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## 1 Introduction

The National Immigrant Survey analyses the migratory process from its beginning in the country of birth to the arrival of the immigrant in our country, and his/her changes of residence once in Spain, the networks that are created as a result and other important aspects in the decisions and strategies that influence the immigrants themselves in their choice of Spain as a destination country and their establishment therein.

In recent years, the migratory phenomenon has become one of the social issues of greatest interest, concern and public debate in Spain. This is due to the fact that, since the middle of the nineties, Spain has become an important destination for immigrants from Northern Africa, the American continent, Eastern Europe and other parts of the world. The intensity of these migratory flows has increased each year, converting Spain into the European Union country that most contributes to the increase in the immigrant population on the continent, resulting from the continuity, persistence and intensity of the aforementioned migratory flows. This situation is not unrelated to the sectorial, spatial and temporally differentiated requirements of heterogeneous labour markets. Independently of its eventual persistence in the coming years, this new reality has already stimulated social concern and no small amount of public debate in our country, both because of the intensity of the phenomenon, and because of the fact that, for the first time in centuries, Spain has become a focus of immigration rather than emigration.

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### 1.1 NEED TO CARRY OUT THE NATIONAL IMMIGRANT SURVEY

The massive influx of immigrants to our country has become a star issue within the field of social and economic research. Most of this research has focused on political aspects, on the quantification of the main magnitudes, on the study of its economic implications and of its influence on the labour markets, as well as on the problem of new trends in social relations and intercultural coexistence in a society that is increasingly diversified. All of these aspects are important, and it is foreseeable that they will continue to attract the attention of researchers in the future.

Paradoxically, less attention is paid to the migratory process itself from the time the decision is made until the person is introduced into the recipient society. From this perspective, migration consists of a series of strategies followed by the immigrants. These strategies usually encompass both the origin and the destination, and the person's incorporation via family, friend or compatriot networks. Sometimes they are successful and sometimes they are not, but these are always fundamental in understanding immigrants and their behaviour, as well as the social and economic situations they are in. This research focus has served to highlight many of the most relevant aspects of the phenomenon in societies with a stronger migratory tradition.

Thus, the tendency of immigrants to group in networks can be considered a characteristic that is common to all migratory processes, though its specific manifestation may differ from one case to another. We know very little of the truly social, economic and cultural dimensions of the migratory phenomenon and the networks arising therein. These deficiencies have important negative implications for Spain given that, on the one hand, they indicate an important reduction in our comprehension of the migratory phenomenon, and on the other hand, they make it difficult to prepare and implement public policies that are effective in successfully implementing the public management of the immigration phenomenon in our country.

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## 1.2 BACKGROUND AND DEFICIENCIES IN THE AVAILABLE SOURCES

The truth of immigration in a population is manifested in all its expressions, included in most of the population studies carried out, but its representation in the total population, lower than 10%, prevents an independent analysis of this group, above all when trying to differentiate characteristics by different countries of origin of the immigrant population.

The National Statistics Institute currently provides the following sources for finding information regarding the immigration phenomenon:

- **Census.** This instrument collects ample information on the immigrants present in Spain at the time of conducting the census. It also includes questions regarding the recent migratory trend of the population.
- **Continuous register.** This instrument collects basic information on the immigrant population existing in Spain, updated periodically. The Residential Variation Statistics (RVS), based on the register, reflect movements between municipalities and between Autonomous Communities, distinguishing those movements of foreign nationals.
- **Vital Statistics.** The registers of both marriages and births collect the information referring to all persons, whether they have Spanish nationality or they are from other countries.
- **Economically Active Population Survey (EAPS).** The EAPS is carried out quarterly, and collects information regarding active, employed and unemployed persons, according to their nationality. The INE compiles the Migrations Survey (MS), derived from the EAPS, whose objective is to ascertain the intensity and characteristics of the domestic migratory movements produced within Spain, and of the immigrants from outside of our borders, be they Spaniards returning to the country, or foreign nationals. Unlike other statistical sources that analyse the migratory phenomenon such as the Residential Variation Statistics (RVS), the MS covers the number of migrants and not the number of migrations. Moreover, it facilitates obtaining information on migrants in terms of the labour market, which makes it a unique source as compared to other sources that analyse the migratory phenomenon. The questions that allow for gaining knowledge about the migratory phenomenon are those which appear in Section I of the EAPS

questionnaire, in which reference is made to the situation of the interviewee one year ago.

Despite the evident utility of these sources, we continue to lack systematic and representative information on the immigrant population in which we may retrospectively collect their migratory experiences, both in our country and in other places. It is therefore necessary to build a source that collects information on the migratory experience in matters as relevant as family, work, housing, migratory networks, places of origin, changes in location, the migratory experience of the most direct relatives and friends, ... There is currently no information of this type that encompasses the totality of the immigrant population and fulfils basic representativeness criteria.

For the purpose of contributing to resolve this deficiency, it was decided to undertake the performance of a large National Immigrant Survey (NIS), tending to the in-depth analysis of the social and economic dimensions of the migratory phenomenon, with particular interest in the functioning of immigrant networks and the way that these network influence the decisions that they make. The centre of attention is aimed above all at the elements that support both the decision to migrate and the shaping of certain strategies that are closely linked to the composition and functioning of the migratory networks. The incorporation of a longitudinal perspective into the same with retrospective questions allows for understanding the migratory experience as a living process, subject to changes that express the transformations in the different aspects that comprise this phenomenon.

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### 1.3 CREATION OF THE WORKING GROUP IN CHARGE OF THE PROJECT AND THE FIRST DECISIONS

The National Immigrant Survey has been conducted together with the *Population and Society* Study Group of the Universidad Complutense de Madrid, which had already drawn up a first draft of the project, and the Ministry of Labour and Social Affairs, through the State Secretariat for Immigration and Emigration, which already had other studies and analyses of immigration networks.

One of the most important and controversial aspects in the definition of the project was the statistical definition of the target population to be studied. A foreign immigrant, stock-type variable, is any person who has made an immigration from abroad, flow-type variable, then referring to all those individuals who, having established their habitual residence outside of the National Territory, thus excluding vacation stays, at the time of conducting the survey, reside habitually in Spain. This definition implicitly carries the time dimension over flows that should be considered, without limiting the study to those immigrants who had made an immigration movement during a specific period of time, for example, in the last ten years, or all those who, independently of their origin, have at some point in their lives made an immigration movement. From this second point of view, that which was finally agreed on, the limitation

necessary was that the origin of the immigrant not be Spain, thus excluding from the study the returns of Spaniards by birth who had been born in Spain.

The second decision for the definition of the target population demanded choosing between two basic variables: country of birth or nationality. The identification of this group with the foreign nationals residing in Spain, excluded from the study all those immigrants who, at some point prior to the performance of the survey, even possibly after their arrival in Spain, had become nationalised Spaniards, and therefore, for example, the following generations of Spanish emigrants who might decide to come to Spain, would have been excluded from the study. The choice of the country of birth variable, as was finally agreed on, on the other hand, excluded from the analysis the following, probably the second, generations, of persons born in Spain to foreign immigrants. Finally, given the characteristics of the study, it was decided to limit the population to those immigrants aged 16 years old or over at the time of the interview.

With all of the previous considerations, the target population of the survey was defined as the persons born outside of Spain who, at the time of conducting the survey, were 16 years old or over and had been residing in Spain for more than one year or had the intention of doing so, except for Spaniards by birth, born outside of Spain, who during the year of their arrival in Spain had not yet turned two years old.

Next, and bearing in mind the technical, economic and time limitations of a project based on obtaining data through a survey with the support of interviewers, we embarked upon the task of summarising and structuring in the questionnaire the information contained in the draft of the original project, respecting as much as possible the original content, and in such a way that it would service all of the interests of the three partner institutions summarised in previous paragraphs.

When a more elaborate questionnaire was created, advice was requested of the statistical departments of the Autonomous Communities, in order to ascertain their interpretation and proposals regarding the project, and to propose their cooperation, participating in the financing of the extension of the sample when they were interested in representativeness on an Autonomous Community level for all of the groups of countries of birth represented. The sample was doubled over the initial calculations in the Autonomous Communities of Balears, Navarra and Murcia.

The sample was meant to be based on a probabilistic design using the Municipal Register of inhabitants as the basis for the construction of the framework. The specific characteristics of the target population, such as their greater mobility, mainly in their first year of residence in Spain, implied that for a two-stage design of census sections and persons, based on the municipal register at 1 January for each year, appropriate for surveys aimed at the entire population, it would be necessary to opt for a specific design for this survey, using the municipal register as close as possible to the time of conducting the interviews. On the other hand, one more stage was included in the selection: the dwellings, creating a uniform lottery among the surveyable persons residing in each

dwelling visited, clearly yielding results that surpassed 85% of the effective sample.

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## 2 Objectives

The main objective of the National Immigrant Survey is to provide information on the immigrants who have been in Spain longer than one year, or have the intention of doing so, and in particular, on the most important groups, with a dual goal:

a) Offer the State Administrations valuable and necessary information that is destined to favour a deeper knowledge of the immigration phenomenon, allowing for the study of the measures to be adopted aimed at improving the living conditions of immigrants and facilitating their social integration.

b) Offer the national and international scientific community a source of information that could be the object of numerous studies and analyses.

In this way, the society and the State Administration can benefit both from the data derived from the Survey itself and from the scientific studies carried out with the survey data.

As specific objectives, it is worth noting that, with the current survey and its subsequent analysis, the goal is to:

a) Generate basic information on the community of immigrants present in Spain at the time of performing the Survey. This includes:

- The fundamental socio-demographic characteristics.
- The living conditions and socio-economic situation of the community of immigrants; in particular: the current housing and co-resident group situation and their employment situation (occupation, having more than one job, temporary factor at work, income, ...)

b) Contextualise important aspects of the migratory experience as regards the weight of networks on influencing the decisions and strategies that that immigrants themselves decide. The definition of these networks is fundamentally based on the relations with the group of family and relatives, even if it is possible to extend it to other groups, although with a more limited scope.

c) Generate ample information regarding certain strategies and aspects of the migratory experience that will be analysed, depending on the demographic, socio-economic and cultural characteristics of the immigrants, as well as the functioning of their family networks and the characteristics of the group that they belong to. These strategies refer to the following points:

- The decision to emigrate and the conditions on departure. This includes the previous migratory experience of the individual and of his/her family.
- The conditions on arrival.
- The current situation regarding the family.
- The family re-grouping processes.

d) Analyse, as far as possible, the itineraries followed by the immigrants as well as certain aspects of their migratory experience in Spain. These itineraries will be constructed for:

- The migratory trajectories (both individual and family) followed before arriving in Spain.
- Work trajectory (first employment situation and current employment situation).
- Residential trajectory within the different municipalities in Spain, paying special attention to the first residential situation and the current residential situation.

e) Generate information on the relations that immigrants keep with their countries of origin (consignments, contacts, ...), and among themselves in our country, as well as their documentation situation in Spain and their strategies for the medium-term future. All of this will be provided in relation to the fundamental characteristics of these immigrants themselves and to their migratory experience both in Spain and before their arrival in Spain.

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### 3 Definitions

**Immigrant:** For the purpose of the NIS, all persons whose country of origin is other than Spain and who, at the time of the performance of the survey, have established their habitual residence within the national territory of Spain, are considered immigrants.

**Habitual residence:** Physical premises in which the person resides habitually, that is, the place where he/she normally spends his/her daily rest periods. Temporary trips to another dwelling for purposes of leisure, holidays, visits to relatives and friends, business, medical treatment or religious pilgrimage do not change the place of habitual residence.

**Country of origin:** For this survey, the country of birth is considered to be the country of origin, except in the case of Spaniards born abroad, who during the year of their arrival in Spain have not yet turned two years old, in which case, Spain is considered to be their country of origin, and therefore they are not considered to be immigrants.

**Place (country) of birth:** The country of birth is considered to be that of the habitual residence of the mother at the time of birth of the immigrant. For those territories that have changed legal status or name, the current denomination will be borne in mind as well as the current legal situation and, in particular the current borders, according to the INE classification of countries adapted to the survey.

**Country of departure:** The country in which the immigrant lived before his/her current arrival in Spain (at the time prior to his/her arrival in Spain). This does not include countries in which the person has spent holidays, stayed less than 3 months or stayed temporarily as a transit country (even if the stay were longer than 3 months).

**Migratory trajectory:** Within this survey, migratory movement refers to any movement lasting longer than three months that the immigrant makes. This does not include transfers related to holiday periods nor to those short-duration visits to family or other persons or places.

**Informal migratory network:** Group of social relations in which an immigrant is involved, and which are available to him/her when implementing migratory, residential or labour strategies. Migratory networks are comprised of the relatives of the subject, persons linked to the immigrant due to friendship, compatriot or knowledge reasons. Institutions can also form a part of these networks and, in this case, they would be formal networks. Informal networks are those that are developed outside of the institutional framework, based exclusively on personal relations. The components of the network may be in Spain, in the country of origin or in any country through to which the immigrant has travelled. For the purposes of the indicators generated from this survey, as a general rule, we will focus on the family dimensions of the migratory networks.**Surveyable person:** Any person aged 16 years old or over whose country of birth is other than Spain and who has had his/her habitual residence in Spain for at least one year, or having been here for less than one year, has the intention of doing so. In the case of persons with Spanish nationality from birth and who fulfil the previous conditions, they will not be surveyable if, during the year when they arrived in Spain, they had not yet turned two years of age.

**Informant:** The person in the dwelling who fills out the first part of the questionnaire, that is, the person who fills out the dwelling composition table. The rest of the questionnaire can only be filled out by the person selected from among all those surveyable persons in the dwelling. Only if the informant fulfils the requirements to be surveyable and is selected to respond to the survey, may the same person respond to the entire questionnaire.

**Household:** A household is considered to be the group of persons who habitually reside in the same dwelling. The differences between household and family are: a) A household may be comprised of one individual, whereas a family must consist of at least two members. b) The members of a multi-person household need not be related, whereas the members of a family must be related.

**Family:** A group of persons (two or more) who, residing in the same family dwelling, are linked through a blood or in-law relationship, independently of the degree.

**Family nucleus:** Intermediate hierarchical unit between the inhabitant and the family. This may be one of four types: couple without children, couple with one child or more, father with one child or more, and mother with one child or more. In order to be a part of the family nucleus of their parents, children must not have a partner or children.

**Secondary dwelling:** A dwelling is secondary when it is used during only part of the year, seasonally, periodically or sporadically; for example, for holidays, weekends, temporary work, ... In the case of periodical occupation, the part of the year in which it is occupied by the same household must be less than six

months in order to be considered a secondary dwelling, because if it is equal to or longer than six months, it will be considered a surveyable dwelling, that is, a dwelling in which the person resides habitually.

**Employment:** Employment refers to any paid activity carried out by the subject of the interview. This may or may not be stable employment. This may or may not be employment with a formalised contract. This may be full-time or part-time employment. An immigrant may work in several employments simultaneously.

**Main work or employment:** A person is considered to have more than one employment if he/she simultaneously maintains more than one labour relation during the reference week. Therefore, changing employment during the reference week does not imply having two employments, unless they are performed simultaneously during one day or more, and in which case, the latter, the new job, would be considered the main employment and the former the secondary. If, during the reference week, the person were to perform two employments (or more), the main employment would be determined by the interviewee, and in case of doubt, that to which he/she dedicates the most hours per week. When a person carries out the same occupation, with the same professional situation and simultaneously in several establishments that perform the same activity, in such a way that none of them by itself can be considered the main employment (for example, a housekeeper who works in different houses, or a teacher who teaches at different schools), it is considered that all of them are part of the same employment from the moment when, without interruption, they began to work as such (independently of whether during that period he/she worked at times in one or more establishments) and not as one main employment with the others being secondary employments.

**Work pre-contract:** Agreement of intent by virtue of which the worker commits him/herself to provide services, working for others, under the management and within the body that corresponds to the individual or company that hired him/her, in exchange for payment after the acceptance of the same.

**Verbal job commitment:** Informal work promise or proposal in which the employer (or intermediary on behalf of the employer) commits him/herself to employing the worker, and in which the nature of the work to be performed by the worker is determined (this may be generalised).

**Net amount:** The payment that the worker actually receives after deductions, contributions and other similar payments, in the case of workers working for others. In the case of freelance workers, the net amount refers to the sum obtained after deductions at source, instalments and other similar payments, as well as deductible expenses.

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## 4 Pilot surveys and other previous studies

In order to specify the final content of the questionnaire, administration procedure and sampling design, as well as other peculiarities that had to be taken into account given the population group object of the sample, and the tools available for its conduction, different previous studies and tests had to be performed; specifically, two consecutive pilot surveys were carried out, complemented with qualitative studies.

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### 4.1 THE FIRST PILOT SURVEY

Carried out in October 2005. Given the general nature of aspects that we wished to study of the immigrant population, the first exercise prior to its implementation consisted of the determination of concrete objectives and the specific definition of the target population, according to the interests of the three cooperating bodies. Once the aforementioned extremes were set, it was necessary to structure the questionnaire in such a way that it facilitated the response of the surveyed persons in view of the quantity of retrospective questions included, regarding both the person surveyed and his/her closest relatives.

The first questionnaire to be tested on the field was available in September 2005. The survey was carried out in October of the same year with a sample of 500 immigrants aged 16 years old and over, belonging to 50 census sections - 10 subjects and 10 substitutes per section - from 3 provinces: Balears, Madrid and Málaga and 5 representative groups of countries of birth: EU 15, North and South Sahara, Latin America and Eastern Europe. The provinces for the performance of the test were chosen according to the groups of immigrants most represented in each of them: in Balears, the EU 15 group was selected - 10 sections-, in Málaga, the North and South Saharans were selected - 20 sections- and in Madrid, the Latin Americans and Eastern Europeans were selected - 20 sections-.

The sampling design corresponded to a two-stage sampling, census sections in the first stage and persons in the second. For the selection of persons, the Municipal Register of Inhabitants of the INE was used, those persons were sent a personalised letter of presentation of the survey, and they were subsequently visited at their homes in order to conduct the survey.

The poor interpretation by informants of several questions in the completion of the questionnaire was noted as an incident, so as to improve its writing in the final survey and thus avoid confusion in the response on the part of the surveyed persons. Some reticence to answer certain questions was recorded, in particular those questions regarding the relatives of the surveyed person with whom he/she did not live, and it was detected that some groups felt uncomfortable with the denomination of immigrant. The evaluation of the questionnaire was, however, positive in terms of its content, and it was decided to make some

changes in said content in accordance with the feedback obtained from this study.

Another circumstance that we wanted to evaluate with the pilot survey was regarding the need for the knowledge of languages on the part of the surveyors, given that the survey was aimed at persons born abroad, and communication problems could pose a great difficulty in conducting the interviews, though for the most part they were able to be completed in Spanish, even if, as was mentioned in the previous paragraph, it was necessary to adjust the writing of some specific questions.

In terms of the sampling design, problems were recorded at the time of locating the selected persons in the homes provided by the Municipal Register of inhabitants, with an incident arising in the results of the survey that advised on the change in sampling design and the updating of field incidents considered. Bearing in mind all of the framework and personal incidents, only 23.5% of the total visits made yielded interviews.

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#### 4.2 THE SECOND PILOT SURVEY

Carried out in April 2006. With this study, the goal was mainly to try out a new sampling design created specifically for the survey and that would minimise the problems detected in the previous test, consisting of a three-stage sampling, with census sections as the units of the first stage, dwellings as the units of the second stage and persons as the units of the third stage and the analysis.

The three-stage sampling design required the prior classification of the dwellings into: dwellings with immigrant residents, called type A, and dwellings without immigrant residents, known as type B, according to the information from the Municipal Register of inhabitants at the time of the extraction of the sample. In order to check the strength of the sampling hypothesis, two independent samples were taken, one for each type of dwelling. The results indicated that the hypothesis was good and, therefore, the sampling design was appropriate for the survey, registering less than 3% of errors in classifying the dwellings from type B to type A.

This second pilot study already included in the questionnaire the modifications required by the incidents registered in the first pilot study, and said questionnaire turned out to be convenient for the final survey. The interviews were completed in an average time of 40 minutes.

Although both pilot surveys were conducted with a print questionnaire, for the final survey, the strategic decision was made to program it electronically to ensure the coherence between the many time occurrences that it included, regarding both the surveyed person and his/her relatives.

Granted that the language that the interview was conducted in had not turned out to be problematic in either of the two tests, it was considered sufficient for the final survey to have an electronic questionnaire programmed in Spanish - and personal interview - with versions thereof in text format for the most

represented and extensive languages, in addition to the co-official languages of Autonomous Communities. Nonetheless, it was decided to complete this collection system aided by telephone interviews through a centralised team of translators in the case of the impossibility of conducting any of the interviews due to language difficulties.

The field results improved significantly with the new sampling design, obtaining an effective sample of 72% that we hoped to surpass, which is what has happened, in the final survey, for which an effective sample of 87.37% was obtained.

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#### 4.3 THE QUALITATIVE STUDIES OR IN-DEPTH TESTS

Parallel to the first pilot survey, a cognitive pre-test was conducted to contribute to optimising the quality of the information collected in the questionnaire through the identification of potential sources of measurement error originating in the questionnaire, the surveyed persons and the interviewers. The main elements of study were focused on the manuals of interviewers, Inspectors and survey technicians, on the letter of presentation and on the design, format and wording of the questionnaire questions. These studies were carried out with the collaboration of the school of Psychology of the Universidad de Granada.

Given the broadness and heterogeneity of the variables on which the survey intends to provide information, it was necessary to establish the specific pre-test objectives, select the group of questions that would be the object of investigation of the same. This selection was made considering the general objective of the survey, the administration method (personal interview) and the characteristics of the surveyed persons.

There were four specific procedures used:

–Discussion groups with immigrants (target population): different groups were created, defined by the most represented nationalities in the population to study the perspective and content of the *role* of participant as a surveyed person, such as knowledge and comprehension of the most general concepts, attributions on the objective and goal of the survey, attitudes and degree of implication, ...

–Discussion groups with interview personnel: general information on the dynamics of the process of questionnaire administration.

–Cognitive interviews: direct evidences on the development of the stages of the *question-answer* process followed by the surveyed persons.

–Behaviour coding: identification of "problematic" questions for the interviewer and/or the interviewee.

The results were later evaluated, and together with the results from the first pilot survey, the data collection tools were adapted in the second pilot survey and in the final survey.

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## 5 Technical characteristics of the final survey

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### 5.1 SCOPE OF THE SURVEY

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#### Population scope

The target population of the sample are those persons born abroad and aged 16 years old and over, who at the time of the conduction of the survey, had resided in Spain for at least one year or, even if they had not spent a year in Spain, they did have the intention of residing in the country for at least one year. Excluded from the population scope are those persons born outside of Spain who had Spanish nationality from birth, and who did not yet turn two years old the year that they arrived in Spain.

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#### Geographical scope

The geographical scope of the study encompasses the entire national territory.

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#### Time scope

The survey collection work was carried out for four months, between November 2006 and February 2007.

The reference period, that is, the moment referred to by the situation of the person interviewed, is the week immediately prior to the date on which the survey is conducted with the interviewee.

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### 5.2 SURVEY DESIGN

According to the information available at the time of designing the survey, the Continuous Register at 1 January 2005, the target population presented very different distributions between the different Autonomous Communities, and little homogeneity within the same.

The objective of the survey is to provide estimates on a **national level**, broken down into the most relevant nationalities. Nevertheless, an independent sample has been designed for each Autonomous Community, with the objective of facilitating aggregate data on the most important nationalities residents in them.

The groups of nationalities that were considered the most relevant are:

1. Ecuador
2. Morocco
3. Romania
4. Latin America, not including Ecuador
5. Africa without South Africa and Asia without Japan (and other countries that may be considered to have a type of immigration corresponding to countries that are the most economically developed from these two continents)
6. North America without Mexico and Oceania
7. EU 15 + European Economic Space but not from the EU (Liechtenstein, Iceland and Norway) and Switzerland
8. Other

The sampling framework used was the Continuous Register available at the time that the survey was conducted, referring to September 2006.

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#### **Type of sampling. Stratification**

Given the characteristics of the survey, **two independent samples** have been designed:

- Sample of dwellings in which at least one foreign national resides.
- Sample of dwellings in which only Spaniards reside.

A three-stage sampling was used in both cases, with stratification of first stage units.

The first stage units are the census sections, those of the second stage are main family dwellings, and the third stage unit is the person selected from among the foreign residents. The first stage units are grouped into **strata** in accordance with the size of the municipality to which the section belongs.

Considering the distribution of the target population, in each sample, the following strata have been used:

• **Sample of dwellings with foreign nationals**

*Stratum 0:* municipalities with more than 500,000 inhabitants

*Stratum 1:* remaining provincial capitals

*Stratum 2:* municipalities with between 100,000 and 500,000 inhabitants, not capitals

*Stratum 3:* municipalities with between 50,000 and 100,000 inhabitants

*Stratum 4:* municipalities with between 20,000 and 50,000 inhabitants

*Stratum 5:* municipalities with fewer than 20,000 inhabitants

• **Sample of dwellings with only Spaniards**

*Stratum 1:* provincial capitals

*Stratum 2:* municipalities with more than 50,000 inhabitants

*Stratum 3:* municipalities with fewer than 50,000 inhabitants

Within each stratum, the sections are grouped into substrata, through a **hierarchical analysis of conglomerates**, following Wald's algorithm.

The variables used in obtaining the substrata are:

- **Sample of dwellings with foreign nationals:** Percentage of foreign nationals from each of the existing nationalities considered in this section.
- **Sample of dwellings with only Spaniards:** Percentages of each of the age groups and sex (0-14, 15-39, 40-64, 65 and older) of the population from the section.

For both types of sample, we have also considered the "island" variable in the island Communities.

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### **Sample size. Allocation**

To cover the survey objectives of facilitating estimates with a certain degree of reliability on a national level and by Autonomous Community, a sample size of approximately 21,000 dwellings has been determined, distributed in 2,100 census sections.

Subsequently, the Communities of Illes Balears, Murcia and Navarra, for the purpose of achieving their own goals of providing estimates with a greater breakdown, have extended the sample of dwellings with foreign nationals, through an agreement signed with the INE, and therefore, the final sample was 2,270 sections, distributed in the following way: **1,770 sections** for the sample of dwellings with foreign nationals and **500 sections** for the sample of dwellings with only Spaniards.

The sample is distributed among the Autonomous Communities, following a commitment allocation that is either uniform or proportional to the size of the population, the latter being measured by the number of foreign nationals or by the number of dwellings with only Spaniards, depending on the sample in question.

The distribution of the sample among provinces and strata is carried out strictly proportionally to the number of foreign nationals or dwellings with only Spaniards.

A sample of ten dwellings is selected in each sample section.

As the third stage unit, a foreign person is selected with equal probability from among the residents in the dwelling.

**Chart 1. Distribution of the sample of sections by Autonomous Community**

Autonomous Community	Sample of dwellings with at least one foreign national	Sample of dwellings with only Spaniards	Total sample of sections
Andalucía	147	63	210
Aragón	64	21	85
Asturias (Principado de)	52	20	72
Balears (Illes)	152	18	170
Canarias	94	23	117
Cantabria	49	17	66
Castilla y León	68	30	98
Castilla-La Mancha	68	25	93
Cataluña	210	57	267
Comunitat Valenciana	165	40	205
Extremadura	50	20	70
Galicia	71	30	101
Madrid (Comunidad de)	206	46	252
Murcia (Región de)	114	20	134
Navarra (Com. Foral de)	110	16	126
País Vasco	66	29	95
Rioja (La)	50	15	65
Ceuta and Melilla	34	10	44
<b>TOTAL</b>	<b>1770</b>	<b>500</b>	<b>2270</b>

### Sample selection

#### Sample of dwellings with foreign nationals

The selection of sections was carried out with a probability proportional to the size measured by the number of surveyable foreign nationals. The dwellings, in each section, have equal probability via systematic sampling with a random start, after ordering the dwellings by the predominant nationality in them. At the time of holding the interview, when possible, a third stage unit is selected from among the list of persons born abroad and who reside in each dwelling.

**Sample of dwellings with Spaniards** The selection of sections is carried out with a probability proportional to the size measured by the number of dwellings in the section made up only of Spaniards. The dwellings, via systematic sampling, with equal probability, after ordering by size of the dwelling.

As with the previous sample, at the time of holding the interview, when possible, a third stage unit is selected from among the list of persons born abroad and who reside in each dwelling.

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## Estimators

The main characteristics of the survey refer to dwellings and persons. In both cases, ratio estimators are used, to which calibration techniques are applied.

### A. Estimation of person characteristics

#### 1. Estimator based on the sample design

In accordance with the selection procedure followed, the probability of a person belonging to the sample is given by:

$$\pi_{ish} = \frac{n_h P_{sh}}{P_h} \cdot \frac{m}{V_{sh}} \cdot \frac{1}{p_{ish}}$$

where:

$n_h$ : number of sample sections in stratum h

$P_{sh}$ : immigrant population in section s of stratum h

$P_h$ : immigrant population in stratum h

m: number of theoretical dwellings of the sample by section

$V_{sh}$ : dwellings with immigrants in section s of stratum h

$p_{ish}$ : immigrant population in dwelling i

The estimator of a characteristic X, based on the design factor will be:

$$\hat{X} = \sum_h \sum_{\substack{seh \\ s \in M}} \sum_{\substack{ies \\ ie \in M}} \frac{P_h}{n_h P_{sh}} \cdot \frac{V_{sh}}{m} p_{ish} \cdot x_{ish} = \sum_h \sum_{\substack{seh \\ s \in M}} \sum_{\substack{ies \\ ie \in M}} f_{ish}^d x_{ish}$$

where:

$f_{ish}^d$ : design factor of the person selected in dwelling i in section s of stratum h.

$x_{ish}$ : value of characteristic X of the person selected in dwelling i in section s of stratum h

M: theoretical sample of sections and dwellings

#### 2. Correction of non-response

The correction of non-response is carried out on a provincial and dwelling-size level, measured by the number of surveyable immigrants who, according to the Register, reside in the dwelling. To this end, three types of dwelling size are considered:

- Dwellings with one person
- Dwellings with two persons
- Dwellings with three or more persons.

The probability of response in each cell defined by the cross of province (P) and size (k) is calculated from the design factors:

$$\pi_{k,P}^R = \frac{\sum_{s \in P} \sum_{i \in S} f_{k,i,s}^d}{\sum_{s \in M^e} \sum_{i \in M^e} f_{k,i,s}^d}$$

where  $M^e$  is the effective sample.

The estimator based on the effective sample, with correction of non-response is:

$$\hat{X} = \sum_k \sum_h \sum_{s \in h} \sum_{i \in S, k} \frac{P_h}{n_h P_{sh}} \cdot \frac{V_{sh}}{m} p_{ish} \cdot \frac{1}{\pi_k^R} \cdot x_{ish} = \sum_k \sum_h \sum_{s \in h} \sum_{i \in S} f_{sh}^d \cdot \frac{1}{\pi_k^R} \cdot x_{ish}$$

### 3. Calibration techniques

The previous factor is re-weighted to adjust the estimate distribution to external sources. This calibration has been carried out by means of the CALMAR framework of the French National Statistics and Economic Studies Institute (INSEE).

The variables used in the adjustment process are the population projections, by group of nationalities and sex, in accordance with the external information provided. Said population information comes from a specific programme for deriving, from the Population Now Casts (ePOBa), the groups of persons born abroad, by sex and age, residing in family dwellings.

## B. Estimation of characteristics of dwellings

### 1. Estimator based on the sample design

As with the case of persons, the probability of a dwelling  $i$  belonging to the sample is given by:

$$\pi_{ish} = \frac{n_h P_{sh}}{P_h} \cdot \frac{m}{V_{sh}}$$

where:

$n_h$ : number of sample sections in stratum  $h$ .

$P_{sh}$ : immigrant population in section  $s$  of stratum  $h$ .

$P_h$ : immigrant population in stratum  $h$ .

$m$ : theoretical dwellings of the sample by section.

$V_{sh}$ : dwellings with immigrants in section  $s$  of stratum  $h$ .

The estimator of a characteristic  $X$ , based on the design factor will be:

$$\hat{X} = \sum_h \sum_{\substack{seh \\ seM}} \sum_{\substack{ies \\ ieM}} \frac{P_h}{n_h P_{sh}} \cdot \frac{V_{sh}}{m} \cdot x_{ish} = \sum_h \sum_{\substack{seh \\ seM}} \sum_{\substack{ies \\ ieM}} f_{ish}^{Vd} x_{ish}$$

where:

$f_{ish}^{Vd} = f_{sh}^{Vd}$ : design factor, common to the dwellings of the sample of section  $s$  of stratum  $h$

$x_{ish}$ : value of characteristics  $X$  in dwelling  $i$  of section  $s$  of stratum  $h$

$M$ : theoretical sample of sections and dwellings.

### 2. Correction of non-response

The correction of non-response is analogous to that performed in the case of persons, with the probability of response per cell defined by province ( $P$ ) and size ( $k$ ):

$$\pi_{k,P}^R = \frac{\sum_{\substack{seP \\ seM^e}} \sum_{ies} f_{k,is}^{Vd}}{\sum_{\substack{seP \\ seM}} \sum_{ies} f_{k,is}^{Vd}}$$

where  $M^e$  is the effective sample.

The estimator based on the effective sample and with correction of non-response:

$$\hat{X} = \sum_k \sum_h \sum_{\substack{S \in h \\ S \in M^e; i \in M^e}} \sum_{i \in S} f_{Sh}^V \cdot \frac{1}{\pi_k^R} \cdot X_{iSh}$$

### 3. Calibration with external sources

Finally, an adjustment is made of the population total, by group of nationalities, in accordance with the external information provided, and the available sample size.

#### Sampling errors

For the estimating of sampling errors, the **Jack-knife method** has been used, allowing for obtaining the estimate of the variance of the estimator of characteristics Y through the expression:

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

in which  $\hat{Y}_{(lh)}$  the estimation of characteristics Y, obtained by removing the group of sections i from stratus h, and  $A_h$  are the random groups of sections formed in stratus h.

To obtain the estimator, and for simplicity's sake, rather than recalculating the elevation factors, the stratus factors are multiplied where the sections have been removed by the factor:  $\frac{n_h}{n_h - \#(lh)}$ .

In accordance to the aforesaid:

$$\hat{Y}_{(lh)} = \sum_{j \in h} F_j Y_j + \sum_{\substack{j \in h \\ j \notin lh}} F_j \frac{n_h}{n_h - \#(lh)} Y_j$$

where:

lh is the group of sections from stratum h

$n_h$  is the total sections from stratum h

$A_h$  are the groups of sections from stratum h

# (l) is the number of sections from group l

The relative sampling error is published in the tables as a percentage, variation coefficient, whose expression is:

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

The sampling error facilitates obtaining the confidence interval, within which, the real value of the estimated characteristic is found with a determined probability.

Sampling theory determines that, in the interval between

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

there is 95% confidence in finding the real value of parameter Y.

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## 6 The questionnaire. Characteristics studied

The structure and organisation of the questionnaire used in the final survey was mainly based on the following considerations:

- The objectives of the study, which defined the main variables.
- The determination of the person to be surveyed, carried out once one of the residents of each dwelling visited was contacted.
- The scope of demographic information necessary regarding the persons forming part of the migratory network in which the surveyed person is involved, mainly their closest relatives.
- Chronological order in the definition of migratory trajectories of the different persons making up the network and their interrelations.
- The convenience of placing, at the end of the questionnaire, the optional questions on participation in groups or associations, plans for the future, and those referring to remittances.
- The administration method of the questionnaire through personal interview and electronic questionnaire implemented in a tablet-type laptop computer.

The structure of the questionnaire, with the modules that comprise it and the information collected in each one of them, can be viewed in figure 5.1. The complete questionnaire can also be obtained, including, in addition, the name of the variables with which the answers to the different questions are identified, in accordance with the design of the register of the microdata file. Nonetheless, the questionnaire administered was a version programmed in a tablet-type laptop computer - electronic questionnaire - that included more clarifying notes and examples for some of the questions.

The questionnaire in the version administered - electronic questionnaire - was written in Spanish, although text versions of it were available in the remaining

co-official languages of Autonomous Communities, and in the main languages indicated by the pilot studies: German, French, English, Rumanian and Arabic.

The following are descriptions of the different modules comprising the questionnaire.

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#### 6.1 MODULE 0: IDENTIFICATION OF THE MEMBERS OF THE DWELLING AND SELECTION OF THE PERSON TO BE INTERVIEWED.

The goal is to ascertain the composition of the dwelling and the socio-demographic data of all the inhabitants therein, allowing for the selection of the person to be interviewed.

The basic socio-demographic information is collected - age, sex, country of birth, nationality and year of arrival in Spain - of the persons who reside in the dwelling, to select, among those who belong to the target population, that person who will be surveyed. The module also collects the structure of the household according to the family ties or relationship linking all of the persons in the dwelling, information that is essential, on which the rest of the information collected in the survey depends, and on which the migratory network established for the selected person depends.

The composition of the dwelling in which the immigrants reside and the household that they comprise, constitute significant characteristics that synthesize and differentiate their strategies, experiences and living conditions. For this reason, under this heading, the survey studies the characteristics of the household that constitute an object of study in themselves and also regarding other characteristics of immigrants. In this sense, the size of the household and the family ties that exist among the persons forming part of it constitute the basis for identifying the composition and typology of immigrant households, and provide valuable information regarding the conditions in which they are immersed at the time of the interview.

---

#### 6.2 MODULE 1: SOCIO-DEMOGRAPHY

The objective of this module is to ascertain the main socio-demographic characteristics of the person interviewed: marital status, level of studies, employment situation, knowledge of Spanish, conditions of the dwelling, ..., via questions on their personal and family situation and living conditions in Spain at the time that the survey is conducted.

Complete the socio-demographic information of the surveyed person - place of birth, level of studies, knowledge of languages and marital status - , of the family members closest to the surveyed person who do not live with him/her - sex, age, place of birth, nationality and place of residence - and of the children aged four years old and over who live with the surveyed person - schooling, studies and languages - . The variables that describe these characteristics are usually

relevant for differentiated behaviours measured by others, such as economic activity, profession, family composition, ...

This module also includes the tenancy regime of the dwelling (property or rental), the cost of rental or mortgage and debt taken on. It also studies the material conditions or state of the dwelling, the inhabitable space and the systems of water supply, energy and heating of the dwelling occupied by the immigrant and the co-residing group.

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### 6.3 MODULE 2: MIGRATORY EXPERIENCE

The objective of this module is to ascertain the migratory experience from the birth of the immigrant: the countries in which he/she has lived, the year when he/she began to live in each one of them, with whom and the reasons inspiring him/her to move.

These characteristics are aimed at contextualising migratory experiences, at identifying and differentiating the role and weight that migratory networks have in the decisions and strategies that immigrants implement from their place of birth. The migratory experience of the members of the family of origin of the immigrant and their own previous migratory experiences constitute elements that encourage or influence the decision to come to Spain, as well as the means, the time of doing so and the arrival conditions.

The migratory history of the individual is reconstructed, from his/her birth to the present, including the persons who accompanied him/her for each move and the reasons for moving.

In addition, information is obtained on the migratory experience of the relatives closest to the interviewee - first country to which they emigrated - .

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### 6.4 MODULE 3: CONDITIONS IN THE COUNTRY OF DEPARTURE BEFORE COMING TO SPAIN

The purpose of this module is to collect information regarding the conditions which the immigrant faced in the country of departure before coming to Spain.

Therefore it concerns identifying some of the more significant factors which may work in favour or against emigration. In particular, attention is paid not only to the family and home environment of the immigrant, but also on the situation related to their economic activity and insertion into the labour market before coming to Spain. This information provides an insight into the main expulsion factors, particularly those of an economic nature, as well as family circumstances surrounding migration. However, in turn, it constitutes a base for longitudinally comparing transitions experienced by immigrants in their economic activities from their place of origin to their destination.

This module specifically covers information regarding housing and employment of the surveyed person and place of residence of immediate family in the country of departure before coming to Spain.

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#### 6.5 MODULE 4: ARRIVAL IN SPAIN

This module is not conducted if the immigrant arrived in Spain before the year 1990. Its main objective is to cover the conditions and manner in which the person arrived in Spain. Thus, many of the elements will be profiled which define the relationships which the migratory network establishes in the point of origin and destination.

Under this heading, the essential elements are studied of the migratory movement in itself - the journey or displacement of the immigrant - , bearing in mind that the final destination is Spain. The object of study is centred on the displacement that, ultimately, drives the person from the country of departure - the last in which he/she stayed three months or longer before coming to Spain - to any point in the Spanish national territory.

Excluded from the analysis are prior displacements or transfers in the migratory itinerary that the immigrant may have followed, that do not have the Spanish national territory as the point of destination.

Included are material and economic travel aspects and those related to the existence of informal migratory networks, in particular, on the means of transport used, contacts in Spain and financing of the journey.

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#### 6.6 MODULE 5: EMPLOYMENT HISTORY IN SPAIN

This module studies the migratory trajectory in Spain, mainly focusing on employment. The analysis centres on the first and most recent jobs in Spain.

Here the object of study centres on the employment situation of the immigrant in Spain, including two key time dimensions. The first refers to the current employment situation of the immigrant, adhering to the information that the immigrant provides as regards the week prior to the time of the survey. The second refers to the first employment situation that the immigrant had upon arrival in Spain, if and only if the surveyed person has had more than one employment. In both cases, the interviewee is asked for details on his/her employments, including occupation, the means of gaining them and remuneration. The complete employment history is reconstructed through certain questions that link the first employment situation to the latest - the number of employment contracts had in our country, the number of times that the surveyed person was unemployed and the duration of the longest of these periods -. In this way, the goal is to obtain key information regarding the labour evolution that the immigrant has had in his/her migratory experience.

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## 6.7 MODULE 6: RESIDENTIAL HISTORY IN SPAIN

This module studies the migratory trajectory in Spain, mainly focusing on residence. The questions centre mostly on the characteristics of the first dwelling or accommodation that the immigrant had in Spain. Excluded are the dwellings in which the immigrant has spent holidays or in which he/she has spent less than one month.

The knowledge of the aspects related to the dwelling in which immigrants have their residence, which are collected in module 1 - current living conditions -, is increased with the longitudinal or historical dimension considered at this point. Substantial information is collected on the evolution that the residential situation of the immigrant has experienced. For this purpose, in this section data is compiled on the first residence of the immigrant upon his/her arrival in Spain, in that case that there have been changes of residence in the migratory experience within the national territory. The information collected allows for evaluating the number of changes of residence and the significance of these changes in the first year of stay in Spain, coinciding with the initial stages or the arrival of the immigrant.

This also includes information on the mobility of the immigrant between different municipalities, which is fundamental in ascertaining internal migratory movements.

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## 6.8 MODULE 7: RELATION WITH THE COUNTRY OF BIRTH

The relation with the country of birth constitutes one of the essential aspects in understanding the past, present and future dynamics of any migratory process. The nature of the migratory movement, the strategy designed by the migrant or in relation to the migratory network, the migratory network and its characteristics and even the development of the migratory experience itself have a basic root in the society of birth. In this society, a good deal of the plans that have to do with migration are born, and a maintenance or perpetuation of the migratory process is carried out.

It is specifically this module that includes variables that collect influences perceived by the surveyed person in deciding to come to Spain, contacts kept with relatives and friends, visits, mailing of remittances and properties in the country of birth.

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## 6.9 MODULE 8: SOCIAL INVOLVEMENT IN SPAIN

This last module attempts to collect complementary information on the immigrant, specifically: his/her social involvement in Spain, plans for the future, documentation situation.

The social involvement of immigrants in Spanish society is an essential aspect in determining the degree of integration of the said group in our society, for the purpose of satisfactorily adapting integrating policies. This section thus includes three questions regarding involvement in social groups or associations and in municipal elections.

It is well-known that the information on the documentation situation is not adequately collected in household surveys, given the nature of the instrument and the difficult determination of the matter, as has been proven in other studies, however, a question is still included that allows for jointly using this information with the rest of the Survey, bearing in mind that these are the instruments that are appropriate for these objectives, near the treatment of the administrative registers.

This also includes information on the plans of the surveyed person in terms of his/her permanence in our country and intention of bringing other relatives here.

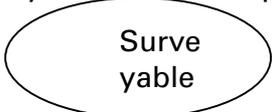
**Figure 6.1 Structure of the questionnaire**

M0 IDENTIFICATION OF THE MEMBERS OF THE DWELLING

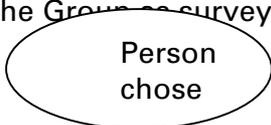
-Classification of the dwelling as primary, secondary, group and others.



-Information on the persons who live in the dwelling (age, country of birth, nationality and arrival in Spain).



-Classification of the Group as surveyable and non-surveyable



-Selection of the (person selected)

-Family ties among the persons in the dwelling and the person chosen.

-Family ties among the other persons in the dwelling among themselves.

---

#### M1 SOCIO-DEMOGRAPHY

–Of the person chosen:  
(place of birth, studies, languages and marital status)

–Of relatives with whom he/she does not live:  
(sex, age, country of birth, nationality and place of residence).

- Of the spouse.
- Of the children.
- Of the siblings.
- Of the father.
- Of the mother.

–Of the children aged 4 years old and over with whom he/she lives:  
(schooling, studies and languages).

–Current dwelling and relation of the surveyed person with the dwelling.

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#### M2 MIGRATORY EXPERIENCE

–Migratory trajectory of the person chosen, companions and reasons.

–Migratory experience of relatives.

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#### M3 CONDITIONS IN THE COUNTRY OF DEPARTURE BEFORE COMING TO SPAIN

–Employment and residence conditions of the person chosen.

–Residence conditions of relatives.

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#### M4 ARRIVAL IN SPAIN

–Conditions of the journey and situation on arrival.

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#### M5 EMPLOYMENT HISTORY IN SPAIN

–First job, current job and changes in employment.

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#### M6 RESIDENTIAL HISTORY IN SPAIN

–First dwelling in Spain and changes in residence.

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#### M7 RELATION WITH COUNTRY OF BIRTH

–Communication with relatives, travel, remittances and properties in the country of origin.

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#### M8 SOCIAL INVOLVEMENT AND DOCUMENTATION SITUATION IN SPAIN

–Social involvement, documentation situation and plans for the future.

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### **7 Collection method and organisation of fieldwork**

Due to the distribution of the sample in some provinces being very small, it was considered more efficient, in terms of information collection in the field, to group the sample in zones. For this reason, the provinces were grouped in collection zones, taking into consideration for this grouping the workload of the provinces and their geographical proximity.

The information was collected on the level of the zones created, with the field team for each zone being made up of the following types of personnel: interviewers, interviewer inspectors and inspector technicians of the survey for the zone.

The Survey inspector was the person in charge of the organisation and control of data collection, training of dependent personnel, distribution of work, inspection and monitoring of the work and quality control of the information obtained.

The interviewer inspector was dependent on the Survey inspector, with the main objectives being the consultancy, organisation of work and control thereof of his/her dependent interviewers, performance of the filtering of the questionnaire collected by them and inspection of their work in terms of ensuring the quality of the information collected. One of the main functions consisted of visiting the dwellings indicated by the Survey inspector, in accordance with an established Plan of inspection, checking whether the Interviewer carried out his/her work correctly and whether the data collected was correct.

The interviewers, as personnel in charge of the direct collection of data, were selected bearing in mind that, in order for the survey field work to succeed, the persons who were to establish contact with the immigrants had to have professional interest and experience in working with persons affected by social problems, which is common among immigrants. For the same reason, almost a week of theory and practical training was dedicated to this personnel, both in the rules of the survey and in the techniques for home interviews.

Data collection was carried out via the personal visit of the interviewers to the dwellings selected, using as an instrument a laptop computer, in which the electronic questionnaire was implemented in different languages. However, as a complement, a centralised system of telephone information collection was habilitated in foreign languages (English and Arabic) for those cases in which it

was impossible to conduct the interview in the home, due to language difficulties, although only 26 such requests were received, of which the questionnaire was completed in 50% of the cases.

A letter was sent to the dwellings selected one week prior to the interview, explaining the reason for the survey. A free telephone helpline was also made available, during the period of information collection, to tend to questions related with the survey that the surveyed persons might wish to ask.

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## 7.1 PROCESS FOR THE ADMINISTRATION OF THE QUESTIONNAIRE

Due to the size and complexity of the questionnaire, a computer-assisted questionnaire was chosen, with which it was possible to control all of the historical facts of the different persons making up the migratory network about which the information was collected. The election of the information collection method was fundamental in guaranteeing the coherence of the responses, granted that the interviewee had to remember many time facts and places that were interrelated in different parts of the questionnaire.

Thus, the interviewers were provided a laptop computer on which to write down the responses of the interviews with a light pen. The computer itself controlled the flow of questions to be asked, according to the responses it obtained throughout the interview, and included coherence controls among the recorded responses and notices and examples to facilitate the comprehension of the questions asked. The interviews were recorded on the computer, which at the same time, had devices for reviewing and filtering, printing and downloading to files. If a response was incoherent with those previously mentioned, the computer prevented the interview from continuing and allowed for navigating the part of the questionnaire that was already completed in order to correct the error and, if necessary, the flow of questions to ask if the computer had to change it by virtue of the corrected response.

Module 0 of the questionnaire could be answered by any person residing in the dwelling who acted as informant, and said module collected the demographic information necessary to determine the surveyable persons in the dwelling. Once the persons residing in the dwelling who formed part of the target population of the survey were ascertained, the computer itself selected the person to be surveyed, and this said person answered the rest of the questionnaire.

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## 7.2 INCIDENTS IN THE FIELDWORK

The dwellings selected to be a part of the sample of this survey belonged to two types of sections:

Type-A Sections. In the dwellings selected in this type of section, according to the Municipal Register of Inhabitants of 2006, there were persons residing, aged 16 years old and over and born outside of Spain.

Type-B Sections. In the dwellings selected in this type of section, according to the Municipal Register of Inhabitants of 2006, there were not persons residing, aged 16 years old and over and born outside of Spain. In these dwellings, there might have been persons residing, younger than 16 years old born outside of Spain.

In each section of the sample, independently of their type, there were 10 dwellings and 10 substitute dwellings selected. Exceptionally, there may have been fewer than 10 substitutes in some section. There might also have appeared some section without any substitute dwelling.

The listing of substitute dwellings is obtained by substituting the incidents produced during the interview process, both if the incident takes place in the dwelling and if it takes place in the substitute dwelling.

Substitutes are used only to prevent the size of the sample selected from diminishing too much, with the corresponding increase in sampling errors.

The following detail the incidents considered in the performance of the fieldwork, distinguishing the unit in which they are produced: dwelling, group of persons who comprise it or person selected.

#### **A.1. Incidents in the dwelling selected**

**Empty dwelling (E):** the dwelling is uninhabited due to death, change of residence of the persons who lived there or the building in ruins.

**Secondary dwelling (SD):** a dwelling is secondary when it is used during only part of the year, seasonally, periodically or sporadically; for example, for holidays, weekends, temporary work, ... In the event that occupation were periodical, the part of the year when it is occupied by the same household must be shorter than six months in order to be considered a secondary dwelling, given that if it were longer or equal to six months, it would be considered a surveyable dwelling.

**Un-locatable dwelling (UD):** the dwelling cannot be located at the available address, because said address is erroneous, because it no longer exists, or for other reasons.

**Dwelling used for other purposes (OP):** the available address does not correspond to a family dwelling, but rather to commercial premises, an office, a workshop, ..., and persons do not live there.

**Inaccessible dwelling (IN):** that which cannot be accessed to conduct the interview due to climatological causes (floods, snowstorms, ...) or geographical reasons, when there are no passable roads leading to the dwelling. This includes cases in which the danger of the area prevents access to the dwelling.

#### **A.2. Treatment of dwelling incidents**

In the aforementioned cases, the dwelling will be substituted by the first substitute dwelling available that appears in the list of dwellings selected for the sector, both for dwellings of type-A sections and for dwellings of type-B sections.

### **B.1. Incidents with the group of persons in the dwelling**

In the dwellings that present no incidents (surveyable or main dwellings), it is studied whether there are persons there who fulfil the conditions to be the object of survey, that is:

1. Resident in Spain,
2. Born outside of Spain,
3. Aged 16 years old or over and,
4. Have the intention of remaining in Spain at least one year in total, in the case of having arrived in Spain less than one year ago.
5. If the person has Spanish nationality from birth, he/she will be surveyable if, in addition to fulfilling the previous conditions, during the year of arrival in Spain, he/she turned 2 years old or over.

The following are considered group incidents:

**Surveyable group (SG):** when it is possible to select one or more persons from the dwelling to be interviewed.

**Absence of the group (AG):** when the dwelling is occupied by a group of persons, but they cannot be located during the fieldwork in that section, and there is no additional information justifying a Long-term absence.

**Long-term absence of the group (LAG):** the dwelling is inhabited by a group of persons, but they are all absent, and in addition, it is known that the absence is going to continue for the duration of the fieldwork in that section.

**Refusal of the group (RG):** the person with whom contact was initially made in the dwelling refuses any type of cooperation.

**Inability of the group to answer (IG):** the group cannot participate in the interview due to language difficulties or other causes such as illness or disability.

**Unsurveyable group (USG):** none of the persons in the dwelling fulfil the requirements to be selected.

### **B.2. Treatment of group incidents**

In the aforementioned cases (except for Surveyable group: SG, which does not constitute an incident in itself, and for Unsurveyable group: USG, which has its own treatment), the dwelling is substituted by the first substitute dwelling available on the list of dwellings selected for the section, both for type-A section dwellings and for type-B section dwellings.

In the case of Unsurveyable group (USG), if the dwelling belongs to a type-A section, it is substituted by the first substitute dwelling available that appears on the list of dwellings selected in the section, but if the dwelling belongs to a type-B section, no substitution is made, and therefore no substitute is used.

### **C.1. Incidents with the person selected**

In the surveyable dwellings that present no group incident (surveyed group), the following incidents are considered regarding the person selected:

**Surveyed (S):** the person selected cooperates and provides the information required for all of the modules.

**Refusal (R):** the person selected refuses to cooperate, which may be an initial complete refusal or a later refusal after beginning to cooperate.

**Absence (A):** the person selected is not present in the dwelling for any of the visits made during the fieldwork in this section, without there being any evidence of refusal or of long-term absence.

**Long-term absence (LA):** the person selected is not present in the dwelling and the personnel is informed that he/she will remain absent for a period of time longer than the stay of the Interviewer in the section.

**Inability to respond (IR):** the person selected is unable to respond to the interview, due to disability, illness or language difficulties. Exceptionally, in the case of language difficulties, it is acceptable for another person from the dwelling to collaborate, making it possible for the Interviewer and the person selected for the interview to understand each other. If this is possible, the survey will be conducted.

### **C.2. Treatment of incidents with the person selected**

When one of the above incidents takes place (except for Surveyed: S) in type-A section dwellings, the dwelling is substituted by the first substitute dwelling available that appears on the list of dwellings selected for the section. For dwellings from a type-B section dwelling, no substitute is used.

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## **8 Response rate**

The conduction of the survey with a probabilistic sample design allows for the analysis of a response rate that measures the representativeness of the effective sample, total of valid surveys conducted, in comparison with the theoretical sample and that other, no probabilistic, survey designs could not perform.

This section focuses on the response rate obtained in the type-A sample sections in which the dwellings selected had some foreign national, in accordance with the selection framework.

A total of 15,465 valid questionnaires were obtained from the fieldwork, for which 32,541 dwellings were visited, obtained from the listing of 17,700 main family dwellings from the type-A sample, in which, according to the framework, at least one person resided who had been born abroad and was aged 16 years old or over, the target population of the survey. Out of the total of 15,465 interviews conducted, 8,911 corresponded to persons selected in dwellings from

the main sample, that is, 57.62%, and 6,554 came from the sample of substitute dwellings, 42.38%.

As a whole, an effective sample of 87.37% was obtained as compared with the theoretical sample of 17,700 dwellings. The 8,911 interviews achieved from the main sample represent 50.34% of the same. This result does not seem bad, compared with those of other surveys aimed at households, if we bear in mind that, in addition to the usual framework errors, the aim of this survey necessarily includes the additional framework incident categorised as *Unsurveyable group*, for the cases in which there is no surveyable person residing in the dwelling, and that this incident, with 1905 dwellings erroneously classified in the listing of dwellings as surveyable, represents 10.83% of the main sample.

In 4 Autonomous Communities, the percentage of effective sample was greater than 95%, in Principado de Asturias - 96.73% -, Región de Murcia - 96.05% -, Comunidad Foral de Navarra - 96.73% -, and La Rioja - 96.40% -, whereas in another 3 -Autonomous Communities, this figure did not reach 80% of the collected sample, in Illes Balears - 77.76% -, Canarias - 71.91% -, and Melilla - 70.91% -.

The response rate, the quotient between questionnaires obtained and dwellings visited, both of the main sample and of the substitute, yielded 47.52%, which increased to 63% if we do not consider among the dwellings visited those listed that were framework errors, in total, 7,985 dwellings. The framework errors in the listing of dwellings selected refer to family dwellings that are not main dwellings, because they are dedicated to other purposes, or they are seasonal or empty dwellings. Also included in framework errors are those dwellings appearing twice in the listing, those that are un-locatable and those that are erroneously classified as surveyable when the residing group has turned out to be un-surveyable.

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## 9 Elevation and reference populations

Elevation factors have been calculated for persons and dwellings. The elevation factor of persons illustrates what the surveyed person represents over the total of the target population, and respectively that of dwellings over the total of the dwellings in which it has been estimated that these persons live. The total of dwellings for which the elevation factors have been calculated, has been obtained from the framework and corresponds to 2,158,694 dwellings. To elevate the population surveyed to the total of the target population, population projections have been used, by sex and group of countries of birth, of persons aged 16 years old and over at 1/1/2007, thus obtaining a total of 4,526,522 persons. Among the groups of countries of birth, the countries of birth with the most significant presence in the Spanish population have been considered in a single group.

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## ESTIMATION OF THE POPULATION AT 1/1/2007 AGED 16 YEARS OLD AND OVER, BY PLACE OF BIRTH, SEX, AUTONOMOUS COMMUNITY

The estimation originated from the Population Now Casts (ePOBa) at 1/1/2002, by Autonomous Community, sex, age and distributed by places of birth - 13 groups -, according to the distribution provided by Census 2001.

To adjust to the Now Casts by large groups *0-15* and *16 and over*, in the period 2002 to 2007, it was necessary to work with the corresponding generations at each moment that, in January 2007, had turned 16 years old or over.

Thus information was obtained from the Census of 2001, by sex, Autonomous Community and for each group of countries of birth considered, o the generations that at that date were 10 years old or younger, 11, 12, 13, 14, 15, and 16 years old and over. The corresponding percentage distribution was applied to the Population Now Casts (ePOBa) at 1/1/2002.

For each year, the corresponding entries - both internal and external were added, by generation, sex, place of birth, and those born in Spain, as well as subtracting the departures (internal and external) and deaths, with the same breakdown for each Autonomous Community.

The resulting population was adjusted to the ePOBa for each year from 2003 to 2007.

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## 10 Treatment of the information

The subsequent treatment of the information collected, detection and estimation of errors, was carried out using the Detection and Automatic Imputation technology developed by the National Statistics Institute, based on the Fellegi-Holt model, after extending the system to be adopted to the needs of this survey. As reference data, it is necessary to consider that the questionnaire register design contains more than 1,600 variables to which nearly 500 other derived variables have been added, 3,800 edits have been configured for the control of the flow of the questionnaire, nearly 5,000 for the evaluation of the consistency of the responses, and some 100 rules of automatic imputation. The imputation work represents less than 2 per thousand of the total information collected in the questionnaires, and in many cases is due to the does not know - does not answer responses.