INSTITUTO NACIONAL DE ESTADISTICA

Continuous Household Survey

Methodology

September 2016

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1 Introduction

Demographic statistics constitute one of the main thematic foundations of official statistics. In addition, they are the measuring object with the longest tradition in public statistics. In fact, the operations for the recount and quantitative description of the population are the oldest precursors in many countries.

In recent decades in Spain, the main product in the production of statistical information in this field has been the Population and Housing Censuses, since the demand for information on the evolution of the population and its characteristics has increased substantially in recent times.

We must also consider the growing attention that sociological analysis currently pays to studying new types of cohabitation and types of households.

The 2011 Population and Housing Census included noteworthy innovations in its execution: its development from the information contained in administrative registers, completed with a large sample survey, data collection through different channels (the Internet, telephone, post or personal visit) or the georeference of all of the census information. Once the 2011 Census is completed, one must reflect on how to respond to the demand for statistical information during this decade.

The need to increase the frequency in the production and dissemination of data on the basic characteristics of the population, dwellings and households is evident, improving on the current ten-yearly censuses. This central objective is accompanied by the need for increasing the power, efficiency and agility of the statistical system to meet demands for socio-demographic information.

The strategy of the INE to face these objectives, already set out in the project itself for the 2011 Population and Housing Census, focuses on initiating the functioning of a new statistical operation, the **Continuous Household Survey (CHS)**, which is to become a central piece in the inner workings of Spanish demographic statistics in the coming years, and which began to be conducted in January 2013.

2 Objectives

The **Continuous Household Survey** is set out as ongoing research regarding basic social and demographic variables, both on households and on the persons comprising them, and on the dwellings they inhabit, with two fundamental objectives:

1. **The preparation of annual statistics on population and household characteristics**, which will offer information regarding basic variables on these groups, similar to that provided by the Population and Housing Censuses, but on a more broken-down level (Autonomous Communities and provinces), referring to 1 January each year.

The variables to ne analysed will be:

- **The population resident** within the geographical scope of the study and its breakdowns, such as the population born abroad, or the population whose father or mother were born abroad (second generation of foreign nationals).

- The households resident within the geographical scope of the study.

- The dwellings within the geographical scope of the study.

Determining the number of dwellings transcends the scope of this product to date, in the sense that it requires fieldwork that is not fully considered therein. An objective of the survey is to target a sample of dwellings, in which there are also empty dwellings, and therefore, data on occupied or empty dwellings can be offered as well, which will be considered cautiously, due to the nature of the collection method and the available resources.

2. **To enable the compilation of household surveys that may target sub-samples of the CHS**. The CHS will constitute the basic infrastructure in which the data collection on households from different INE surveys will gradually be integrated, in accordance with the planning determined at the corresponding time.

In addition, the Continuous Household Survey can function as "omnibus" research over which modules can be designed with agility and efficiency, to meet the emerging demand for information.

In turn, it must be noted that the Continuous Household Survey will serve as a source of information for the **Household Projection** statistical operation, which will provide the evolution of the number of households, even if this is not an immediate objective currently considered for the operation.

3 Population and territorial scope and reference period

The target population of the Continuous Household Survey is the population and the households resident in Spain, in each of the Autonomous Communities and in each of the provinces, as well as the dwellings located in each of said territories. Initially, the survey includes only residents in family dwellings, who according to the 2011 Census, account for more than 99% of the total population resident in Spain.

The survey will provide preview data, referring to 1 July each year, and final data, referring to 1 January each year.

4 Definitions, concepts and variables

The basic concepts and definitions of the survey are adapted to the community regulations in force and other international recommendations.

The **population resident** in a given geographical area is defined as persons who at the time of the interview, have their regular residence established therein, understanding regular residence as the place where a person normally spends their daily resting periods, without considering temporary absences due to leisure trips, holidays, visits to relatives and friends, business, medical treatment or religious pilgrimage. Nevertheless, it is important to highlight that only regular residents in a district will be considered:

Persons who according to the previous definition, would normally have lived therein for a continuous period of at least 12 months.

Those who according to the previous definition, would have established their regular residence therein less than 12 months ago, but with the intention of remaining therein for at least one year.

In addition, in the case that the place of regular residence of the interviewee cannot be specified according to the previous premises, they will be considered to reside in the dwelling they are at when the interview takes place.

In applying this definition, the following special cases shall be taken into consideration:

- If a person regularly resides in more than one residence during the year, their regular residence will be considered to be that in which they spend most of the year. If a person works far from home throughout the week, and only resides there at the weekends, it will be considered their regular residence.
- For students of primary and secondary education who are far from home during the academic year, this will be considered their regular residence, regardless of where they undertake their studies.
- For higher education students who are far from home during the university academic year, their place of studies will be considered their regular residence, whether it is an institution or dormitory, regardless of where it is.
- An institution will be considered the regular residence of all residents who at the the time of the interview have been residing or intend to reside therein for twelve months or more.
- The general rule regarding where most of the resting time is spent is applied to the members of the Armed Forces who live in barracks or military camps.
- The place where the interview is conducted will be considered the regular residence of persons who are homeless, nomads, without a fixed residence, or unaware of the concept of regular residence.
- For children with two places of residence (for example, in case of their parents' divorce), that in which they spend the most time will be considered their regular residence. If they spend the same amount of time in both places,

the regular residence will be that residence in which they have spent the night on the day of the interview.

A **dwelling** is defined as the structurally separate and independent venue that, given how it was constructed, reconstructed, transformed or adapted, is conceived to be inhabited by persons or, even if this is not the case, is used as a person's regular residence at the time of the interview. As an exception, dwellings will not include venues that, despite being initially conceived for human habitation, at the time of the census are totally dedicated to other purposes (for example, those used exclusively as commercial premises). Dwellings may be family or group dwellings, though for the purposes of the survey, group dwellings will not be considered dwellings, but rather, locales.

Included as part of the scope of the survey is accommodation, understood as venues that have not been initially conceived for residential purposes, but *do* however constitute the residence of one or more persons when the interview takes place.

Lastly, for the purposes of the survey, a **household** is comprised by the person or group of persons who regularly reside in a main family dwelling.

These variables are analysed according to the following listing of classification variables that are collected in the questionnaire, and which are presented grouped by subject:

- Demographic variables:

VARIABLE	RESPONSE	Identifier
Sex	Male Female	SEXO
Date of birth	Day Month Year	DIAFENAC MESFENAC ANOFENAC
Legal marital status	Single Married Widowed Separated Divorced	EC
Place of birth	If the person was born in Spain If the person was born outside of Spain: country	NACIM PNACIM
Date of arrival in Spain	Month Year	MESFLLEG ANOFLLEG
Nationality	Spanish Spanish and other If the person does not have Spanish nationality: country of nationality or stateless person	NAC PNAC
Spanish nationality from birth	Yes No: country of nationality at birth or stateless person	NACNACIMESP PNACNACIM
Date of acquisition of Spanish nationality	Month Year	MESFNACESP ANOFNACESP
Birthplace of the father	Spain Outside of Spain: Country	NACIMPADRE PNACIMPADRE
Birthplace of the mother	Spain Outside of Spain: Country	NACIMMADRE PNACIMMADRE

Date of birth: day, month and year of birth.

Legal marital status: (legal) marital status of each individual in relation to Spanish marriage laws.

Place of birth: it refers to the country of regular residence of the mother at the time of birth, or if not available, that in which the birth took place, always according to the international borders at the time of the interview.

Date of arrival in Spain: month and year in which the individual has last established regular residence in Spain.

Nationality: nationality is defined as the legal link between an individual and a State. It is acquired by birth or by naturalisation if it is by statement or acquired by choice, marriage or other terms according to the national legislation. It refers to the nationality at the time of the interview, and Spanish nationality is assigned whenever the person has said nationality, though the person may have other nationalities as well.

Spanish nationality from birth: for those who have Spanish nationality, this refers to whether or not they have it from birth. If they do not, they must introduce the nationality of origin (in the birth date).

Date of acquisition of Spanish nationality: month and year of acquisition of Spanish nationality for those individuals who are Spanish at the time of the interview but not Spanish since birth.

Birthplace of the father: it refers to the country of regular residence of his mother at the time of birth, or if not available, the place in which the birth took place, always according to the international borders at the time of the interview.

Birthplace of the mother: it refers to the country of regular residence of her mother at the time of birth, or if not available, the place in which the birth took place, always according to the international borders at the time of the interview.

- Variables related to the household:

Total number of household members	1 member 2 members 3 members 4 members 5 members 6 members 7 members 8 members or more	TAMTOHO
Kinship relationship of person i with person j	Person i is the Father/Mother Spouse/Partner Son/Daughter Brother/Sister Grandfather/Grandmother Grandchild Other relative There is no kinship relationship of person j	P0i_0j

Total number of household members: the number of regular residents in the dwelling at the time of the interview.

Kinship relationship of person i with person j: it is a variable that identifies the person that occupies position i in the list of persons as the father/mother, spouse/partner, son/daughter, grandfather/grandmother, grandchild, other relative, non-relative of the person who occupies position j in the list of persons, and who in addition is the person being surveyed at that moment.

Spouse: the person to whom the interviewee is (legally) married.

Common law relationship: the person with whom the interviewee has a relationship without being (legally) married.

- Social variables:

Educational level	● Cannot read or write ● Can read and write but went to school for less than 5 years ● Went to school for 5 years or longer, but did not reach the last academic year of OSE, GBE or Upper Secondary Education ● Reached the last year of OSE, GBE or the first stage of secondary education or has the School Certificate or Certificate of Primary Studies ● Second-stage secondary education (LOE, LOGSE), Secondary Education, Upper-Secondary Graduate, Upper-secondary Non-higher Education, Pre-University Course ● Intermediate Vocational Training, VTI, Industrial Technician or equivalent, Intermediate Music and Dance, Certificates from the Official Language Schools ● Advanced Vocational Training, VTII, Industrial Master or the equivalent ● University diploma, Technical Architecture, Technical Engineering or the equivalent ● University Degree or the equivalent ● University degree, Architecture, Engineering or the equivalent ● Official university Master's degree (as of 2006), Medical Specialties or the like ● Doctorate	ESTUDIOS
Relationship with economic activity	Working full time Working part time Unemployed person Studying Retired, pre-retired, retired from a prior economic activity Incapacitated to work Dedicated to housework Other type of economic inactivity	RELACT
Professional Status	Businessperson, professional or self-employed worker Employs other persons Does not employ other persons Wage earner or worker employed by others With a permanent contract With a temporary contract	OCUPA

Educational level: the highest level satisfactorily completed in the educational system of the country where said education has been received. It is considered that a person has reached a specific level of learning when they have completed

and passed all the academic years of that level and are therefore, eligible to obtain the corresponding qualification or diploma.

Relationship with economic activity: the self-perception that the interviewee has of their situation with regard to the economic activity at the time of the interview, and if pertinent, the reason why they are not working. In any case, this refers to what the respondent considers to be their main situation.

Professional status: this refers to the characteristic of the job that reflects the relationship between the person who takes the initiative in the creation of the economic activity, and the worker who carries it out.

- Variables related to dwelling:

Type of non-main family dwelling	Secondary dwellings Empty dwellings Commercial locale or dwelling intended for professional purposes	TIPOVI
Tenancy regime	Owned dwellings, by purchase, totally paid, inherited or donated Owned dwellings with mortgages Dwellings that are rented or sublet Dwellings that are granted free of charge or at a low price to another household, the company, etc.	REGVI
Usable surface area of the dwelling	Less than 30 square meters 30-45 square meters 46-60 square meters 61-75 square meters 76-90 square meters 91-105 square meters 106-120 square meters 121-150 square meters 151-180 square meters More than 180 square meters	METROSVI
Number of rooms in the dwelling	There is, or is not, a kitchen Number of bathrooms Number of dining rooms, lounges or living rooms Number of junk rooms, basements and attics measuring 4m² or more, with entry from the inside of the dwelling, and used for residential purposes Number of bedrooms Number of other rooms for residential purposes Total number of rooms in the dwelling	COCINA ASEOS COMEDORES TRASTEROS DORMITORIOS OTRASHAB HABVI
Type of building	Building that is solely or mainly intended for dwellings Independent single-family dwelling Semi-detached single-family dwelling Building with two dwellings Building with 3 and less than 10 dwellings Building with 10 or more dwellings Building that is intended for other uses (and includes one or more conventional dwellings)	TIPOVIV
Year of construction	Year if it was built after 2000 Between 1991 and 2000 Between 1981 and 1990. Between 1971 and 1980. Between 1961 and 1970. Between 1951 and 1960. Between 1941 and 1950. Between 1921 and 1940. Before 1920	ANEDI ANOANEDI

Family dwelling: A dwelling designed to be inhabited by one or more persons, not necessarily linked by family ties, and who do not constitute a group.

Type of family dwelling: classification of family dwellings depending on the use made of them. This distinguishes between main family dwelling, non-main secondary dwelling and non-main empty dwelling.

Main family dwelling: family dwelling that, at the time of the interview, is used as the regular residence of a household. Main family dwellings may be conventional or accommodation.

Conventional main family dwelling: A family dwelling is a dwelling that fulfils all the requirements to be inhabited, and on the date of the census, is not used totally for other purposes. Conventional dwellings are located in buildings, unlike accommodation.

Accommodation: A main family dwelling that presents the particular feature of being mobile, semi-permanent or improvised, or a space that was not designed for residential purposes, although it is used as the residence of one or more persons at the time of the survey.

Non-main secondary dwelling: A dwelling that is not the regular residence of a household at the time of the interview but is occupied for certain periods of time throughout the year, for example, for holidays, weekends, etc. This also includes dwellings that are used continuously and not seasonally, but are not a regular residence (for example, for successive short-term rentals)

Empty non-main dwelling: A family dwelling that is not the main regular residence nor the secondary residence of a household. These dwellings remain empty, or are available for sale or rent, or even abandoned.

A locale or dwelling solely intended professional purposes: A venue located in a building that is structurally separated and independent, that is not used as a family dwelling and in which economic activities dependent on a company or institution are carried out.

Group dwelling: A dwelling designed to be inhabited by a group of persons subjected to a common authority or scheme that is not based on family ties or specific cohabitation schemes. A group dwelling may occupy a building partially, or more frequently, the entirety of the building. This definition includes group establishments, such as convents, barracks, asylums, student or worker residence halls, hospitals, prisons, hotels, hostels, etc. Lastly, when there are dwellings of a family nature in the establishment, for example, those intended for executive, administrative or services personnel of the establishment, these dwellings are considered independent from the group.

For the purposes of the survey, group dwellings are not considered dwellings, but rather, locales or premises.

Tenancy regime: This refers to the relationship existing between the household and the ownership of the dwelling in which they reside.

Usable surface area of the dwelling: the surface area existing within the external walls of the dwelling, excluding open balconies or gardens as well as uninhabitable basements, storage rooms or attics.

Number of rooms in the dwelling: a **room** is understood to be the space in the dwelling that is surrounded by walls that go from the floor to the ceiling, are at least two metres high and cover at least four square meters, excluding bathrooms, entry halls, hallways and open balconies. That is, bedrooms, dining rooms, living rooms, storage rooms, kitchens, enclosed balconies and other separate spaces will be considered rooms.

Type of building: The classification of the dwelling, depending on the building it is in. Thus, we obtain a classification of both dwellings and the areas where they are grouped, according to the type of urbanism (high-rise, spread out, areas of single-family homes, etc.).

Year of construction: The year in which the construction of the building was considered to be finished.

- Territory variables:

Size of the municipality	500,001 or more inhabitants 100,001 - 500,000 inhabitants 50,001 - 100,000 inhabitants 20,001 - 50,000 inhabitants 10,001 - 20,000 inhabitants 5,001 - 10,000 inhabitants 2,001 - 5,000 inhabitants 1,001 - 2,000 inhabitants 501 - 1,000 inhabitants 101 - 500 inhabitants fewer than 101 inhabitants	TAMAÑO
Province		PROVINCIA
Autonomous Community		CA

Size of the municipality: the classification of the municipality where the dwelling is located, according to the registered population therein at 1 January of year t, t being the year of the survey.

Province: The province of the municipality where the dwelling selected in the survey is located.

Autonomous Community: The Autonomous Community of the municipality where the dwelling selected in the survey is located.

The following **derived variables** must be added to this set of classification variables, and their value is deduced from the above variables:

- Demographic variables:

Age	Five-year age groups (0-4 years old, 5-9 years old, ... 85 years old and over)	EDAD
Situation in the household	1 Persons who comprise a family nucleus 1.1 Married couples 1.1.1 Married persons of the opposite sex 1.1.2 Married persons of the same sex 1.2 De facto couples 1.2.1 De facto couples of the opposite sex 1.2.2 De facto couples of the same sex 1.3 Fathers or mothers alone 1.4 Sons/Daughters 1.4.1 Not with a father or mother alone 1.4.2 With a father or mother alone 2 Persons who do not comprise a family nucleus 2.1 Persons who live alone 2.2 Persons who do not live alone 2.2.1 Living with other relatives (with whom they do not comprise a family nucleus) 2.2.1 Living with other persons who are not relatives	SITUHO
Cohabitation as a couple	Cohabitation with their opposite-sex spouse Cohabitation with their same-sex spouse Cohabitation as an opposite-sex de facto couple Cohabitation as a same-sex de facto couple No cohabitation as a couple	PAREJA

Age: the number of complete years lived by a person.

Situation in the household: The family role of each person in the household. It distinguishes between the persons who comprise a family nucleus from those who do not, even if they are part of the household.

Family nucleus: The intermediate hierarchical unit between the person and the household. A family nucleus consists in the following: a married couple or a couple living together without children, and married couple or a couple living together with one child or more, a father or mother living with one child or more. In order to be considered part of the family nucleus, children must not have a partner or have children.

Living together (cohabitation) as a couple: It determines whether or not the interviewee cohabits with their spouse or de facto partner, and if so, whether they are a same sex or opposite sex spouse/partner..

- Household-related variables:

Type of Family Dwelling	Main family dwelling Secondary dwellings Empty dwellings	TIPOVID
Type of household	1 Single-person household 1.1 Person living alone and under 65 years of age 1.2. Person living alone and 65 years of age or older 2 Father/mother living alone with one or more children 2.1 One or more children under 25 years of age 2.2 All children over 24 years of age 3 Couple without children living in the household 4 Couple with children living in the household 4.1 All children are the children of both members of the couple 4.1.1 One or more children under 25 years of age 4.1.2 All children over 24 years of age 4.2 One or more children are the children of one member of the couple, and not of the other 4.2.1 One or more children under 25 years of age 4.2.2 All children over 24 years of age 5 Other types of households 5.1 Couple or father/mother with one or more children and other persons 5.1.1 Couple with one or more children under 25 years of age and other persons 5.1.2 Father/mother with one or more children under 25 years of age and other persons 5.1.3 Couple or father/mother with all children over 24 years of age and other persons 5.2 Couple without children and other persons 5.2.1 Couple without children and other relatives 5.2.2 Couple without children and other persons, where at least one of them does not have a kinship relationship with the couple 5.3 Persons who do not make up a couple, and if they have another kinship relationship between each other, it is other than parent and child 5.4 Other	TIPOHO
Number of children of couples with children who do not live with other persons	1 child cohabiting in the household 2 children cohabiting in the household 3 or more children cohabiting in the household	NHIJOPAR
Type of family nucleus (for households with one single nucleus)	1 Couples with or without children, with or without other persons 2 Mother with children, with or without other persons 3 Father with children, with or without other persons	NUCFAM
Number of children in households with only one nucleus	0 children cohabiting in the household 1 child cohabiting in the household 2 children cohabiting in the household 3 or more children cohabiting in the household	NHHIJO
Number of children under 25 years of age in households with	0 children under 25 years of age cohabiting in the household 1 child under 25 years of age cohabiting in the household 2 children under 25 years of age cohabiting in the household	NHIJOMENOR

only one nucleus	3 or more children under 25 years of age cohabiting in the household	
Nationality of the household	Domestic household Household with Spaniards only Household with Spaniards and foreign nationals Foreign household Household with only one nationality Household with more than one nationality	NACHO

Type of household: Classification of households according to the number of family nuclei comprising them. This distinguishes single-person households from multi-person households, and in turn, it distinguishes single-family-nucleus households cohabiting without other persons from other types of multi-person households. The latter may be: households with only one nucleus that live with other persons who are not part of the nucleus, households comprising persons who do not form a nucleus or households comprising more than one nucleus.

Type of family nucleus. There are 4 types: couple without children, couple cohabiting with one or more children, father cohabiting with one or more children, mother cohabiting with one or more children.

Number of children of couples with children who do not live with other persons: The number of children cohabiting in the household in the case of households comprising only one family nucleus of the following type: a couple with children cohabiting without other persons who are not part of the nucleus.

Number of children in households with one single nucleus: The number of children cohabiting in the household in the case of households comprising one single family nucleus, of any type, regardless of whether or not other persons not forming part of the nucleus cohabit there.

Number of children under 25 years of age in households with only one nucleus: The number of children under 25 years of age cohabiting in the household in the case of households comprising one single family nucleus, of any type, and regardless of whether or not other persons not forming part of the nucleus cohabit there.

Nationality of the household: The classification of the household, based on the nationality of its members. There are four types: households where all members are Spaniards, households where all members have the same foreign nationality or are stateless, households where some members are Spaniards but others do not have Spanish nationality, and households where none of the members have Spanish nationality and there are members with different foreign nationalities.

5 Sample design

The sample has been designed in order to yield results at national, Autonomous Community and provincial levels. An independent sample is designed for each Autonomous Community and province. The most important aspects of the design are the following:

5.1 Type of sampling

The type of sampling used is stratified two-stage sampling.

Las unidades de primera etapa son las secciones censales. Puesto que el objetivo de la encuesta es tanto el estudio de la población como el de las viviendas, las unidades de segunda etapa son los huecos (direcciones postales desagregadas hasta el nivel de planta y puerta dentro de un edificio) existentes en la sección después del recorrido censal.

En los huecos de la muestra que resulten ser viviendas principales se analizan las características de la población, en los restantes sólo se investiga el tipo de vivienda.

El marco para la selección de la muestra es el marco de huecos proporcionado por el Censo de Edificios de 2011.

A partir del año 2016, cambian los objetivos de la encuesta, se mantiene el mismo diseño muestral pero se investigan solamente los huecos que son viviendas principales.

5.2 Stratification criteria

The sections are grouped into strata within each province, according to the type of municipality (based on demographic importance) to which they belong.

The following types of municipalities are considered in order to establish stratum formation:

1. Self-represented municipalities: Municipalities that given their category in the province must always have sections in the sample.

Self-represented municipalities include the provincial capital and other municipalities with which no other municipalities may be grouped with regard to their demographic status which is worth noting within the province.

2. Co-represented municipalities: These are the municipalities which form part of a group of municipalities within the same province, which are demographically similar and which are represented in common.

In line with this classification, in general, the theoretical strata considered correspond to these concepts:

Stratum 1: Provincial capital municipality

Stratum 2: Self-represented municipalities, important areas in comparison with the capital.

Stratum 3: Other self-represented municipalities, important areas compared with the capital or municipalities with more than 100,000 inhabitants.

Stratum 4: Municipalities with 50,001 to 100,000 inhabitants (except the previous).

Stratum 5: Municipalities with 20,001 to 50,000 inhabitants. (except the previous)

Stratum 6: Municipalities with 10,001 to 20,000 inhabitants.

Stratum 7: Municipalities with 5,001 to 10,000 inhabitants.

Stratum 8: Municipalities with 2,001 to 5,000 inhabitants.

Stratum 9: Municipalities with fewer than 2,001 inhabitants.

It must be borne in mind that, given the different distribution of municipality size among the different provinces, stratification is not uniform for all of them. Nonetheless, and whenever possible, it is intended to carry out a uniform stratification for all provinces belonging to the same Autonomous Community.

5.3 Size of the sample allocation

In order to meet the objectives of the survey, an annual sample size of 100,000 units researched is estimated.

De acuerdo a la información disponible se espera que la muestra proporcione un total de 60.000 viviendas principales y 30.000 viviendas no principales, aproximadamente.

The sample is distributed among provinces, assigned one part uniformly and the other part proportionally.

With this sample size, and using the two-year sample, it is expected that the provincial estimation of a variable presented in the population in a 10% proportion, will have a variation coefficient of 5% for a person variable and 8% for a dwelling variable.

With the one-year sample, on Autonomous Community level, the estimation of a variable presented in the population in a 10% proportion, will have a variation coefficient of around 4% for a person variable and 7% for a dwelling variable.

In the previous estimations, variables whose design effect is approximately 2 have been considered.

According to the type of sampling used and the planning of the data collection, a total of 1,572 census sections and 65 units within each census section are researched each year.

The distribution of the sections sample among provinces is presented in the following table:

Province	No of sections	Province	No of sections
Albacete	18	León	20
Alicante/Alacant	50	Lleida	24
Almería	24	Lugo	16
Araba/Álava	16	Madrid	132
Asturias	48	Málaga	34
Ávila	14	Murcia	60
Badajoz	32	Navarra	40
Balears, Illes	42	Ourense	16
Barcelona	94	Palencia	12
Bizkaia	36	Palmas, Las	38
Burgos	20	Pontevedra	30
Cáceres	28	Rioja, La	40
Cádiz	32	Salamanca	18
Cantabria	40	Santa Cruz de Tenerife	38
Castellón/Castelló	30	Segovia	12
Ciudad Real	20	Sevilla	40
Córdoba	28	Soria	10
Coruña, A	30	Tarragona	30
Cuenca	16	Teruel	12
Gipuzkoa	28	Toledo	26
Girona	28	Valencia/Valéncia	56
Granada	28	Valladolid	20
Guadalajara	16	Zamora	14
Huelva	18	Zaragoza	32
Huesca	16	Ceuta	14
Jaén	22	Melilla	14

5.4 Sample selection and update

The sample selection, as with the rest of the surveys targeting the population, is carried out for the purpose of obtaining self-weighted samples.

Las unidades de primera etapa se seleccionan con probabilidad proporcional al tamaño, y las de segunda etapa con probabilidad igual dentro de cada estrato.

The size is measured in terms of the number of spaces in the section.

With the objective of improving the survey estimates, meeting the needs of other surveys, and avoiding the tiredness of collaborating units, the sample is renewed in two aspects:

Cada año se renueva la mitad de la muestra de secciones. Esto significa que en cada trimestre, la mitad de las secciones que constituyen la muestra salen de la muestra y la otra mitad es sustituida por nuevas secciones. The entire space sample is renewed in the sections that remain in the sample.

Previously, the section is updated via a field itinerary, for the purpose of including all constructions that may be the object of research and constructions omitted in the census itinerary, as well as delisting the units that have been incorrectly included in the section.

Therefore, each section remains in the sample for two consecutive years, but each space is part of the sample only once. This means that there is no common spaces sample for two consecutive years.

5.5 Distribution of the sample

The survey is annual, and the sample is distributed uniformly over the four quarters of the year.

Muestra anual de secciones por Comunidad Autónoma y trimestre

Comunidad Autónoma	Trimestre 1	Trimestre 2	Trimestre 3	Trimestre 4	Nº Secciones
Andalucía	58	58	58	58	232
Aragón	15	15	15	15	60
Asturias, Principado de	12	12	12	12	48
Balears, Illes	10	10	11	11	42
Canarias	19	19	19	19	76
Cantabria	10	10	10	10	40
Castilla y León	35	35	35	35	140
Castilla - La Mancha	24	24	24	24	96
Cataluña	44	44	44	44	176
Comunitat Valenciana	34	34	34	34	136
Extremadura	15	15	15	15	60
Galicia	23	23	23	23	92
Madrid, Comunidad de	33	33	33	33	132
Murcia Región de	15	15	15	15	60
Navarra, Comunidad Foral de	11	9	10	10	40
País Vasco	20	20	20	20	80
Rioja, La	8	8	9	9	34
Ceuta	4	3	4	3	14
Melilla	3	4	3	4	14

5.6 Estimators

Para las características de población, hogares y viviendas, se generan dos tipos de estimaciones. El primero de ellos se refiere a estimaciones con datos anuales, a un nivel de desagregación territorial y temática más agregado, referidas a mitad del periodo (año t), para el cual se utiliza la muestra correspondiente a ese año. El segundo se refiere a las estimaciones con la muestra acumulada de dos años (t-1 y t), con una desagregación más detallada, los datos son el valor medio del periodo por lo que se refieren a 1 de enero del año t.

Estimaciones con la muestra de 1 año

Las estimaciones de nivel para características de personas y viviendas principales se obtienen mediante un proceso en varios pasos.

Paso 1: Factor de diseño obtenido como inversa de la probabilidad de selección.

La probabilidad de pertenecer a la muestra de un hueco *i* de la sección *s* del estrato *l es*:

$$P_r(h_{lsi}) = k_l . \frac{\mathrm{H_s}}{\mathrm{H_l}} . \frac{m_s}{H_s} = k_l . \frac{m_s}{H_l}$$

siendo:

k_l = número de secciones seleccionadas en la encuesta en el estrato l

H_l = Total de huecos en el marco en el estrato l

H_s = Total de huecos en la sección s del estrato l

m_s = Número de huecos seleccionados en cada sección del estrato l. Este número se ha fijado en 65.

El factor de diseño de los huecos muestrales es la inversa de la probabilidad de pertenencia a la muestra. Como la muestra es autoponderada, el factor de diseño es el mismo en cada estrato y vendrá dado por:

$$F_l^d = \frac{H_l}{k_{l\cdot 65}}$$

Paso 2: Corrección de la falta de respuesta a nivel de estrato

Consideramos dos tipos de falta de respuesta, de huecos y de viviendas principales (VP):

- FR_H: Huecos de la muestra sin información sobre si es VP o no.
- FR_VP: Viviendas principales (VP) de la muestra sin información sobre el número de personas residentes en la vivienda.

Como el objetivo son las estimaciones en viviendas principales, para calcular el factor se hacen las correcciones de los dos tipos de falta de respuesta, *de forma consecutiva*, y al nivel de *estrato-provincia.*

El factor de diseño corregido de la falta de respuesta de huecos tiene la expresión:

$$F_l^{dh} = F_l^d . \frac{\sum_{mth} F_l^d}{\sum_{meh} F_l^d}$$

Finalmente el factor anterior se corrige de falta de respuesta de VP obteniendo el factor:

$$F_l^{dhvp} = F_l^{dh} \cdot \frac{\sum_{mtvp} F_l^{dh}}{\sum_{mevp} F_l^{dh}}$$

donde,
mth y *meh* son las muestras teórica y efectiva del total de huecos muestrales
mtvp y *mevp* son las muestras teórica y efectiva de viviendas principales de la muestra de huecos, de las que se conoce o no, respectivamente, el total de personas que residen en las mismas.

Paso 3: Aplicación de técnicas de calibrado que ajustan las estimaciones a fuentes externas y proporcionan un factor único para viviendas y personas.

La aplicación de técnicas de calibrado al estimador obtenido en los pasos anteriores, se hace en dos fases:

Fase 1. Tiene por objetivo fundamental mejorar el estimador obtenido en los pasos anteriores, actualizando la población empleada en el momento de la selección de la muestra al momento de realización de la encuesta.

Como la muestra es autoponderada, y las correcciones de falta de respuesta se realizan al nivel de estrato dentro de la provincia, se puede realizar un primer calibrado a los totales de población por estrato, similar al realizado en otras encuestas.

El estimador de razón separado (estrato-provincia) vendría dado por la expresión:

$$\widehat{VP}_R = \widehat{VP} * P/\hat{P}$$

y el factor de elevación correspondiente sería:

$$F_{l,Cal1}^{dhvp} = F_l^{dhvp} \cdot \frac{p_l}{\sum_{mevp,l} F_l^{dhvp} \cdot p_l} = \frac{p_l}{p_l}$$

Fase 2. El factor anterior se repondera para ajustar la distribución de algunas características estimadas con la muestra a la información procedente de fuentes externas.

Las variables auxiliares utilizadas son:

- Comunidades autónomas (sin Ceuta y Melilla)

- Población por grupos de edad y sexo quinquenales (0-75 y más, 32 grupos)

- Población por nacionalidad, españoles y extranjeros

- Población total por provincia

- Total de hogares por tamaño (5 grupos)

- Ceuta y Melilla

- Grupos de edad y sexo decenales considerando Ceuta y Melilla unidas (18 grupos)

- Población por nacionalidad española y extranjera. Ceuta y Melilla unidas

- Población total Ceuta y Melilla separadas

- Total hogares por tamaño (5 grupos) Ceuta y Melilla separadas

Después de aplicar los pasos anteriores, se obtiene un factor de elevación final $F_{l,Cal2}$ para cada uno de los elementos de la muestra efectiva.

Así el estimador del total $\hat{Y}$ de una característica *Y* se puede expresar por:

$$\hat{Y} = \sum_{j \in S} F_{l,cal2} \cdot y_j$$

donde la suma se extiende a todas los elementos de la muestra *S* e y_j es el valor de la característica Y observada en el hogar j.

Las variables de calibrado son las Cifras de Población a 1 de enero y a 1 de julio de cada año, según se trate de estimaciones con la muestra de un año o con la muestra de dos años.

Estimaciones con la muestra de dos años

El objetivo es obtener estimaciones de características desagregadas utilizando la muestra de dos años consecutivos, es decir, estimaciones *relativas a las viviendas principales* con referencia a enero del año t, a partir de la información proporcionada por las dos muestras anuales de los años t-1 y t.

De acuerdo con el diseño y renovación de la muestra, ambas muestras se pueden considerar relativamente independientes, pues aunque entre dos años consecutivos la mitad de la muestra de unidades primarias (secciones) es común, todas las unidades secundarias (huecos) son diferentes entre un año y otro.

El tratamiento de ambas muestras tomadas de forma conjunta se ha realizado de la siguiente manera:

1. Se han unido las muestras efectivas de viviendas principales de los dos años en una sola muestra acumulada, para lo cual se ha ajustado el factor de cada vivienda de la muestra acumulada del estrato *h* a la población de enero del año t.

   El factor inicial $F^h_{l,Cal2}$ obtenido para las estimaciones de cada año se corrige para que el nuevo factor $F^*_{h,l}$ se ajuste a la población del estrato en la mitad del periodo de los dos años mediante la expresión:

$$F^{*}_{h,l} = F^{h}_{l,Cal2}\frac{P_h}{\sum_h F^{h}_{l,Cal2} p_l}$$

donde p_l es la población residente en la vivienda *l,* y P_h la población del estrato h. El sumatorio del denominador se extiende a toda la muestra acumulada de los dos años en el estrato.

2. Se realiza un calibrado similar al de las muestras anuales (grupos de edad y sexo, nacionalidad, tamaño de hogar y totales provinciales), en la muestra unión de las dos anuales, tomando como factor de entrada el obtenido en el punto anterior

De esta forma:

- Se utilizan como punto de partida los factores obtenidos con las muestras anuales. Con ello se mantiene 'cierta coherencia' entre las estimaciones anuales y las de la muestra acumulada.
- Se mantiene la corrección de falta de respuesta realizada en cada muestra anual, lo que parece adecuado dado que de un año a otro pueden variar las condiciones de recogida de la información y con ello la distribución de la falta de respuesta.
- Se obtiene una estimación en la que los dos años están representados de forma equilibrada, en función del peso que cada elemento tenga en su muestra anual

5.7 Sample errors

Para la estimación de los errores de muestreo se ha utilizado el **método Jackknife.**

Este método se basa en la formación de submuestras en las que cada una de ellas se obtiene eliminando una unidad primaria de la muestra total. La estimación de la varianza del estimador de una característica *Y* tiene la expresión:

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

siendo:

$\hat{Y}_{(ih)}$ la estimación de la característica *Y* obtenida quitando de la muestra la sección i del estrato h.

$\hat{Y}$ es la estimación de la característica *Y* obtenida con toda la muestra.

n_h es el número de unidades primarias en el estrato h.

En las tablas se publica el error de muestreo relativo en porcentaje, coeficiente de variación, cuya expresión es:

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

El error de muestreo permite obtener el intervalo de confianza, dentro del cual, con una determinada probabilidad se encuentra el valor verdadero de la característica estimada.

La teoría del muestreo determina que en condiciones de normalidad, en el intervalo comprendido entre

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

existe una confianza del 95 por ciento de que se encuentre el valor verdadero del parámetro Y.

6 Description of the questionnaire

The Continuous Household Survey has a single questionnaire structured into three sections that collect information on the spaces (postal addresses) selected in the sample, and when they are main dwellings, on the persons who reside therein.

There are three different formats of the questionnaire, due to the fact that the survey information collection is multi-channel. The formats of this questionnaire are as follows:

CAWI, which is the format used for the collection via the Internet, and which is filled in by the respondent her/himself.

CATI/CAPI, which is the format used for the collection via interviewer, whether by telephone or in person at the address of the respondent, using a tablet-type laptop computer.

PRINT, which is the format used by the respondent when they fill in the questionnaire sent by post, and they return it using the same system.

The first three formats (CAWI, CATI, CAPI) use an electronic questionnaire supported by a software application, and therefore, they include controls for range, flow, completeness and validity that function during the collection itself, whereas those questionnaires received in print format must then be recorded using the application, and it is then that the controls are checked. Nevertheless, a space may begin completion via one channel, and then end it using a different channel. Thus, for example, a print questionnaire that does not meet the established requirements in the stipulated controls, may be passed on to telephone collection (CATI), if a telephone is available for that space, or to in-person collection from the home, with a tablet-type device (CAPI) if not.

Depending on the format, the questions in each section may be presented in a different order, for the purpose of facilitating completion, though in general, they have a very similar presentation in all cases. Each section comprises correlated numbered questions. These sections are ordered, and are as follows:

I . IDENTIFICATION OF THE HOUSEHOLD MEMBERS

This section is fundamental for defining the structure of the information that will be collected in the space or selected address.

First, the goal is to determine whether at that address there is someone residing regularly, in which case, it is considered a main dwelling. If there is nobody residing there, it is necessary to obtain the type of space, differentiating between dwelling and locale, and for these purposes, those dwellings intended solely for professional purposes are considered to be locales.

In the case of locales (or dwellings intended solely for professional purposes), at this point the questionnaire ends for this space.

In the case of a non-main dwelling, that is, where there are no persons residing regularly therein, it is necessary to determine whether it is used only temporarily, or whether it remains empty throughout the year. In any case, it is necessary to fill in the dwelling questionnaire afterward.

If the dwelling is the regular residence of a human group (main dwelling), this section includes the number of persons residing regularly therein, the list of said persons and the tenancy regime of the dwelling. Then, the dwelling

questionnaire is filled in and an individual questionnaire is collected for each of the persons on the list.

Thus, in all cases of spaces classified as main or non-main dwellings, it is necessary to fill in a dwelling questionnaire, and moreover, in those that are main dwellings, to fill in the corresponding individual questionnaires.

II. DWELLING QUESTIONNAIRE

This section consists of 4 questions, two referring solely to the dwelling: distribution and surface area, and the other two referring to the building where the dwelling is located: type of building and year of construction.

III. INDIVIDUAL QUESTIONNAIRES

This section includes the questions that must be asked to each person resident in the dwelling. They correspond to questions relating to identification, demography, kinship, education, labour and professional data.

Specifically, they are the following: given name and surnames, personal identifier (ID, residence card or passport), sex, date of birth, marital status, place of birth, nationality, date of acquisition of Spanish nationality if not from birth, date of arrival in Spain, place of birth of the father and of the mother, kinship relationship with the other persons in the dwelling, and whether 16 years old or over, as well as the highest educational level completed, the situation with regard to the labour market, and if the person works, their professional status.

As the CAWI and PRINT questionnaires are filled in by the respondents themselves, they have been designed, bearing in mind that they will be self-completed, and therefore, they contain precise instructions to this end.

The completion of the CATI/CAPI questionnaire is carried out by the interviewer with the information provided by the respondent. In the case of CATI, once a person has been contacted, the interviewer must verify that the address they are calling to is the selected address, and afterward, locate a suitable respondent, and lastly, conduct the interview.

Prior to asking the questions, the interviewer must consider the following principles:

- Firstly, finding an ideal respondent that is capable of answering the question, "Who regularly resides in this dwelling?" and has the knowledge of the information requested in section II Dwelling Questionnaire. In the case that it is the regular residence of a human group, the interviewer must try to find a respondent who resides in the dwelling, and ask about the respondents for each individual questionnaire. If the individual respondents are not in the dwelling when the interview is taking place, this person must provide the information requested for each member, and therefore, must have knowledge of said information. The person must be 18 years old or over.

- If the respondents of the respective individual questionnaires are in the dwelling, they must be the persons to provide the information. For those persons

under 16 years of age, the interviewer must request authorisation from the parents or guardians in order to ask the questions.

- Prior to ending the visit (CAPI) or the call (CATI), if the interview has not finished, the interviewer must have set - with the respondent - the date and time of the new visit or call, writing it down appropriately.

As a general rule, the interviewer will never read the "Does not know" option.

6.1 Status of completion of a questionnaire

A space may be in any of the following statuses, according to the degree of completion of its questionnaire. These statuses refer to the space, and therefore, do not depend on the collection method.

1. **NOT INITIATED (NI).** This will be the initial status of all the spaces in the sample. All of the spaces for which no questionnaires have been received, via any channel, are considered to be in this status.

2. **RECEIVED (R)** Those spaces for which the arrival, in print, has been registered, without having begun their recording, will be considered in this status Only spaces whose questionnaire has arrived by post may have this status.

3. **IN COMPLETION (IC)**. When the print questionnaire has begun to be recorded, but the recording has been interrupted, or when the questionnaire has been received via CAWI, unfinished, without having elapsed the established period (10 days) to consider it Incomplete, it will be considered in this status.

4. **INCOMPLETE (I)**. Questionnaires for which the completion has not finalised, by any channel, and which are not in a status of "In completion"

5. **FINALISED (F)**. Questionnaires for which the completion has been finalised. In some cases when the questionnaire does not have all of the questions completed, it may be considered Finalised, with two possible cases: Valid Incomplete Finalised (**VIF**), and Invalid Finalised (**IF**) (according to whether or not certain questions in the questionnaires are completed).

6.2 Validity of a questionnaire

Only valid questionnaires are used for information processing, even if they may be incomplete. For the questionnaire corresponding to a space to be considered valid, it must have completed a minimum of information.

The questions that must be answered, providing the flow of the questionnaire so demands, are as follows:

- Section I. Identification of the household members, with the exception of the question regarding the number of residents.

- In the dwelling questionnaire: the question regarding the type of building in which the dwelling is located.

- In the individual questionnaires for all of the persons in the dwelling: the sex and place of birth (Spain or outside of Spain)

Moreover, if the respondent resides in the dwelling, the following must be answered:

- In the dwelling questionnaire: number of each of the different rooms in the home (kitchen, bathrooms, dining rooms, bedrooms, storage rooms and other)

- In the individual questionnaire of the respondent, and of all her/his direct relatives (father/mother, spouse/partner, son/daughter, brother/sister, grandfather/grandmother or grandson/granddaughter): all of the questions, with the exception of those corresponding to the personal identification, date of acquisition of Spanish nationality if not from birth, situation with regard to the labour market and professional status.

- In the individual questionnaire of the remaining persons: their relationship with the respondent (not related or indirect relatives).

7 Information collection

7.1 General collection scheme

The sample is distributed over the four quarters of the year, in such a way that the information collection is carried out in accordance with a quarterly plan of work and resources. This basically follows a strategy that is similar to the one put into practice in the 2011 Census, using a *multi-channel* methodology. To this end, different information collection systems are used: the Internet (CAWI), ordinary post, telephone interviews (CATI) and personal visits with a laptop computer (CAPI).

For any given quarter, the data collection considers the following activities:

- Submission of letters to postal addresses selected in the sample, opening the collection of questionnaires via the Internet. Opening, moreover, of the free query telephone number, which includes the possibility of responding to the questionnaire by telephone.
- Mailing of a first claim letter to those sample units that have not responded to the online questionnaire.
- Mailing of a subsequent claim letter to those sample units that have not responded to the online questionnaire, accompanied by the print questionnaire with a pre-stamped envelope for submission to the INE.
- Mailing of a further claim letter to those sample units that have not completed the online or postal questionnaire, and for which a contact telephone number has been located; these units are studied via telephone interview, in the event that they continue not to respond. The remaining units for which a telephone number is not located are sent a letter, notifying them of the coming visit of an interviewer to their address, and they are collected via personal interview.

Lastly, as mentioned previously, the quarterly fieldwork of the survey also includes an update of the framework of postal addresses in each census section selected in the first sampling stage.

7.2 Press releases

The updating of sections intends to keep the listing of all existing spaces truly in the section up-to-date, in such a way that any of them may have a probability of being selected for the sample.

The goal is to perform an itinerary within the limits of the section, and verify whether these are correct. During the section itinerary, the interview has the fundamental objective of registering and delisting the spaces, as well as modifying erroneous postal addresses.

In order to perform the update, the interviewers have a tablet, which includes a computer application that enables them to collect all modifications to the section.

During the section itinerary, the interviewer visits all the postal addresses, and delists all of the duplicate spaces, or spaces that for reasons such as destruction, in ruins, etc., no longer exist. They modify the data that is erroneous, and registers spaces that did not appear, either by omission or due to being newly constructed. They must register all spaces existing in the newly constructed buildings, that contain at least one family or group dwelling, as well as those in omitted buildings or inhabited accommodation. This does not include buildings intended solely for locales, nor those dedicated to agrarian activities, nor their corresponding spaces.

In this way, those changes that may have occurred from the last update are included, in order to reflect the composition of the section as reliably as possible.

The updating of sections is carried out in the last week of the first month of the quarter prior to the information collection.

7.3 Territorial organisation of the collection

The national territory has been divided into six Zones for purposes of data collection. The Zone is the geographical area specified for this survey that includes a set of provinces. The Head of Zone is one of those provinces, and from it, the information is managed through an application for the management, collection and processing of the information developed for this survey (ARZ). The remaining delegations that comprise the zone are those responsible for organising the CAPI collection within their provinces.

The previous shows the six zones, and the number of sections that are in the sample in each one of them. In total, there are 1,600 sections distributed over the four quarters of the year.

COLLECTION ZONES IN THE CONTINUOUS HOUSEHOLD SURVEY

Zona	Provincia	Total secciones
Barcelona	07 Balears, Illes	42
	08 Barcelona	94
	17 Girona	28
	22 Huesca	16
	25 Lleida	24
	43 Tarragona	30
	50 Zaragoza	32
Total Zona		**266**

Zona	Provincia	Total secciones
Málaga	06 Badajoz	32
	11 Cádiz	32
	14 Córdoba	28
	18 Granada	28
	21Huelva	18
	23 Jaén	22
	29 Málaga	34
	41 Sevilla	40
	51 Ceuta	14
	52 Melilla	14
Total Zona		**262**

Zona	Provincia	Total secciones
Murcia	02 Albacete	18
	04 Almería	24
	13 Ciudad-Real	20
	28 Madrid	132
	30 Murcia	60
	45 Toledo	26
Total Zona		**280**

Zona	Provincia	Total secciones
Ourense	05 Ávila	14
	10 Cáceres	28
	15 A Coruña	30
	24 León	20
	27 Lugo	16
	32 Ourense	16
	33 Asturias	48
	36 Pontevedra	30
	37 Salamanca	18
	47 Valladolid	20
	49 Zamora	14
Total Zona		**254**

Zona	Provincia	Total secciones
Valencia	03 Alicante	50
	12 Castellón	30
	16 Cuenca	16
	19 Guadalajara	16
	35 Las Palmas	38
	38 Tenerife	38
	44 Teruel	12
	46 Valencia	56
Total Zona		**256**

Zona	Provincia	Total secciones
Bizkaia	01 Álava	16
	09 Burgos	20
	20 Gipuzkoa	28
	26 La Rioja	40
	31 Navarra	40
	34 Palencia	12
	39 Cantabria	40
	40 Segovia	12
	42 Soria	10
	48 Bizkaia	36
Total Zona		**254**

Each Zone has the following personnel: a Zone Manager, in charge of an Interview Inspector and 5 Interviewers-Recorders. They all carry out the tasks indicated, using functionalities of the ARZ application to this end.

The Zone Manager carries out the necessary contacts with those responsible for the CAPI collection in the provinces that are part of their Zone, in order to resolve any incidence that occurs.

In addition, they are in charge of:

- managing the different postings of letters sent out to the spaces, and the requests by respondents for new questionnaires.

- assigning their interviewers their registration packs and recording of questionnaires received in print format, as well as the recording of envelopes returned by the Post Office.

- controlling the CATI collection, assigning work quotas to their interviewers.

- controlling the management of the free information hotline (L900).

- studying the cases in which information is received from the same space, but via different channels (receiving a print questionnaire, and there is already information received via CAWI, for example), seeing if it is compatible and if information from both can be used, or if the corresponding information must be discarded.

The Zone Interviewer Inspector is in charge of collating the recording and filtering of the questionnaires received in print format, and filtering those received via CAWI. In addition, they conduct in-situ observations of calls to the 900 information hotline and for CATI collection, directly performing this work when the collection circumstances so suggest.

The Zone Interviewers-Recorders are fundamentally in charge of the registration and recording of questionnaires received by post, the filtering of questionnaires arriving via the Internet and post and not in a finalised stage, calling dwellings so long as they have a telephone, and the completion of questionnaires via CATI. Other tasks are: attending the 900 Hotline, and sending the print questionnaires requested via the 900 Hotline, inserting printed letters of the different mailings that may be made to the spaces, and conducting searches of telephones for the addresses corresponding to the selected spaces whenever necessary.

As a complement, in each provincial delegation, there is: a person responsible for the CAPI collection in their province, a CAPI Inspector who carries out CAPI inspections and a number of CAPI interviewers who conduct the personal interviews, depending on the number of sections in each province. These CAPI inspectors and interviewers are not solely dedicated to this survey, but rather, perform this work along with other INE surveys.

The CAPI Manager is in charge of studying the sections and the workload in each of them (interviews that must be conducted at home) so as to distribute it in the most suitable manner among their interviewers. To this end, they have access to the CAPI functionality of the ARZ application, only for their province, which enables registering the Inspector and the Interviewers, registering the portable devices (tables) and assigning them to their interviewers, carrying out the weekly uploading and downloading of information from the server to the portable device and vice versa. They also organise the inspections, and carry out inspections, in the sections included by the interviewer inspectors. They plan section updates.

The CAPI Inspector conducts the inspection of a sample of sections for each interviewer, and carries out the direct collection or update in the cases in which it is necessary to do so due to the amount of available resources.

The CAPI Interviewer is in charge of conducting the home interviews using the tablet. Some dwellings will be in the INITIATED status, the visit being to complete the questionnaire or to filter some questions. Prior to beginning the fieldwork, the CAPI Interviewer studies the section, or sections, that they will visit, in order to organise the visits as suitably as possible. Moreover, they must carry out the section updates, also using the tablet..

7.4 Organitation of the collection channels

As previously mentioned, the objective of the CHS is to collect information on the selected spaces in the sample, as well as on the persons who reside in the dwellings that are considered to be the regular residence of a human group.

The information received comes from different completion channels:

-CAWI. The data from this channel is collected via an electronic questionnaire available at the www.iria.ine.es website, to which all spaces selected in the sample will have access.

In order to access it, the letters sent to the selected spaces include the necessary keywords for the online completion. It is the respondent her/himself who fills in the questionnaire.

This channel is open throughout the period that the sample data collection lasts.

Once the questionnaire is completed, the same online application determines the completeness and validity thereof, passing the information on to the central database.

- POST. This is the second channel that is opened in this collection process.

After having been sent a claim (2nd Letter), the spaces in the sample that have not filled in the questionnaire online are sent a print questionnaire.

As in the CAWI, the collection system is via self-completion by the respondent. The dwellings in which there are more than 6 residents cannot complete the questionnaire via this channel.

Once the questionnaire is received in the corresponding centres (zone heads), it is recorded by the interviewers-recorders of the zone.

A single postal mailing is carried out of the envelopes with questionnaires, and two additional weeks before moving on to the next stage are waited for the purpose of providing the time to receive as many completed questionnaires as possible.

-**CATI,** in principle, is the third collection channel. It consists in collecting the information via telephone. The zone interviewers-recorders call the spaces that

have not answered by CAWI or PRINT, and for those that have a valid telephone number. The respondents may also call the free hotline to request the completion of the questionnaire via this channel.

It is an interviewer-recorder who conducts the telephone interview, completing an electronic questionnaire available in the ARZ application.

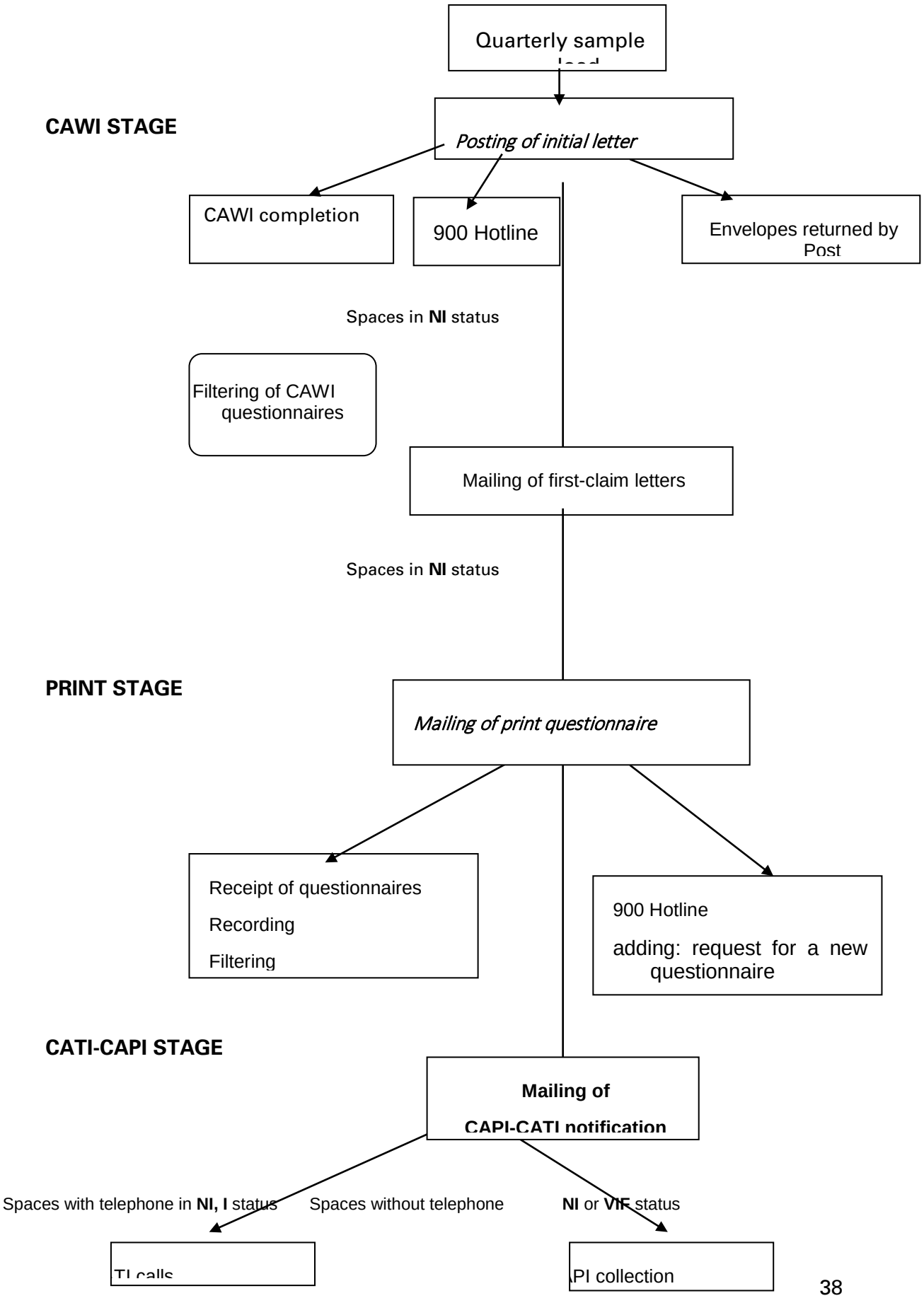
The procedure is monitored at all times by the application, and is as follows: when a space moves on to the CATI stage, the contact stage with the space takes place from the telephone centre corresponding to the zone. The interviewer calls the space selected by the application or a space which is already assigned. This call may be answered, or it may occur that it is a fax or answering machine, etc. For each call, the interviewer or the application assigns a result for the call. The application generates subsequent calls at different times, in order to achieve contact. Once a person has been contacted, the interviewer must verify that the address called is the selected address, and then they must locate a suitable respondent, and lastly, conduct the interview. According to the situations that arise, the interviewer or the application will assign an incidence to the space. Moreover, depending on the results of the calls to a space and the incidents that may occur, the application will assign a temporary or final result to each space.

- **CAPI**. A personal interview is conducted in the spaces in which no information has been obtained in the three previous stages. Collection by this method is carried out at two times: simultaneous to the CATI collection, the spaces for which no telephone number has been obtained are studied by CAPI, and at the end of the quarter, all of the spaces pending study are visited.

The sample units that have completed the questionnaire online or in print format, and said questionnaire is incomplete, or presents inconsistencies, are called (if they have a telephone), or visited (if they do not have a telephone), in order to complete or filter the questionnaire via CATI or CAPI, respectively.

During the entire collection stage, there is a free telephone number available to respondents.

The following scheme summarises the work carried out in the zone heads chronologically. The tasks are logically accumulative.


Quarterly sample
CAWI STAGE
Posting of initial letter
CAWI completion
900 Hotline
Envelopes returned by Post
Spaces in NI status
Filtering of CAWI questionnaires
Mailing of first-claim letters
Spaces in NI status
PRINT STAGE
Mailing of print questionnaire
Receipt of questionnaires
Recording
Filtering
900 Hotline
adding: request for a new questionnaire
CATI-CAPI STAGE
Mailing of
CAPI-CATI notification
Spaces with telephone in NI, I status
Spaces without telephone
NI or VIF status
TI calls
PI collection

7.5 Calendar

The CHS is a quarterly survey. Each quarter, information is collected from approximately 25,000 spaces, following the calendar presented below for any given quarter **t**:

- Load of the sample selected in the application: one week prior to the beginning of the quarter
- Beginning of the massive search for telephones of the sample: from the sample loading and for one month, up until the mailing of the print questionnaires is carried out.
- Preparation, printing and mailing of the initial letter to the sample spaces: Friday of the week prior to the beginning of the quarter
- Beginning of CAWI collection: first Monday of the quarter
- 900 hotline: from the beginning of the collection.
- Mailing of CAWI claim letters: 20 days after the first letter.
- Updating of the sections from quarter t+1: last week of the first month of quarter t
- Mailing of print questionnaires: five weeks after the beginning of the CAWI collection.
- Claim letter for print questionnaire (dwellings with a located contact telephone number) and notification of a CAPI visit (dwellings without a located contact telephone number): two weeks after mailing the questionnaire.
- Beginning of the first CAPI collection: last week of the second month of the quarter. As necessary, and always in accordance with the party responsible for the zone, the CAPI collection dates may be changed to others that are compatible with the remaining tasks assigned to the interviewers. The CAPI collection may not begin prior to two weeks following the mailing of the print questionnaires. In case of changing the CAPI starting date, notification letters are sent soon enough.
- Beginning of the CATI collection: 9 weeks following the beginning of CAWI.
- Second CAPI collection: last week of the quarter.
- Closing of the collection for quarter t: last working day of the quarter.

7.6 Incidences and their processing

In the process until being able to classify the selected spaces, and in the case of dwellings, the purpose is to obtain the completed questionnaires for each dwelling, some situations or incidences preventing their collaboration may arise.

As different information collection methods are set out, incidences may appear in any of the channels, and they may be either temporary or final.

INCIDENCES IN THE SPACES

The possible incidences in the spaces are the following:

INACCESSIBLE SPACE (IN)

When it is not possible to access a space to obtain information. This incidence can occur both in CATI and in CAPI. In CATI this is considered a temporary incidence, while in CAPI it is considered to be final.

In CATI it occurs when the results in the telephone calls to that space are ST (without a telephone), because the located telephone number does not exist or the telephone number is mistaken (it does not correspond to the space address) and other contact telephone numbers cannot be obtained for that space.

In CAPI, an inaccessible space is considered to be that which cannot be accessed to conduct the interview due to climate reasons (floods, snowstorms, etc.) or geographical reasons, when there are no roads leading to the dwelling.

PREVIOUSLY SELECTED DWELLING (SA)

This incidence may appear in both CATI and CAPI, and in any case, is considered final.

It occurs when the respondent informs that the dwelling has been previously selected (less than three years ago) and has already collaborated in the sample of another INE population survey. Collaboration in the 2011 Population Census is excluded due to this incidence.

REFUSAL (R)

It may occur in CATI and CAPI.

The household as a whole or the persons with whom the interviewer contacts refuse to collaborate in the survey. This incidence may occur during the first contacting with the household or after the first contacting, when for some reason the household or one of its members refuses to provide the requested information.

This incidence may be considered temporary or final depending on whether it is considered short-term and if it is expected to be recoverable or not.

ABSENCE (A)

This incidence occurs in CATI when the interviewer contacts a person in the household who does not live in it and is informed that the persons who regularly live in the household will be absent during the entire period of the survey and no other telephone number is obtained so as to contact the residents.

It may also occur in CAPI when the interviewer contacts a person from the household or a neighbour, doorman, etc., and is informed that the dwelling is occupied, but it is not possible to contact with any of its residents. It may be

temporary or final, depending on whether the incidence can disappear during the time considered in the calendar for collection of absentees.

The final absence incidence occurs when the questionnaire has not been achieved through any of the channels and has been absent in the last CAPI collection.

INABILITY TO RESPOND (IR)

This incidence occurs when all household members are unable to respond to the interview or complete the questionnaire due to old age, illness, incapacity, language difficulties or any other circumstance.

This may occur in CATI and/or CAPI and it is considered final.

NOT SURVEYABLE (NS)

The selected space is a commercial premises, a group dwelling or a space intended for professional activities. It is a final incidence that may ensue in any channel.

It is produced when the CAWI application (used to complete the questionnaire) is accessed from a space and in section I (Identification of household members), question 1, it is indicated that no one lives in the dwelling. Afterwards, option 3 is selected (commercial premises or dwelling intended for professional purposes) in question 2 (what the dwelling is used for).

It is also produced upon reception of a print questionnaire completed with the aforementioned data.

This incidence occurs in CATI when the person who answers the telephone reports that the space is currently intended for commercial premises or professional purposes or it is a group.

It occurs in CAPI when the interviewer realises that the space is intended for commercial premises or it is a group as well as when asking the first questions of the questionnaire they answer that nobody lives in it because it is intended for professional use or to be a commercial premises.

DUPLICATE (D)

There is at least another space in the sample with the same postal address. It is a final incidence that may occur in CAPI or CATI.

It occurs in CAPI when the respondent indicates that the interview has already been carried out (therefore, the dwelling is duplicated in the sample).

This occurs in CAPI when the interviewer realises that in the sample there is space with the same address as another space of the sample.

ASSIGNED TO CAPI (CP)

It is a temporary incidence that occurs in CAPI when during the telephone interview the respondent indicates they wish to carry out the interview personally. In this case the space is derived to CAPI collection.

UNTRACEABLE SPACE (UN)

The space cannot be traced in the address that appears in the list of selected spaces. It may be because the address is not correct, the space does not exist any longer or for other causes. It is a final incidence that occurs in CAPI.

NOT CONTACTED (NC)

This incidence occurs when after having visited the dwelling several times, it has not been possible to contact anybody and it has not been possible to determine by the household nor by a third party (neighbours, doorman, etc.), whether the dwelling is occupied or not. It is a final incidence that occurs in CAPI.

In CAPI collection there are a series of incidences analogous to this one but they are purely temporary since they refer to the results of a specific call to the telephone number of the space. They are the call results referred to as NA (nobody answers the telephone or it is an answering machine), B (busy), AP (contact is established but before starting the interview the respondent asks to be called some other time, or there is no valid respondent in the space at that time and the call is postponed, or if the respondent claims to have already sent in the questionnaire but it is not recorded in the application), PIC (partial interview because a future interview is established so as to complete it), PIO (partial interview for other reasons).

EMPTY WITH INFORMATION (EI) and EMPTY WITHOUT INFORMATION (EW)

They can be produced in any channel when the selected space is classified as a dwelling with no residents. It may be a dwelling which is only used occasionally (during vacation periods, weekends,...) or is empty all year, but it is not a dwelling exclusively used for professional purposes.

It is considered empty with information (EI) when the dwelling questionnaire is completed and empty without information in the opposite case.

SURVEYED (S)

It may occur in any channel. It is not an incidence strictly speaking since in this case it has been possible to achieve the finalised questionnaire corresponding to a space with persons residing in it, that is, all required questionnaires are completed: dwelling and individuals.

INCIDENCE PROCESSING

Since all spaces of the sample are considered holders, and therefore there are no reserve samples, no incidences give place to substitution by another space.

The spaces with final incidence are blocked in all channels, except if it is decided to blank the incidence for a justified cause.

In the case of temporary incidences, depending on the collection channel and the completion status, the space can be caused to pass through another channel or cause another action (for example establishing an appointment to be called or visited again or go on to search of telephone number).

8 Data processing

The information received can come from any of the 4 collection channels established for the survey. This information not only contains the questionnaires but also the results and incidences that occurred in the spaces of the sample, and it is managed and controlled by the ARZ zone collection application.

Since an electronic questionnaire is used in the CAWI, CATI and CAPI channels, there is a filtering system implemented in the data entrance itself. It detects the errors and inconsistencies and warns of strange values when the responses are being inserted. This way, the correction / confirmation of information is carried out in the household while the interview takes place. In the collection itself, the range, flow, completion and validity of the questionnaires are also incorporated. However, the paper questionnaires received shall later be recorded via the application and it is then when the diverse controls are checked and the possible errors to be corrected are detected and subsequently filtered. Filtering is carried out at zone level, via the corresponding function of the ARZ application.

The ARZ application also includes a system to control the coverage of what is received by the different channels as well as the transferring of information from one channel to another until completion of sample collection of each quarter.

Once the collection corresponding to a quarter is finalised in the zones, the information is treated in a centralised way. The treatment has the following stages:

- ***Quality control stage***: It shall be checked once again that the collected information does not have any inconsistencies or serious errors in the questionnaires, however all of the coherency conditions established for the questionnaire are assumed to be guaranteed.

-***Separation of valid questionnaires stage:*** It consists in two iterative processes:

The first one determines the set of valid questionnaires within the total of questionnaires received, separating the complete ones from the incomplete ones as well as from the invalid ones. A procedure is executed over the questionnaires in order to determine which ones may be considered valid if certain invalidity criteria are softened (those related to the lack of data in variables that can be imputed automatically). Manual searches in the register database are preformed over the rest of invalid questionnaires if the only reason why they are invalid is that a register datum (date of birth, country of birth or nationality) is missing.

A second process is performed over valid questionnaires that may or may not be complete. It consists in checking the coherence of the kinship matrix of the household members. Questionnaires that do not pass this check undergo a filtering process also based on register searches. This filtering is carried out with the support of an application. The questionnaires that after having undergone this filtering process continue having an incoherent kinship matrix, are added to the invalid questionnaires.

The questionnaires that are finally valid, whether they are complete or incomplete, are reserved for annual or biannual information processing.

- ***Filtering and imputation processes:*** This stage is applied to the quarterly file corresponding to the complete or incomplete valid questionnaires, whose kinship matrix is coherent. It consists in detecting inconsistencies that are not included in the electronic questionnaire as well as in the automatic imputation of the incomplete valid questionnaires. The correction of possible missing or incoherent values is carried out automatically by using the DIA methodology.

It has a non-final nature if the quarterly files corresponding to the same period are not gathered (it may be one year or two years, depending on the provisional or final data to be obtained).

- ***Calculation of derived variables and application of elevation factors:*** it consists in applying the design factors to the filtered questionnaires resulting from the DIA in which there has been a calculation of the derived variables that are necessary to operate the results and provisionally tabulate the results corresponding with the data of the quarterly sample.

- ***Joining quarterly files:*** when a period is completed (a year, if it is in order to obtain provisional results, or two years if it is to obtain final results) the quarterly files of that period corresponding to complete or incomplete valid questionnaires, with coherent kinship matrix that were reserved for this purpose (the ones prior to filtering and imputation with DIA) are joined together.

- ***Filtering and imputation stages of the joined file and calculation of derived variables:*** these stages are the same as the ones carried out provisionally with a quarterly nature, but this time the joined quarterly file is used.

- ***Measuring the sample and applying elevation and measurement factors:*** Population figures, of 1 January of the reference year and its provisional results of 1 July of that year are taken as an external source of information. The sample is measured by incorporating the elevation and measurement factors to the file, this way obtaining the tables of final and provisional results.

Collection of survey data is developed continually, based on an annual sampling selection that is divided into four independent quarterly sub-samples along every year t. The results of the survey are disseminated once a year during the first quarter and it includes: provisional results with reference date 1 July of that year, and final results with reference date 1 January of year t.

The provisional results are compiled by using the information collected in the sample of year t, with reference 1 July of year t, and the elevation factors will be measured with the provisional Population figures of 1 July of year t. The final results are compiled by using the information gathered in the samples of year t-1 and t, with reference 1 January of year t and the elevation factors will be measured with the Population figures of 1 January of year t.

That is, each questionnaire is used in three different result publications and it is affected by different elevation factors. This way, each sample observation may have:

- Elevation factors measured for the use of final results of 1 January of year t.

- Elevation factors measured for the use of provisional results of 1 January of year t.

- Elevation factors measured for the use of final results with reference 1 January of year t+1.

- Generation of final anonymised microdata files

9 Dissemination plan

The dissemination plan considers including statistical result tables for the analysis objectives of the survey. Dissemination is carried out on an electronic publication via the INE website and the microdata file of the survey is available as well.

Calendar

The calendar for publication of results is the following:

- Provisional results: referred to 1 July 2013 are published in the first quarter of 2014. From that moment on, every first quarter of year t+1 offers the provisional estimation at 1 July of year t.

- Final results: referred to 1 January 2014 are published in the first quarter of 2015. From that moment, each first quarter of year t+1 offers the final estimation at 1 January of year t.

This way, the final results of the survey are published shortly after the Population Figures are published at 1 January of year t, as well as the final results of Vital Statistics and Migration Statistics of year t-1, which take place in December of year t.

Results tables

The following are the results tables at national level. This information, occasionally with a lower disaggregation level, is also provided at Autonomous Community and Province levels. In the publication for provisional results, the greatest detail is provided for Autonomous Communities. Information at province level is only provided in the final results.

- Resident population

There are results regarding resident population according to the different variables completed in the study and the main crossings, marital status, living together as a couple, situation in the household,...as well as population data regarding the households in which they live, according to type of household, size of household and nationality of household members.

For resident population born abroad, there is information in reference to country of birth and date of arrival in Spain. For second generations (children of parents born abroad) there is information in reference to the county of birth of the parents.

- Households: It details the number of households according to the nationality of its members, type and size of household as well as variables that relate the household with the dwelling (number of rooms of the dwelling, usable surface area, tenancy regime of the dwelling).

- **Dwellings**: There are disaggregations of the main dwellings according to the researched characteristics: type of building, year of construction, tenancy regime, usable surface area, number of rooms.

Microdata file

The final microdata files will be the basis for dealing with information requests that demand specific and detailed uses. The content of these files will adjust to

that established in the Public Statistical Function Law, in agreement with individual data confidentiality and INE microdata dissemination regulations.

They will be available from the second quarter of 2015, on an annual basis and with information gathered every two years.

There are two microdata files available: the microdata of the dwelling and household questionnaire and the microdata of the persons residing in the dwellings.

ANNEX: Questionnaires

Note:

The questionnaire included in the Annex of the Methodology has been used since the survey started in 2013 and it responds to its initial denomination. In April 2014 it was called Continuous Household Survey