probabilities, using a *1/f'*period.

Prior to the systematic selection, the records in each cell are ordered by the variables that define the other levels of disaggregation of the estimates, that is, by field of study, sex, type of university and branch of study. In this way, it is intended that the sample representation, according to these last variables, is adequate.

Finally, the initially planned sample has been slightly increased, to complete those cells corresponding to classifications *(1), (3) and (4)* that, after carrying out the selection process described, did not have a sufficient sample. In this section, the selection was also carried out with equal probability and involved a sample increase of around three thousand five hundred units.

b) Master's degrees

A simple random sample of students with a master's degree has been selected in each cell defined by the crossing of the *autonomous community and CNED*, with a sampling fraction (*f'*) corresponding to the formula in the previous section. This selection is made by systematic sampling with equal probabilities, using a *1/f'*period.

Prior to the systematic selection, the records of each cell are ordered by the variables that define the other levels of disaggregation of the estimates, that is, by university, sex, field of study, type of university and branch. In this way, it is intended that the sample representation, according to these last variables, is adequate. After this process, the sample obtained is about ten thousand units.

The sample has been increased in three additional stages, to complete the cells corresponding to the classifications described in the initial introduction, which meant a sample increase of 4,800 units.

5.3 ESTIMATORS

5.3.1 Design-based estimators. Elevation factors prior to calibration

Post-stratified estimators have been used, considering as post-stratum each of the cells that are produced by the crossing of the four classification variables that define the disaggregation that the estimates must have (see introduction) for each of the groups under study.

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Under the hypothesis that in each of the previous cells, the sample units have the same probability of being selected, the estimator of a characteristic X has the expression:

$$\hat{X} = \sum_{i \in S} d_i x_i$$

where $d_i = \frac{N_{123\,4,i}}{n_{123\,4,i}} = \frac{Titulados\ en\ el\ marco\ en\ la\ celda\ a\ la\ que\ pertenece\ el\ elemento\ i}{Titulados\ en\ la\ muestra\ efectiva\ en\ la\ celda\ a\ la\ que\ pertenece\ el\ elemento\ i}$

Given the large number of cells considered, in some of them no effective sample was collected. For this reason, a small percentage (less than one percent) was not represented with the factors d ᵢ thus obtained. However, in the subsequent calibration process, this lack of representation is recovered, using the information of the effective sample available on the different calibration variables.

5.3.2 Calibrated estimators

The elevation factors obtained in the previous section are calibrated to marginal totals from sources outside the sample, using the CALMAR software, written in SAS by the INSEE.

The calibration variables used have been those detailed below for each of the two groups under study:

a) University graduates

- Nationality, Spanish or foreign (2).
- University studies by sex (152)
- National level by field of study and sex (202)
- Registered in the register of Spanish residents abroad (PERE) (1)
- Registered in the State Base for people with disabilities (BEPD) (1)

b) Master's degrees

- Nationality, Spanish or foreign (2).
- University studies by sex (156)
- Scope of study and sex (144)
- Registered in the register of Spanish residents abroad (PERE) (1)
- Registered in the State Base for people with disabilities (BEPD) (1)

In this way, the calibrated factors provide correct estimates of the population totals corresponding to all the previous variables.

5.4 SAMPLING ERRORS

For the estimation of sampling errors, the Jackknife method has been used, which allows the estimation of the variance of the estimator of the total of a characteristic Y by means of the expression:

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$$\hat{V}(\hat{Y}) = \sum_{h} \frac{n_h - 1}{n_h} \sum_{i \in h} (\hat{Y}_{(hi)} - \hat{Y})^2$$

being:

$\hat{Y}$ the estimate of the total characteristic *Y* obtained with the complete sample

$\hat{Y}_{(hi)}$ the estimate of the total characteristic *Y* obtained after removing the unit i of stratum h from the sample.

n_h is the number of sample units in stratum h.

To obtain the estimator $\hat{Y}_{(hi)}$, and for simplicity's sake, instead of recalculating the raising factors (with correction of non-response, calibration, etc...), the factors of the stratum where the unit has been removed are multiplied by the factor $\frac{n_h}{n_h - 1}$

Accordingly:

$$\hat{Y} = \sum_{l,k \in S} F_{lk} y_{lk}$$

$$\hat{Y}_{(hi)} = \sum_{l \neq h} F_{lk} y_{lk} + \sum_{\substack{l=h \\ j \neq i}} F_{lk} \frac{n_h}{n_h - 1} y_{lk}$$

Where F_{ljk} is the raising factor of unit k of stratum l in the complete sample S. That is to say, the available raising factor. In this way the variance can be estimated without the need to recalculate the raising factors.

The tables publish the relative sampling error in percentage, coefficient of variation, whose expression is:

$$\widehat{CV}(\hat{Y}) = \frac{\sqrt{\hat{V}(\hat{Y})}}{\hat{Y}} \; 100$$

The sampling error allows obtaining a confidence interval, within which the true value of the estimated characteristic is found.

Sampling theory determines that in the interval

$$\left(\hat{Y} - 1{,}96\sqrt{\hat{V}(\hat{Y})} \quad , \quad \hat{Y} + 1{,}96\sqrt{\hat{V}(\hat{Y})} \right)$$

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

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5.5 COLLECTION OF INFORMATION

5.5.1 General aspects

Two collection methods are established: through a web questionnaire (CAWI) and using a personal telephone interview (CATI). Each unit is asked to fill in the online questionnaire (CAWI) and, if it is not received within a set time, it is contacted by phone to fill out the questionnaire by CATI, although the possibility of filling in by CAWI is kept open if the person so wishes.

The sample is divided into eight blocks, to facilitate its management, both with regard to the flow of calls to the 900 line, as well as the filtering of the CAWI questionnaires, as well as the coding of variables, as well as the conduct of CATI surveys.

5.5.2 Phases

The collection is designed according to the two planned stages:

1. FIRST STAGE (CAWI)

   The first stage begins in mid-July 2019, enabling the collection channel through the Internet for the first block of sample units, through which all the people assigned to said block can fill out the questionnaire. To do this, they are sent a letter announcing the survey and containing the keys to enter the integration system for the collection of information and administration (IRIA) of the INE. The CAWI channel will be opened successively for the rest of the blocks.

   After one week from the beginning of the CAWI phase in each block, the units of the same that have not completed the questionnaire are sent a second reminder letter, where they are also announced that it is possible that if they do not complete the questionnaire online , soon an agent will contact them to conduct the interview by phone (this will be the second stage, CATI). A new CAWI completion opportunity is provided in the letter. The codes included in it, which allow access to the completion web portal, are used as a reference so that the informant has the assurance that the telephone interviewer is INE personnel.

   Likewise, a few days after the beginning of this phase, the units are called to encourage completion online.

   The electronic questionnaire has been designed through the IRIA application, including flows, serious errors, valid questionnaire controls, warnings and pre-recorded information. In the event that a questionnaire cannot be considered valid, it is purged by an agent, after a time considered sufficient for the person to complete the information.

2. SECOND STAGE (CATI)

In the event that during the first stage of the block (CAWI) the units that belong to it still do not complete the questionnaire online, several days after the reminder letter was sent, an agent contacts them to carry out the interview by phone. However, the CAWI channel remains open during the time these units are in the CATI phase, in case they wish to complete it online.

When contacting by telephone, the CATI centre must ensure that it is calling the selected person. If it is not possible to get the information directly from the selected person, but from a sufficiently informed proxy, he or she is requested to provide the person's information. On the other hand, if it is derived from the telephone contact that, by mistake, it is not the person or there is a proxy that can report, the interview is not carried out and an incident is assigned.

The calls are generated by an algorithm that searches for the most likely time to conduct the interview, based on available information. This algorithm, before generating the call, takes into account:

- The existence of dating
- The existence of filters with interview schedule preferences
- Whether the person has already been called or not
- The time she has not been called
- The time of the previous interview attempt
- If the survey is incomplete, an attempt will be made to assign the call to the same operator for completion
- The geographical location of the units

The usual working method for a CATI operator is what we call "new call", which indicates the willingness of the interviewer to make the call automatically generated by the algorithm.

The alternative work method is what we call "personal". In this case, the operator calls one of the people assigned to him by the supervisor for some reason.

Throughout this second stage, people can complete the survey by CAWI, provided that the CATI interview has not been carried out successfully. As soon as it is completed by CAWI, the unit becomes a partner in the database that handles the calls and, therefore, is no longer called again, except for possible debugging.

5.5.3 Calendar

As mentioned, the information is collected by dividing the sample into eight blocks. The following table shows the time scheme proposed at the beginning for

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each of them. It indicates the anticipated dates for the start of the CAWI phase of each block, the sending of the letter claiming the collaboration, the beginning of the CATI phase and the closing of the block (closing date of both channels):

Block	CAWI start date	First claim	Home CATI	Closing
1	17/07/2019	24/07/2019	29/07/2019	13/08/2019
2	31/07/2019	07/08/2019	12/08/2019	27/08/2019
3	21/08/2019	28/08/2019	02/09/2019	17/09/2019
4	04/09/2019	11/09/2019	16/09/2019	01/10/2019
5	18/09/2019	25/09/2019	30/09/2019	15/10/2019
6	02/10/2019	09/10/2019	14/10/2019	29/10/2019
7	16/10/2019	23/10/2019	28/10/2019	12/11/2019
8	30/10/2019	06/11/2019	11/11/2019	26/11/2019

6. Study and classification variables

Taking into account the objectives of the survey, the study variables have been grouped as follows for each of the two groups under study:

a) University graduates

I. CHARACTERISTICS OF UNIVERSITY GRADUATES OF THE 2013-2014 ACADEMIC YEAR

- Degree completed
- Type of university and branch of knowledge.
- Autonomous Community of the University in which they have graduated and field of study (CNED-2014).
- Disability

II. PLACE OF RESIDENCE IN 2019

- Country or region of residence of the university graduates at the time of the interview.

III. EMPLOYMENT SITUATION IN 2019

- Employment situation of university graduates at the time of the interview.

IV. CURRENT JOB

- Country or region in which they were working at the time of the interview.
- Professional status of your current job.
- Type of workday in your current job.
- Occupation they perform in their current job.
- Main economic activity of the company in which they currently work.

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- Most appropriate level of training to perform your current job.
- Most appropriate area of study to carry out your current job.
- Net monthly salary in current job
- Factors that have influenced you to get your current job (only employed workers).

V. UNEMPLOYED
- Starting time of the job search and time searching for it.
- Job search medium.
- Difficulties finding employment.

VI. INACTIVE
- Situation of inactivity
- Job search and time they have looked for it.

VII. FIRST JOB SINCE GRADUATION
- Time elapsed since they finished their degree until they found their first job.
- Means used for job search.
- Country or region of the first job.
- Professional status of the first job.
- Type of working day at the first job.
- Occupation performed in the first job.
- Most appropriate level of training to carry out the first job.
- Most appropriate area of study to carry out the first job.
- Net monthly salary at the first job.

VIII. EMPLOYMENT HISTORY (Graduates who have had a paid job after finishing their degree).
- Number of employers for whom they have worked after graduating.
- Total time they have been working after graduating.
- Usefulness of the degree to find a job.
- Graduates who have rejected a job and reasons for rejecting it.

IX. PAID WORK WHILE STUDYING
- Graduates who have worked during their university training.

X. GRADUATES WHO HAVE NOT WORKED AFTER GRADUATING
- Job search and time they have been looking for work.
- Job search form.
- Difficulties finding work.
- Graduates who have rejected a job and reasons for rejecting it.

XI. TRAINING AND LEARNING
- Curricular and extracurricular internships.
- Scholarships

- University studies carried out abroad.
- Other training carried out (intermediate and higher level).
- Scope of studies of other post graduate/diploma/undergraduate studies carried out.
- Branch of knowledge of the masters completed.
- Branch of knowledge of the doctorate completed.
- Professional family of vocational training or higher level sports education or higher artistic studies carried out.
- Professional family of vocation training or sports education of mid level degree or professional artistic education carried out.
- Specialized health training.
- Completion of other official studies at the time of the interview.
- Satisfaction with university studies and with their degree.
- Knowledge of languages.
- Computer skills.
- Courses to improve professional qualification and its usefulness in finding employment.
- SEPE training courses received and their results.

XII. MOBILITY

- Mobility within Spain.
- International mobility.

XIII. SOCIAL SECURITY

- Affiliation to Social Security.
- Bases of contribution of affiliates employed by others.

b) University master's degree graduates

I. CHARACTERISTICS OF THE UNIVERSITY MASTER'S DEGREE GRADUATES FOR THE 2013-2014 ACADEMIC YEAR

- Degree completed
- Type of university and branch of knowledge.
- Autonomous Community of the University in which they have graduated and field of study.
- Disability

II. PLACE OF RESIDENCE IN 2019

- Country or region of residence of the master's degree graduates at the time of the interview.

III. EMPLOYMENT SITUATION IN 2019

- Employment situation of the master's degree graduates at the time of the interview.

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IV. CURRENT JOB

- Country or region in which they were working at the time of the interview.
- Professional status of your current job.
- Type of workday in your current job.
- Occupation they perform in their current job.
- Main economic activity of the company in which they currently work.
- Most appropriate level of training to perform your current job.
- Most appropriate area of study to carry out your current job.
- Net monthly salary in current job
- Factors that have influenced you to get your current job (only employed workers).

V. UNEMPLOYED

- Starting time of the job search and time searching for it.
- Job search medium.
- Difficulties finding employment.

VI. INACTIVE

- Situation of inactivity
- Job search and time they have looked for it.

VII. FIRST JOB AFTER FINISHING THE MASTER

- Time elapsed since they finished the master's degree until they found their first job.
- Means used for job search.
- Country or region of the first job.
- Professional status of the first job.
- Type of working day at the first job.
- Occupation performed in the first job.
- Most appropriate level of training to carry out the first job.
- Most appropriate area of study to carry out the first job.
- Net monthly salary at the first job.

VIII. EMPLOYMENT HISTORY (Graduates who have had a paid job after finishing the master's degree).

- Number of employers for whom they have worked after graduating.
- Total time they have been working after graduating.
- Usefulness of the degree to find a job.
- Master's degree graduates who have rejected a job and reasons for rejecting it.

IX. PAID WORK WHILE STUDYING

- Master's degree holders who have worked during their university training.

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X. MASTER'S DEGREES WHO HAVE NOT WORKED AFTER GRADUATING

- Job search and time they have been looking for work.
- Job search form.
- Difficulties finding work.
- Master's degree graduates who have rejected a job and reasons for rejecting it.

XI. TRAINING AND LEARNING

- Curricular and extracurricular internships.
- Scholarships
- University studies carried out abroad.
- Other training carried out (intermediate and higher level).
- Scope of studies of post graduate/diploma/undergraduate studies carried out.
- Branch of knowledge of other completed master's degrees.
- Branch of knowledge of the doctorate completed.
- Professional family of vocational training or higher level sports education or higher artistic studies carried out.
- Professional family of vocation training or sports education of mid level degree or professional artistic education carried out.
- Completion of other official studies at the time of the interview.
- Satisfaction with university studies and with their degree.
- Knowledge of languages.
- Computer skills.
- Courses to improve professional qualification and its usefulness in finding employment.
- SEPE training courses received and their results.

XII. MOBILITY

- Mobility within Spain.
- International mobility.

XIII. SOCIAL SECURITY

- Affiliation to Social Security.
- Bases of contribution of affiliates employed by others.

6.1 RELATIONSHIP OF VARIABLES

The variables are listed and described below, distinguishing between variables available in the administrative records (IUIS, TGSS, SEPE, BEDP and Register), and therefore of direct use, and variables that have been obtained through an interview.

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6.1.1 Administrative records variables

– *IUIS variables*

The variables described below include the information that has been extracted from IUIS. The identification information of the graduates has been obtained (number and type of identification document) and the variables 'name of the degree', 'degree code', 'branch of knowledge', 'field of study', 'university' and 'municipality' as identification data at the degree level selected in the sample.

- Type of identification document

  Type of document presented by the student the first time they enrol in the study (NIF, NIE, passport or other documents).

- Identification number

  Document number presented by the student the first time he enrolls in the study for which he has been selected to participate in the survey. This document number must be permanent for all the years that the student enrols in this study.

- Sex

  The importance of this variable stems from the need for adequate information on the situation of men and women in all policy areas. By studying gender differences and inequalities, it will be possible to achieve a better understanding of them, and based on this information, develop plans and formulate and monitor policies in all spheres of society. Hence the importance of the variable "sex", which through its cross-sectional classification according to other characteristics of the population constitutes the starting point for evaluating the progress made towards the total elimination of existing stereotypes based on gender.

- Date of birth: day, month and year

  The date of birth allows the calculation of the basic social variable 'age in completed years'.

  The age in completed years refers to the number of birthdays passed on the reference date, that is, it is the age at the last birthday. “Age” is a basic parameter in the analysis of survey data, as the differences between population groups estimated from it are relevant for the development of many public, national and EU policies and programs.

- Nationality

  Country of nationality at the time of data collection.

  Nationality is defined as the special legal bond that unites an individual with their State, acquired through birth, naturalization, declaration, option, marriage and other formulas in accordance with national legislation. A person will have the nationality of the country in which they enjoy the right

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of citizenship, that is, whose passport or other national identity document they have, or have the right to have. Adults who have never had such documents are considered nationals of the country when, in their opinion, they have this legal right of citizenship.

In the case of people with more than one nationality, they have been considered nationals of the country in which they had their habitual residence. When none of their nationalities coincided with that of their country of residence, the nationality of other countries of the European Union has had priority. In the other cases, the informant was able to choose the nationality that should appear in the survey. Care has been taken to record the country of nationality and not just the nationality in adjective form (eg Chinese, German, British, etc.), in order to avoid confusion between ethnicity and nationality.

- Name of the degree

  Full name of the 1st and 2nd cycle or undergraduate or master's degree study for which the interviewee has been selected to answer the questions in this survey. There are some cases of graduates in more than one degree, in this case they have been counted once in each of the degrees obtained.

- Degree or degree code

  Code of the 1st and 2nd cycle or undergraduate or master's degree study by which the interviewee has been selected to answer the questions in this survey.

- Knowledge branch of the title for which it has been selected

  Branch of knowledge to which the title for which the interviewee has been selected is associated.

  All studies have been grouped into five branches of knowledge, which are large fields of knowledge whose hallmark is a set of subjects that are the essence of each branch.

  The branches of knowledge are:

  – Arts and Humanities.

  – Sciences

  – Health sciences

  – Social and Legal Sciences.

  – Engineering and architecture.

- Scope of study of the degree for which it has been selected

  Code of the scope of the study to which the degree carried out by the interviewee corresponds according to the national education classification

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(CNED-2014), which is the national classification for the educational sectors in force at the time of the survey.

For Master graduates, the CNED-2014 has been used by broad sector (a level of disaggregation).

For graduates, the CNED-2014 has been used by specific sector (two levels of disaggregation). In some more relevant cases by detailed sector (three levels).

- college

  University code corresponding to the title for which the interviewee has been selected.

- Municipality

  Code of the municipality of the center in which the interviewee graduated (5 digits: the first two positions are the province code and the last three the municipality code)

- Variable that controls specialized health training

  Variable that takes the value 1 when the graduate has a degree that allows acquiring specialized health training, that is, if he has a degree in Medicine or Nursing or Chemistry or Pharmacy or Biology or Physics or Psychology.

  It can be obtained from the field of study of the studies completed by the student (one or several), not by the branch of teaching.

– *Register variables*

- Country of birth

  This is the country in which a person was born, that is, the mother's country of habitual residence on the date of birth.

  In the information collected, a differentiation has been made between the native and foreign population, and within the latter between people born in other EU Member States and those born in a non-EU country. The information on the country of birth has been obtained taking into account the existing national borders at the time of data collection. The country of birth of persons born "by accident" during a short visit by the mother to a country other than that of her habitual residence is considered the country in which the mother has her habitual residence. The country of birth of people born in a place that currently belongs to the territory of a country other than that of the date of birth has been taken from the one in which said place is located at the time of data collection.

– *Social Security variables*

1. Affiliation variables

   - Listing regime

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- Listing group
- Type of contract
- Part time coefficient
- Actual date of entry
- Actual date of exit
- Economic activity of the contribution account
- Number of workers in the contribution account

2. Variables of the Contribution Bases files

A- Quotation bases for someone else's account

- Actual date of entry
- Actual date of exit
- Year of listing
- Monthly contribution base for third parties for common contingencies, corresponding to the month of March of each year

B- Contribution bases own account and others

- Year of listing
- Contribution base own account and others, corresponding to the month of March of each year

– *State Public Employment Service Variables*

1.- Contract File

- Employment
- Contract start date
- End date of the contract
- Contract class

2.- Occupational Training File

- Course code
- Year of realization
- Course duration
- Course result

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– *Variables for State Database of Persons with Disabilities*

- Graduates who have a recognized disability of a degree equal to or greater than 33%

6.1.2 Variables collected by interview

The following variables are collected through CAWI or CATI interviews.

A. Personal and sociodemographic data of the graduate

The following set of variables indicates the nationality, place of birth and current residence of the interviewee, his residence before and while he was completing the studies for which he was selected and the country and level of education of his parents.

- A3: What is your nationality?

  Indicate if your nationality is Spanish, Spanish and another or Another nationality. We also identify the country for those who indicate another nationality: NAC1 and NAC2 (we allowed to identify two possible nationalities).

- A3_PAÍS: In which country were you born?

  It tells us if the interviewee was born in Spain, in another EU country or another country outside the EU.

- A4: In which country do you CURRENTLY reside?

  Country of residence of the interviewee.

  The country of residence is considered a basic variable, especially in the context of comparison within the different countries of the European Statistical System. The information is complementary to that of the variables "country of birth" and "nationality".

- A4_PAÍS: Please indicate the country in which you CURRENTLY reside

  For those who lived abroad at the time of the interview, it is identified by place of residence: United Kingdom, Germany, France, Another EU country, Another European country (outside the EU), A North American country, A Central or South American country, An Asian country, An African country or A country of Oceania.

- A4_PROV: Please indicate the province in which you CURRENTLY reside

  Identify, for those who were living in Spain, the province in which the graduate resided at the time of the interview.

- A5/A5_PROV: In which country did you have your habitual residence BEFORE you began studying"..."? / Please indicate the province in which you were residing BEFORE you began studying "..."?

  You want to know where the interviewee resided before starting the studies for which he was selected for two reasons: 1) to be used as a reference in the mobility block and 2) to discard from the survey, in the group of master's degree graduates, those who do not have Spanish nationality and resided abroad before starting their studies.

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- A6: In which province did you reside WHILE you were studying "..."?

  You want to know where the interviewee resided while they were carrying out the studies for which they were selected to use them as a reference in the mobility block.

- A7/A8: Which country was your father born in? / What is the highest education level achieved by your father?

  You want to know the country of birth and the level of training of the father of the interviewee.

- A9/A10: In which country was your mother born? / What is the highest education level achieved by your mother?

  You want to know the country of birth and the level of training of the interviewee's mother.

B. Education and learning of the graduate

– Training completed and degree of satisfaction with the studies carried out

  The following questions are related to the studies carried out by the interviewee

  - B1: Did you benefit from any scholarships while studying "..."?

    You want to know if the graduate received any financial aid, from public or private origin, to pay, totally or partially, his university studies.

    The different types of scholarship that the interviewee may have enjoyed are:

    – B2_1: General scholarship for studies

      Scholarship intended to help in general the completion of university studies not included in another category.

    – B2_2: Excellence prize or scholarship

      Calls aimed at promoting excellence among university students.

    – B2_3: University collaboration grant

      Scholarship for beneficiaries to provide some service within the university.

    – B2_4: External work experience, to provide a service or work outside the university

      Calls for the beneficiaries to provide a service or carry out a job in an institution outside the university.

    – B2_5: Scholarship to study outside of Spain (including scholarships that accompany Erasmus programmes)

      Scholarship intended to facilitate the total or partial completion of studies at universities in other countries.

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- B3: Did you do part of your studies to obtain the degree in "..."?

  It is intended to know if the graduate completed part of his studies at a university in another country.

- B4: Please indicate the mobility programme or scholarship from which you benefited

  Financial aid obtained to study outside of Spain. It may be included in any of the following programs:

  - Erasmus Programme. Aimed at supporting the realization of a European Higher Education Area and reinforcing the contribution of Higher Education and Vocational Training at the tertiary level to the innovation process.
  - Other programmes or scholarships within the EU
  - Other programmes or scholarships outside the EU

- B5: Please indicate the country of destination

  Country or region in which the university in which the interviewee carried out part of his university studies outside of Spain was located.

- B6: For how many months?

  Time, in months, that the interviewee was outside of Spain studying part of his university studies.

- B7: In addition to the studies done at university "..." have you done part of your studies to obtain the title of "..." in another Spanish university?

  It is intended to know if the graduate carried out part of his studies at a Spanish university other than the university where he completed those studies.

- B8: What was the main reason that led you to start studying to obtain your degree in "..."?

  It is intended to know the main reason why the graduate has carried out these studies for which he was selected.

- B9: If you had to start afresh, would you attend university courses again?

  It is investigated whether the interviewee would study at university if he started again.

- B10: Would you study the same degree again?

  You want to know if the graduate would study the same degree, if he started again.

- <u>Other training carried out by the graduate including knowledge of languages and skills in ICT.</u>

  - B11_1 to B11_7. Apart from the studies to obtain the title of "...", indicate if you have completed any of the following studies.

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It is intended to know if the interviewee has completed other studies in addition to the university study for which they have been selected , regardless of when they took them (before or after completing this study).

These studies can be:

- Degree / Undergraduate degree / Licenciatura [degree equivalent to master's being phased out] or equivalent
- Master's degree
- University PhD
- Higher Art Studies (arts, design, music and dance, drama or preservation and restoration of cultural heritage)
- Higher Education (vocational training, arts and design) or Higher Sports Education
- Intermediate Vocational Training Cycles (vocational training, arts and design) or Intermediate Sports Education

- B12: *For college graduates*: You have indicated that apart from the studies to obtain the title of "...", you have completed another degree / diploma / degree or equivalent. How many degrees, undergraduate degrees, Licenciaturas [degree equivalent to master's being phased out] or equivalent have you completed, apart from "..."? *For master's degrees* : Please indicate how many degrees, undergraduate degrees, Licenciaturas [degree equivalent to master's being phased out] or equivalent you have completed, including the one that enabled you to access master's studies

  It is intended to know the number of total university degrees that the interviewee has, in addition to the study for which he has been selected in the case of university graduates.

- B13_GDL1 to B13_GDL3. What are those degrees / undergraduate degrees / Licenciaturas [degree equivalent to master's being phased out] or equivalent? (If B12 is greater than 3: Indicate the name of the three that you consider most important

  You want to know the scope of study of each of the university degrees completed by the interviewee, up to a maximum of three.

- B14_1 to B14_3. *For college graduates*: When did you finish these studies? *For master's degrees*: What year did you finish these studies?

  For university graduates, it is intended to know the moment in which the interviewee completed each of the university degrees indicated above, taking as a reference the study for which they have been selected:

  - Before starting studies to obtain the degree in "..."? Finished before starting the study for which they have been selected.
  - While studying to obtain the degree in "..." They finished while in the study for which they have been selected.

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- After obtaining the degree in “...”. After finishing the study for which they have been selected.

For *master's degree graduates,* the year in which each of the indicated university degrees ends is requested.

- B15_1 to B15_3. Where did you study this?

  You want to know if any of the university degrees indicated above was carried out in part or completely abroad.

- B16: *For college graduates*: How many master’s have you completed? *For master's degrees* : You have indicated that apart from the studies to obtain the master's degree in "...", you have completed another university master's degree, how many university master's degrees have you completed apart from "..."?

  It is intended to know the number of total university master's degrees that the interviewee has, in addition to the study for which he has been selected in the case of master's degree graduates.

- B17_M1 to B17_M3: Please, indicate the branch of knowledge of these Master's studies (If B16 is greater than 3: Indicate the branch of the three that you consider the most important

  You want to know the branch of knowledge of each of the university master's degrees completed by the interviewee, up to a maximum of three.

  The branches of knowledge are:

  - Arts and Humanities
  - Sciences
  - Social and Legal Sciences
  - Engineering and architecture
  - Health sciences

- B18_1 to B18_3: When did you finish these studies?

  Moment in which the interviewee completed each of the university master's degrees indicated above, taking as a reference the study for which they have been selected :

  - Before starting studies to obtain the degree in “...”? Finished before starting the study for which they have been selected.
  - While studying to obtain the degree in “...” They finished while in the study for which they have been selected.
  - After obtaining the degree in “...”. After finishing the study for which they have been selected.

- B19_1 to B19_3. Where did you study this?

  You want to know if any of the university masters indicated above was partially or completely carried out abroad.

- B20: How many PhDs have you completed?

  It is intended to know the number of total university doctorates that the interviewee has.

- B21: Please indicate the branch of knowledge of this doctoral study (If B20 is greater than 1: Indicate the branch of the one you consider most important)

  You want to know the branch of knowledge of the most important university doctorate completed by the interviewee.

  The branches of knowledge are:

  - Arts and Humanities
  - Sciences
  - Social and Legal Sciences
  - Engineering and architecture
  - Health sciences

- B22: When did you finish this PhD?

  Moment in which the interviewee completed the university doctorate indicated above, taking as a reference the study for which he has been selected :

  - Before starting studies to obtain the degree in "..."? Finished before starting the study for which they have been selected.
  - While studying to obtain the degree in "..." They finished while in the study for which they have been selected.
  - After obtaining the degree in "...". After finishing the study for which they have been selected.

- B23: Where did you study this?

  You want to know if the university doctorate indicated above was carried out in part or completely abroad.

- B24: You indicated that you have completed Higher Vocational Training Cycles and/or higher artistic studies. How many of these studies have you completed?

  It is intended to know the number of higher-level training cycles and / or total higher artistic studies that the interviewee has.

- B25_CFGS1 to B25_CFGS3: What were these studies? (If B24 is greater than 3: Indicate the three that you consider most important)

  You want to know the professional family of the higher degrees completed by the interviewee, up to a maximum of three.

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- B26_1 to B26_3: When did you finish these studies?

  Moment in which the interviewee completed each of the training cycles indicated above, taking as a reference the study for which they have been selected:

  - Before starting studies to obtain the degree in "..."? Finished before starting the study for which they have been selected.
  - While studying to obtain the degree in "..." They finished while in the study for which they have been selected.
  - After obtaining the degree in "...". After finishing the study for which they have been selected.

- B27_1 to B27_3. Where did you study this?

  You want to know if any of the training cycles indicated above were carried out in part or completely abroad.

- B28: You indicated that you have completed Intermediate Vocational Training Cycles. How many of these studies have you completed?

  It is intended to know the number of total medium level training cycles that the interviewee has.

- B29_CFGM1 to B29_CFGM3: What were these studies? (If B28 is greater than 3: Indicate the three that you consider most important)

  You want to know the professional family of the middle grades completed by the interviewee, up to a maximum of three.

- B30_1 to B30_3: When did you finish these studies?

  Moment in which the interviewee completed each of the training cycles indicated above, taking as a reference the study for which they have been selected:

  - Before starting studies to obtain the degree in "..."? Finished before starting the study for which they have been selected.
  - While studying to obtain the degree in "..." They finished while in the study for which they have been selected.
  - After obtaining the degree in "...". After finishing the study for which they have been selected.

- B31_1 to B31_3. Where did you study this?

  You want to know if any of the training cycles indicated above were carried out in part or completely abroad.

- B32: *Only university graduates with a health degree are asked*: Have you done or are you doing any specialised health training (MIR [resident medical intern], EIR [resident nursing intern], FIR [resident pharmaceutical intern], PIR [resident

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psychological intern], BIR [resident biological intern], RFIR [resident radiophysical intern], QIR [resident chemical intern], etc.)

For the interviewees who have completed a health-type study such as medicine, pharmacy, nursing ..., it is intended to know if they had completed or were taking a specialized health training course at the time of the interview.

The response options are:

- Yes, I have already completed this training
- Yes, I am doing the MIR or EIR or FIR or PIR, etc.
- No, but I am preparing for an entrance exam
- No

- B33: If you are currently conducting any of the following studies, please indicate which one (If you are conducting more than one, indicate the study you spend the most time on)

  It is intended to know if the graduate was studying any of the following studies at the time of the interview:

  - University degree of 180 credits (3 years)
  - University degree of 240 credits (4 years)
  - University degree of more than 240 credits (5 years or more)
  - Master's degree
  - University PhD
  - Higher Art Studies (arts, design, music and dance, drama or preservation and restoration of cultural heritage)
  - Higher Education (vocational training, arts and design) or Higher Sports Education
  - Intermediate Vocational Training Cycles (vocational training, arts and design) or Intermediate Sports Education

- B34_1, B34_2: Which language(s) are your native language(s)?

  The interviewee is asked to indicate his mother tongues, that is, the languages he used in his childhood.

  Possible options are:

Spanish	Italian
Co-official language (Galician, Catalan, Basque or Valencian)	Portuguese
	Romanian
	Russian
English	Arabic
French	Chinese
German	Other languages

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- B35: Not including native language(s) how many different languages can you use?

  Number of languages other than their mother tongues that the interviewee can use.

- B36_1 to B36_4 and B36_NIVEL_1 to B36_NIVEL_4: Please indicate which language(s) you know best, other than your native language(s), and your level of understanding of these. (If B35 is greater than 4: Indicate the 4 languages that you consider most important for your labour insertion)

  What are the other languages that the interviewee can use and to what degree.

  The different language options are the same as for the mother tongue

  The different degrees of knowledge of languages are:

  - High level: They understand a wide variety of complicated texts and use the language with flexibility
  - Intermediate level: They understand what is essential in everyday speech and can write simple texts
  - Beginner level: They understand and use the most common expressions

- B36_CERa_1 to B36_CERa_4 and B36_CERb_1 to B36_CERb_4: Please indicate if you have official accreditation for these languages and the highest level you have obtained for each of them.

  The interviewee is asked to indicate if they have any official accreditation for each of the indicated languages and what is the highest level obtained. The levels can be:

  - A1 (DELF A1, Fit in Deutsch 1, …
  - A2 (DELF A2, Fit in Deutsch 2, …)
  - B1 (PET, DELF B1, ZD, …)
  - B2 (FCE, DELF B2, ZDfB, …)
  - C1 (CAE, DALF C1, PWD, …)
  - C2 (CPE, DALF C2, ZOP, …)

- B36_EOI: Have you obtained any of these accreditations through the Official School of Languages?

  The interviewee is asked to indicate if any of the accreditations obtained for any of the languages was carried out through the Official Language School.

- B37: Please choose the alternative that best describes your ability to use the computer or other computing devices.

  Degree of knowledge and use of the computer and other computing devices.

The different options are:

- Basic level user (surfs the internet, send emails, copies or moves files or folders, writes text using a word processor, uses simple formulas in spreadsheets)
- Intermediate level user (formatting text, use of more advanced formulas and create charts in spreadsheets, install devices and/or programmes, use databases)
- Advanced level user (write macros, programme, solve software and hardware problems when the computer does not work properly)

- B38_1 to B38_7 and B39_1 to B39_7: Have you taken any of the following courses in order to improve your professional qualification or your chances of finding a job? and Was the completion of this course useful for you to find or perform a job?

  The aim is to know if the graduate had taken any of the following courses in order to improve his professional qualification or his chances of finding a job and if it was useful for him. The different courses are:

  - Courses leading to Level 1 Certificate of Professionalism
  - Courses leading to Level 2 Certificate of Professionalism
  - Courses leading to Level 3 Certificate of Professionalism
  - Other Occupational Training courses of Public Employment Services
  - Language course
  - Computer course
  - Other unregulated studies

C. Mobility of the graduate

The following variables are related to geographic mobility. We will begin with variables about mobility within Spain and then questions about travel in other countries.

The mobility of the interviewee refers to geographical mobility after obtaining the title for which they have been selected to participate in this survey.

- <u>National mobility</u>

  - C1: After graduating, *(If you resided before starting your studies in Spain and the province in which you resided before and while it is the same)* , have you gone to live in another province within Spain other than A5_PROV? / *(If you resided before starting your studies in Spain and the province in which you resided before and while it is different)* , have you gone to live in another province within Spain other than A5_PROV or A6? / *(If you lived outside of Spain before starting your studies and while you were studying in Spain)*, have you gone to live in another province within Spain other than A6?

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For the interviewees who resided in Spain before starting their studies or while they were carrying out the studies for which they have been selected, this variable collects information on their mobility within the national territory.

- C2: What province did you transfer to?

  Province to which the interviewee has moved after finishing his studies.

- C3_1 to C3_5: Which of the following reasons have led you to make that decision?

  Reasons for which the interviewee has been forced or has had to move residence within the national territory.

  Each variable includes the following reasons for transfer: having found a job, seeking employment or other economic reasons, academic factors: continuing to study or research, personal or family factors and other reasons.

– International mobility

- C4: *(Currently resides in Spain and his residence before beginning his studies was in Spain)* Have you lived outside of Spain after graduating? / *(Currently resides in another country and your residence before starting your studies was in Spain)* Apart from the country in which you currently reside, have you lived in any other country other than Spain after obtaining the qualification of "..."? / *(Currently resides in Spain and his residence before starting his studies was in another country)* After graduating, have you lived outside of Spain in a country other than your usual residence before starting your studies of "..." ? / *(You currently reside in another country and your residence before beginning your studies was in another country)* After graduating, part of the country in which you currently reside, have you lived outside of Spain in a country other than the one where your usual residence was before to start your study of "..."?

  Variable that identifies mobility outside of Spain after obtaining the title for which the interviewee was selected.

- C5: Please tell me which country/countries other than Spain have you lived in since graduating.

  Country or countries in which the interviewee has resided since completing their studies, excluding where they currently live, if they resided abroad.

- C6_1 to C6_6: What were the reasons that led you to live in another country? / What were the reasons that led you to live in the country in which you currently reside?

  For graduates who live or have lived outside of Spain, these variables include the reasons why they moved to other countries. These are: having found a job, looking for a job or other economic reasons, academic factors: continuing to study or research, personal or family factors, administrative factors (end of residence permit or visa ...) and other reasons.

- C7: Do you have plans or have you considered living outside of Spain?

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If the interviewee resides in Spain at the time of the interview, the intention or planning of a transfer outside the national territory is analysed, considering the following options:

- Yes, I have already decided and I am going to leave in the next few months.
- Yes, I have considered it and I would live outside of Spain
- Yes, I considered it but I decided to stay living in Spain
- No, I have not considered it

- C8_1 to C8_6: Which of the following reasons led you to make that decision? / Which of the following reasons led you to make that decision?

  If the interviewee indicates that he has already decided to move out of Spain or that he has considered it and would leave, these variables include the reasons that led him to make this decision. These are: having found a job, looking for a job or other economic reasons, academic factors: continuing to study or research, personal or family factors, administrative factors (end of residence permit or visa ...) and other reasons.

- C9: Which country are you going to move to? / Which country would you move to?

  Country to which the interviewee plans or is planning to move at the time of the interview.

- C10: Do you have plans to return to live in Spain?

  Intention to return to reside in Spain of the interviewees who live abroad at the time of the interview or are going to move in the coming months.

D. Current situation of the university graduate

The following variables are related to the graduate's employment situation at the time of the interview.

- D0: Are you currently working (including unpaid work for a family company or business, work experience or medical residences (MIR [registrar], FIR [pharmaceutical resident intern]...)?

  It begins by asking the interviewee if he or she currently works, including unpaid work for a family business, paid training scholarships or health residences (MIR, FIR …). The different response options are: yes, part-time; yes, full time; no, it is not working.

  People who work normally are temporarily absent from work due to vacations, holidays, voluntary absence, illness or accident, labour dispute, disciplinary suspension of employment and salary, study leave, maternity leave or other kind of leave and are linked to your employment is considered working.

  In the event that in question B32 you have answered that you are currently undergoing some specialized health training, it is considered that you are working, so the last option does not appear, and you must indicate whether the health residency is part-time or full-time.

The usual weekly working hours can be full-time or part-time. The distinction is based on the interviewee's assessment, although it should be noted that part-time work must always be equal to or less than the usual 35 hours per week and full-time work must be equal to or more than 30 normal hours per week.

– Job search when not currently working

The following questions (D1-D8) collect the information of the interviewees who answered that they are not currently working:

- D1: What is your current relationship with economic activity?

  All graduates who have indicated that they are not currently working are asked about their current relationship with economic activity, according to the following categories:

  – Unemployed

  – Preparing for competitive examinations

  – Studying (including unpaid internships)

  – Retiree (including early retiree)

  – Permanently unable to work

  – Dedicated to housework, caring for children or others

  – Other situation

- D2: During the last 4 weeks, have you actively looked for work?

  Active job search of those interviewed who have indicated that they are not currently working.

  It is said that the interviewee has actively sought work if he has contacted an employment office of the Administration or private, with employers, family, friends, a union, ... or if he has posted, consulted or answered advertisements in the press, radio, television, internet ..., or if you have taken an exam or an interview, or if you have looked for land, premises or machinery, financing, or applied for permits or licenses to establish on your own.

  Waiting for results from previous applications, a call from an administration employment office or results from a competitive examination is not considered to be actively searching.

- D3: What is the main reason you have not sought employment in the last 4 weeks?

  In the event that the interviewee is unemployed and says that he has not looked for work in recent weeks, he is asked the main reason why he has not looked for a job. The different options are:

  – I have already found a job that I will be starting soon / I have passed some competitive examinations and I'm hoping to start work

  – I am preparing for competitive examinations

- I don't think I'm going to find work
- I am involved in a dismissal procedure
- Through illness or disability
- I am studying or receiving training
- Due to caring for children or adults who are sick, have disabilities or other family responsibilities
- I am retired (including early retirement)
- Other reasons

It helps us to reclassify, if necessary, the current relationship with the economic activity of the unemployed who are not looking for work. Depending on your answer to this question, question D1 may need to be recoded. Thus, if you answer in D3 that you are *preparing public exams* then question D1 must be recoded with the second option *Preparing competitions*. If in D3 it says that *You are studying or receiving training,* then question D1 must be recoded with the third option *Studying (including unpaid internships)*. If your answer in D3 is *Because you are caring for sick, disabled or elderly children or adults or other family responsibilities*, you must recode question D1 with the sixth option *Dedicated to housework, childcare or other people*. And if in D3 it indicates *You are retired (including early retirement), you* have to recode question D1 with the fourth option *Retired (including early retirement.*

- D4: Have you sought employment any time since graduating?

  If you are not working and have not looked for a job in the last four weeks, you are asked if you have ever looked for a job since you finished your studies.

The following questions (D5-D8) collect the information of the interviewees who have answered that they are not currently working and have looked for a job at some time since they graduated (including those who have searched in the last 4 weeks):

- D5: When did you start looking for work?

  It is intended to know if the job search was before finishing the studies for which you have been selected or after finishing said studies.

- D6: How long have you been looking for a job?

  It is intended to know how long you have been looking for a job: less than 3 months; from 3 to 6 months; From 6 months to 1 year; from 1 year to year and a half: from 1 year and a half to 2 years; 2 or more years.

- D7_1 to D7_10: How are you searching or have you searched for work?

  Options or means of finding work that the interviewee may have used in their search for a job.

  The different search methods are:

  - Through job announcements in the newspaper, internet...

- Through public employment services
- Through university employment services (job board, alumni associations, etc.)
- Through temporary employment agencies
- Through a job exchange
- Looking for help among known professionals of the sector or personal contacts (family, friends)
- By making direct contact with the companies
- I am preparing or prepared for a competitive examination
- Looking for equipment to establish my own business
- Another way

- D8_1 to D8_6: Indicate from 4 (very important) to 1 (not important) each of the following items regarding your difficulties in finding a job.

  Difficulties that the interviewee may encounter in their search for a job. The possible options to be evaluated by the graduate are:

  - The shortcomings in the university education received.
  - Personal activities that prevent work (continue studying, family, others ...).
  - Lack of professional experience
  - Requirement of having a job that meets my economic and professional expectations...
  - Lack of language skills
  - Lack of computer skills.

- <u>Current main job of the interviewee</u>

  The following questions (D9-D18) collect information from the interviewees who answered that they are working at the time of the interview:

  - D9: Are you currently working more than one job?

    You want to know if the interviewee currently works in one or more jobs. In the event that you are working in more than one job, you are asked to consider only the job to which you dedicate the most hours throughout the week for the following questions.

  - D10: In which country do you undertake your professional work?

    You want to know if the interviewee carries out his professional work in Spain or abroad.

  - D11_OTRO: Please indicate the country where you do your professional work

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You want to know the country or region in which the interviewee carries out his professional work when he works outside of Spain.

- D11_PROV: In which province do you do your professional work?

  When the interviewee works in Spain, he asks himself in which province he develops his current job.

- D12/D12_MES: What year did you begin to work for the current company or business? / In what month?

  Year in which the interviewee began to work in the current company. If you have worked in the company in different periods, you are asked to indicate the year of the last incorporation.

  This information is valuable to estimate the degree of fluidity in the labor market and to identify the areas of economic activity where the volume of work changes.

- D13: Which of the following is your professional situation?

  The professional status of the respondent in relation to their current main job. The options indicated are: trainee, training (including MIR, EIR, FIR ...) or trainee; Wage earner with permanent job or work contract of indefinite duration; Employee with a temporary job or a fixed-term employment contract; Entrepreneur with employees; Independent worker or entrepreneur without employees; Help in the company or family business.

  The definition is based on the ILO resolution on the International Classification of Status in Employment (15th CISE, 1993).

  The two dimensions that are essential to the concept of professional status are economic risk and authority. The basic distinction is that between wage earners and self-employed workers.

  Salaried employees are all workers who have the type of employment defined as paid employment: jobs in which the holders have implicit or explicit employment contracts (oral or written), for which they receive a basic remuneration that does not depend directly on the income of the unit for which they work (this unit may be a corporation, a non-profit institution, a government unit or a household). Some or all of the instruments, capital goods, information systems and/or premises used by the holders are owned by third parties, and the holders may work under direct supervision or in accordance with strict guidelines established by the owner or the persons employed by him. (People in salaried employment are usually remunerated with wages or salaries, but they can also be remunerated through sales commissions, piecework payments, bonuses or payments in kind such as food, room or training).

  Self-employed jobs are those jobs in which the remuneration depends directly on the benefits (or the potential to realize benefits) derived from the goods and services produced (in these jobs, own consumption is considered to be part of the benefits). Self-employed workers make operational decisions that affect the company, or delegate such decisions, but retain responsibility for the well-being

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of the company. (In this context, the business includes the operations of a single person.)

Salaried workers with a fixed-term job / contract are employees whose main job will end after a period of time determined in advance, or after a period of time not known in advance, but defined by objective criteria, such as the conclusion of a task or the period of absence of the worker who is being replaced temporarily.

- D14: Please write what your main occupation is in your current job (for example: bus driver, construction worker, university professor, etc.)

  Respondent's occupation in relation to his current main job. It is classified a posteriori following the National Classification of Occupations 2011 (CNO-11) to two digits.

  The basis for classification in the CNO-11 scheme is the nature of the job itself and the level of skills required. A job is defined as a set of tasks and functions that must be performed. Skills are those necessary to carry out the tasks and functions of the job. These consist of two dimensions: skill level and field of expertise.

  The skill level is assumed to be related to the level of education achieved.

- D15: What is the main activity of the company in which you work?

  Economic activity of the local unit in which the individual carries out his main professional activity. The CNAE 2009 is applied to two digits.

- D16: How many people work at your company?

  Size of the company where the respondent is employed. The options indicated are: from 1 to 9 people; between 10-19 people; between 20 - 49 people; between 50 - 249 people; 250 or more people.

- D17: What is the territorial scope of the company you work for?

  Territorial scope where the respondent is employed. The options indicated are: local company; National company; community business; multinational company.

- D18: Please indicate at which of the following intervals your current net monthly salary is paid

  Net monthly salary of the university graduate in his current job. The different options are:

  - Less than 700 Euros
  - From 700 to 999 Euros
  - From 1,000 to 1,499 Euros
  - From 1,500 to 1,999 Euros
  - From 2,000 to 2,499 Euros

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- From 2,500 to 2,999 Euros
- From 3,000 Euros upwards

- Adequacy of training to current main job

  The variables described below (D19-D22) are intended to determine the differences between the interviewee's level of training and the level of training most appropriate to their job, as well as the factors that have influenced their finding a job.

  The educational adjustment to the job is defined as the match between the worker's educational level and that required by his job. A person is considered to be over-educated (under-educated) if he has an educational level higher (lower) than the most frequent educational level in the occupation he performs. In this case, we will refer to the educational level that the interviewee declares as the most appropriate for the position he occupies.

  On the other hand, it is said that there is a mismatch in the educational field when a person is performing a job or occupation that is not related to the content of their highest level studies.

  - D19: In your opinion, what is the most appropriate level of training to do this work?

    Level of training that, in the opinion of the interviewee, is appropriate to the job they occupy. The different options are:

    - Doctorate
    - Master's degree
    - University degree (except Master's or PhD)
    - Advanced vocational training
    - Intermediate vocational training/Bachillerato [Spanish Baccalaureate]
    - Basic vocational training
    - ESO [Compulsory Secondary Education],, EGB [Basic General Education] etc.

  - D20: What area of study do you think is most suited to this job?

    Study area that, in the interviewee's opinion, is more appropriate to carry out their job.

  - D21: In this job, do you use the knowledge and skills acquired while studying "..."?

    It is investigated whether the interviewee uses the knowledge and skills acquired in the study for which he has been selected in his current job.

  - D22_1 D22_6: To get this job, rate from 5 (a lot) to 1 (nothing) how much the following factors have influenced.

    Factors that have influenced the interviewee to get his current job.

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The following factors to be evaluated have been taken into account: theoretical knowledge; practical skills; know languages; training or mastery of computer science and information and communication technologies; personal and social competences: personality, social skills, communication, ability to work in groups; management and planning skills.

- D23: Have you tried to get another paid job in the last 4 weeks?

  To end this block, the interviewee is asked if they have tried to get another job in the last four weeks.

E. Work history of the university graduate

– Work experience prior to training

- E0 / E00: Did you have any paid work (including self-employment, training, internships, scholarships, etc.) before starting to study "..."? What year did you leave the last job you had before you started studying "..."?

  Only for the group of master's degree graduates who are not currently working or who started working in their current job after 2010, they are asked if they had any work experience before starting their studies and, if they had stopped work before completing the master, when did they leave it.

– Work practices carried out during their training

- E1: Did you do work experience in companies, institutions or similar? (If you have done more than a few studies, take into account those related to the degree of...)

  The interviewee is asked to indicate whether he carried out any type of internship in companies, institutions, foundations or the university itself while doing the reference studies.

  A distinction is made between curricular practices, which are part of the curriculum, and extracurricular practices, which are not part of the curriculum.

- E2: For how many months?

  In case of having carried out any of these practices, the graduate is asked to indicate the number of months they lasted. If you have completed both types of internship, you will be asked to take into account the total time spent on both.

– Process of incorporation into the labour market

The variables described below are intended to determine the employment situation of the interviewee while he was carrying out the reference studies. Depending on the situation of the interviewee, a different course of the questionnaire is followed. Next we will look at the questions in sequential order. Questions from E3 to E5 are asked only to interviewees who have indicated that they are not currently working or who started working in their current job after graduation.

- E3a/E3b: (*If they did an internship while studying*) Apart from these internships, have you had any paid work while doing these studies (including self-employment, training jobs, internship contract, internship positions, etc.)? / (*If*

they did not do an internship) Have you had any paid work while you were doing these studies (including self-employment, training jobs, internship contract, internship positions, etc.)?

It is intended to know if the interviewee was working in a paid manner at the time he was studying the study for which he has been selected and if so, to know the type of working day he had.

- E3c: What was the paid job you had while doing these studies like?

  Masters graduates who in question E0 have indicated that they continued working while studying, are asked about the type of working day of that job.

- E4: Is the paid work that you did while you were studying your main current job?

  If the interviewee worked while studying and is currently working, they are asked to indicate whether this job corresponds to their current main job.

- E5: Did you continue working in this job for at least 6 months after finishing these studies?

  If the job he performed while studying is different from his current job or if he was working while studying but is not currently working, the graduate is asked to indicate whether he remained in the job he had while studying for at least 6 more months after completing that study.

- E6: You have indicated that you started working for the current company or business before completing your studies to obtain the title of "...", what was the type of working day of this job like when you were studying?

  If the interviewee started working at his current job before finishing his studies, he is asked about the type of day of that job while he was studying.

– <u>Post-graduation employment</u>

- E7: Once you finished these studies, did your working conditions in the job you continued in after graduating improve?

  This variable collects whether the interviewee's working conditions improved upon having completed the studies for which they were selected.

- E8: While you had this job, were you searching for a better job?

  Respondents who had a job during their studies are asked if they tried to get a better job.

- E9: (*I was not working while I was studying*) Have you had any paid work since you finished the studies of "…"? / (Did *not continue for more than 6 months in the job he had while studying*) Have you had any other paid work since you finished the studies of "…"?

  This question is addressed to those interviewed who are not currently working and either did not work while studying or did not continue for more than 6 months in the job they had while studying. It is intended to find out if they have obtained any paid work after finishing their studies, this being the objective when researching the first job after finishing their studies.

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- E10: (*I was not working while I was studying*) Is the first paid job you had after finishing your studies of "..." is your current job? / (Did *not continue for more than 6 months in the job held while studying*) Is the first paid job you had after finishing your studies of "..." is your current job? Do not consider the job that you had while studying and did not continue for more than 6 months after completion of studies

  This question seeks the same objective as question E9 for those interviewed who are currently working. You want to know the first job after finishing your studies.

– Job search processes after graduation

The following variables collect the characteristics of the job search of the graduates who have had a paid job since they finished the studies for which they have been selected to participate in this survey.

- E11: How long did it take from you finished your "..." studies until you started your first job after graduation?

  Period of time from when the interviewee finished his degree or master's degree until he began to work.

- E12: When did you start looking for work?

  This question is asked to find out the moment in time when you started working after finishing your studies, taking as a reference the moment in which you finished the study for which you were selected.

- E13: How long were you looking for a job until you started working for the first time after graduating?

  Time spent by the interviewee looking for a job after graduating.

- E14_1 to E14_9: How did you find a job?

  Options or means of finding work that the interviewee may have used in their search for a job.

  The different search methods are:

  – Through job announcements in the newspaper, internet...

  – Through public employment services

  – Through university employment services (job board, alumni associations, etc.)

  – Through temporary employment agencies

  – Through a job exchange

  – Contact with the employer on their own initiative or through personal contacts (family or friends).

  – The employer contacted the interviewee.

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- Continuation of internships in companies / institutions carried out during the studies.
- Preparation of oppositions.
- Open your own business.
- Otherwise.

All graduates are asked if they have rejected a job as inappropriate .

- E15: Since you graduated, have you rejected any work because you considered it to be unsuitable?
- E16_1 to E16_9: For which of the following reasons did you reject it?

  For the interviewees who have rejected a job because they consider it unsuitable, the question is to find out why they rejected that job.

  The response possibilities that are stored in these variables are:

  - Did not allow me to continue studying.
  - The work schedule was incompatible with personal or family obligations
  - Accepting it implied changing one's place of residence.
  - The journey between my home and the place of work was not of a reasonable distance
  - Not adequately remunerated.
  - The level of the job was not in line with my skills and knowledge
  - I had another job offer / I was already working.
  - Was preparing for oppositions.
  - Other reasons.

- First job after training

  The following variables refer to the situation in which the graduate was when he began to work after graduating. If you spent more than six months in the job you already had before finishing the degree, it refers to the situation you were in immediately after graduating.

  Sporadic jobs are excluded and include work experience, training, scholarships, help in the family business...

  The work placement contract can be concluded with those who have a university degree or professional training of a medium or higher degree or officially recognized equivalent degrees, in accordance with the regulatory laws of the current educational system, or a certificate of professionalism in accordance with with the provisions of Organic Law 5/2002, of June 19, on Qualifications and Vocational Training, which enable them to practice professionally.

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In addition, no more than five years must have elapsed, or seven years when the contract is concluded with a worker with a disability, since the completion of studies.

The contract for training and apprenticeship is a contractual modality that is configured as an instrument aimed at promoting job placement and training of young people in a regime of alternating paid work activity in a company with training activity received within the framework of the vocational training system for employment or the educational system.

- E17: In what country did you do this first job?

  You want to know if the interviewee had their first job in Spain or abroad.

- E17_OTRO: Please indicate the country where you worked this first job

  You want to know the country or region in which the interviewee had his first job.

- E17_PROV: In which province did you have your first job?

  When the interviewee indicated that his first job was in Spain, he wonders in which province he developed this first job.

- E18: Which of the following was your professional status?

  The professional situation of the respondent is investigated in relation to their first job. Idem D13.

- E19: What was your working day like?

  Time spent at work in your first job after graduation.

- E20: Please write down your first job occupation (examples: bus driver, construction worker, university professor, etc.)

  Occupation of the respondent in relation to their first job. Idem D14.

- E21: What do you think was the most appropriate level of training to do that job?

  According to the opinion of the interviewee, it determines the level of training that is most appropriate to the first job they occupied after graduating.

- E22: What area of study was most suited to this job?

  Study area more in line with the first job that the interviewee occupied after graduating.

- E23: Did you use the knowledge and skills acquired in those studies in their work?

  It is investigated whether the interviewee used the knowledge and skills acquired in the study for which he has been selected in his first job.

- E24: (*If the first job does not correspond to the current job*) Please indicate in which of the following intervals found your net monthly salary / *(If the first job corresponds to your current job*) Please indicate in which of the following

intervals your net monthly salary was at the time you started working in your current company.

Net monthly salary of the university graduate in his first job.

- Employment history

The following variables have been designed to make a summary of the graduate's work experience since he finished the studies for which he has been selected to participate in the survey.

- E25: Approximately how long have you been working in total since you obtained the ree in "?

  Total time the interviewee has been working since the study for which they were selected ended.

- E26: How many different employers have you worked for since you obtained the degree in

  Number of different employers for whom the graduate has worked since completing university studies for which he has been selected to participate in the survey.

- E27: Do you think your title of "..." has helped you to find a job?

  It is investigated if the interviewee considers that the title for which we have selected him to find a job has served him.

F. Household information

The purpose of the following set of basic social variables is to gather information on the size and composition of the private household to which the informant belongs, on the relationships between household members, and on the economic activity situation of household members of age to work. The social situation of a person reflects, at least in part, the composition of his household. Information on the dynamics of the household structure can be extremely useful.

Private households are classified by the total number of household members. The private household is defined as the person or group of people who jointly occupy a main family home or part of it, and consume and / or share food or other goods with the same budget. According to this definition it should be borne in mind that:

1. *A private household can be made up of a single person (one-person household) or several (multi-person household).*
2. *The people who make up the household may or may not be linked by kinship ties. Indeed, the household may be formed exclusively by unrelated persons, by a family together with unrelated persons or exclusively by a family.*
3. *A private multi-person household is one formed by a group of people who jointly occupy a main family home. Therefore, the group of people who live in a collective establishment (hospital, hotel, residence hall ...) does not constitute a private home. However, bear in mind that within the premises of a collective establishment there may be a home, as for example would be the case of the director of a prison who lives in it.*

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4. *A private home is made up of a group of people who share expenses, that is, they have a common economy or budget. People who have a partially independent economy are not considered to form different households if they share most of the basic expenses (housing and / or food) with other people. It is generally understood that they have a common economy, both those who contribute resources to it by collaborating to defray common expenses, and those who do not contribute resources benefit from the expenses of the common economy.*

So, the following people, if they share household expenses, should be considered members of it:

1. *people who habitually reside in that household,*
2. *resident pensioners, tenants, tenants without a private address elsewhere, who plan to stay in the home for a year or more,*
3. *Visitors without a private address elsewhere, who plan to stay in the home for a year or more,*
4. *people who live in the home or intend to do so for a year or more; domestic service, au-pairs without a private address elsewhere, who plan to stay for a year or more,*
5. *people who habitually reside, but are temporarily absent from the home (for reasons of vacation trips, work, education or similar) without a private address in other places, whose absence is less than a year,*
6. *home-schooled children with no private address elsewhere, who continue to maintain close ties to home,*
7. *people who are absent for long periods, but have close ties (for example, people who work outside the home, children or colleagues of other household members), without a private address elsewhere, who continue to maintain close ties with the home,*
8. *people temporarily absent but who have close ties (hospital staff, domestic nurses, or other institutions) with clear financial ties to the home, whose actual or expected absence is less than one year.*

- F1: What is your marital status?

  The interviewee is asked his marital status, understanding as such his legal situation even if it does not coincide with his de facto situation.

- F2: How many people live in the household (not including yourself)?

  Number of people who make up the household, apart from the interviewee.

- F3: Of the people aged 16-64 who live in the household, please tell me how many currently work (not including yourself)

  Number of people that make up the household in relation to their economic situation.

People who live with the graduate and share expenses and / or income with him aged between 16 and 64 who are doing a job or have a job.

- F4_SEXO_1 to F4_SEXO_12 and F4_EDAD_1 to F4_EDAD_12: Indicate the sex and age of the people who you live with

  The interviewee is asked about the sex and age of the people they live with, up to a maximum of 12.

- F5: What type is your home?

  Type of household in which the university graduate resides. The options are:

  – Couple living without children

  – Couple living with children

  – Single father or mother living with a child

  – Couple, or a parent, living with children and other people

  – Other type of household

  We refer to the type of household of the interviewee, classified according to the number of adults and the number of dependent children living in the household.

  – The term "couple" includes married couples, registered couples, and couples living in a consensual union (not married to each other but in a conjugal relationship).

  – The term "child" refers to blood children, stepchildren, or adopted children (regardless of age and marital status), biological or adopted children (regardless of age or marital status) who have their habitual residence in the home of at least one of their parents, and who do not have their own partner or children in the same household.

- F6: Do you live with a partner?

  When the household consists of a couple with children or it is another type of household, the interviewee is asked if he / she lives as a couple.

6.2 CLASSIFICATION VARIABLES

The analysis of the objective variables has been carried out according to the following main classification variables:

– Sex

– Age group

– Country or region of residence

– Nationality

– AC of the study university.

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- University type
- Branch of knowledge
- Field or area of study in which the interviewee has graduated
- Degree (according to grouping of the consensus catalog of degrees)

7. Information processing

7.1 PURIFICATION AND VALIDATION

As the information is collected via CAWI and CAPI, the data is first cleaned using errors implemented in the application that allows inconsistencies to be detected and provides strange value warnings when responses are being entered. In this way, the correction/confirmation of the information is carried out at the same time as the interview.

Once the information corresponding to each batch has been collected, the information is downloaded periodically to the unit responsible for processing the information for centralized control and purification. This process is applied immediately at the closing of the first batch in order to check the quality of the collection and correct any systematic collection errors.

The defined validation controls are passed again, checking that there is no data out of range or inconsistencies between the responses defined in the application. We also proceed to review possible recording errors, outliers, and other anomalous values.

The control and purification treatment phases will be as follows:

- *Coverage Phase:* It detects duplicates, compares the number of questionnaires theoretically collected (according to the computer application for monitoring fieldwork) and effectively received.
- *Purification and imputation phase:* Defined validation checks are passed again verifying that there is no data out of range or inconsistencies between the responses defined in the collection application. Also included are warnings related to anomalous values such as possible recording errors, outliers, and mismatched values not included in the collection application. Marginal tables, variable analysis tables, etc. are also obtained. to improve debugging work. These controls are programmed prior to starting the collection. Correction of possible non-concordant values is carried out automatically and, exceptionally, manually (as in the case of outliers or / and extreme values).

7.2 OBTAINING OF RESULTS

Once the information has been refined, we proceed to the factors calculation phases and obtaining results:

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- *Calculation of raising factors and estimators:* Post-stratified estimators are used to estimate the characteristics of the sample, as detailed in section 5.3.
- *Calculation of sampling errors* The *sampling* errors of the main tables are calculated using estimates of the variances as detailed in section 5.4.
- *Analysis of non-response:* To analyse the lack of response to the Survey, information is obtained on the basic characteristics of the units that do not collaborate in the survey either directly from the reporting unit or from administrative records.

8. Dissemination plan

8.1 TABULATION PLAN

The tabulation plan is structured as follows:

1. Characteristics of university graduates / master's degree graduates from the 2013-2014 academic year.

2. Place of residence in 2019 of university graduates / master's degree graduates in 2013-2014.

3. Employment situation in 2019 of university graduates / master's degree graduates from the 2013-2014 academic year.

4. University graduates / master's degree graduates from the 2013-2014 academic year who were working in 2019.

5. University graduates / master's degree graduates from the 2013-2014 academic year who were unemployed in 2019.

6. University graduates / master's degree graduates from the 2013-2014 academic year who were inactive in 2019.

7. University graduates / master's degree graduates from the 2013-2014 academic year who have had a paid job since they finished their degree / master's degree. First job since graduation.

8. University graduates / master's degree graduates from the 2013-2014 academic year who have had a paid job since they finished their degree / master's degree.

9. University graduates / master's degree graduates from the 2013-2014 academic year who have had a paid job during their university education.

10. University graduates / master's degree graduates from the 2013-2014 academic year who have not had a paid job since they finished their degree / master's degree.

11. Training and learning of university graduates / master's degree graduates from the 2013-2014 academic year.

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12. Mobility of university graduates / master's degree graduates from the 2013-2014 academic year within and outside of Spanish territory.

13. Social Security affiliation and contribution bases for university graduates / master's degree graduates from the 2013-2014 academic year.

8.2 DIFFUSION

The results are published on the INE website.

The results of the Survey are published on the website of the National Statistics Institute (www.ine.es).

The following products are provided in addition to this methodological report:

1.- The main statistical tables that cover the investigated variables as indicated in point 8.1.

2.- The EILU questionnaire.

3.- The tables of sampling errors for the main variables are published, as well as a report on the analysis of the lack of response.

4.- The microdata file and the registration design are provided for both the group of university graduates and the group of master's degree graduates. In this section, only microdata files that do not collect variables from Autonomous Communities are available for download. For reasons of control and confidentiality, the microdata files in which these variables are included will only be provided free of charge under special conditions in the User Assistance Area.

ANNEXED

CNED DEGREE GROUP CODES

CNED	Label
0112	Early Childhood Teacher Training
0113	Primary education teacher training
011	Education (Other studies)
0211	Audiovisual techniques and media
021	Arts (Other studies)
022	Humanities
023	Languages
0311	Economy
0313	Psychology
031	Social and behavioural sciences (Other studies)
032	Journalism and Documentation
0413	Direction and administration
041	Business and administration (Other studies)
042	Law
051	Life sciences
052	Environment
053	Chemical, physical and geological sciences
054	Mathematics and statistics
061	Computing
071	Engineering and related professions
072	Production and manufacturing industry
073	Architecture and construction
081	Agriculture and Livestock
082	Forestry
084	Veterinarians
0912	Medicine
0913	Nursing
091	Health (Other studies)
092	Social services
1014	Physical and sports activities
1015	Travel, Tourism and Leisure
109	Services (Other studies)

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