Country: Spain
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Survey Institute: Demoscopia
Expert: Seppo Laaksonen
Reference study: ESS Spain Round 1

| Target Population, Population coverage | Persons aged 15 years and over who are resident in private households in Spain, including the North-African cities of Ceuta and Melilla |

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<tr>
<th>Problems</th>
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| The population census structured in census sections taken from the Continuous Census (Padrón Contínuo), updated in March 2004 by the Instituto Nacional de Estadística (INE, the Public Statistics Office of Spain).

PSUs are Electoral Sections. There are 34,600 electoral sections in Spain. Electoral sections are the most elementary framing unit of eligible voters. The size of sections vary between 500 and 2,000 voters (18+ years old), being 1,300 the average size.

The sampling frame for stage 2 is a list of persons enumerated in the Continuous Census. The list comes from the 2001 Census, updated in March 2004 using the municipal rolls. When a citizen moves from one borough to another he has to notify it to the local authorities of the new place of residence. That will allow him to access to health, education and other public services and also to be included in the electoral list. The law obliges every city council to send the data from its roll to the INE once a year. That process produces national Continuous Census of inhabitants. Foreigners usually register themselves in municipal rolls in order to benefit from welfare services even if they are not legally established in the country. Taking the Continuous Census as a frame ensures the best possible coverage of the population of residents.

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<td>The frame includes all residents in private houses, yet being family or collective. This can result in a selection of less than 1% individuals not included in the target population.</td>
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<th>Sampling design</th>
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| Stratified Two-stage probability sampling. The strata will be obtained by crossing two population classification criteria: Autonomous Community of residence (18 units) and Type of habitat (3). Only 43 of the resulting strata are not empty.

Stage 1: Selection of 503 PSUs proportionally to population of 15+ years old.
Stage 2: Random selection of 6 or 7 individuals in each PSU selected in...
the previous stage (6 in rural area units and 7 in urban areas).

Overrepresentation of the Basque Country and the North-African cities of Ceuta and Melilla (50% more) due to the predicted low response rate in these regions.

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<th>Design effects</th>
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<tr>
<td>DEFF$_s$ = 0.956</td>
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<tr>
<td>DEFF$_c$ = 1 + (4.095 - 1) * 0.089 = 1.275</td>
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<tr>
<td>DEFF$_p$ = 1</td>
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<tr>
<td>DEFF = (DEFF$_s$) · (DEFF$_p$) · (DEFF$_c$) = 0.956 · 1 · 1.275 = 1.219</td>
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<th>Remark</th>
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<td>DEFF$_s$ and DEFF$_c$ for the 2004 round have been estimated from the data of ESS Round 1. The stratification proposed for the Spanish Sampling Design of Round 2 increases the precision of the sample.</td>
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<th>Target response rate</th>
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<td>70%, although a safe estimation of 65% is handled for the calculation of the sample size.</td>
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<td>A net sample of size n$<em>{net}$ = n$</em>{eff}$ * DEFF = 1,500 * 1.219 = 1,829 interviews will be conducted. With 10% of ineligibles and a response rate of about 65% the gross sample size must be n$_{gross}$ = 1,829 / (0.65 * 0.9) = 3,126. Gross sample size including the Basque Country overrepresentation = 3,126 + 80 = 3,206. A conservative estimation of the number of achieved interviews per cluster has been taken (4.095).</td>
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<th>Special Features of the design</th>
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<td>The sample design ensures equal probability of individual selection for all the individual in the same stratum, although there are some differences among strata. There are two sources for differences among strata. First, the distribution of target population would differ from the distribution of total population (used in the assignment of number of sections and individuals of the sample to strata). Second, some strata are over represented in order to compensate for low response rates. It is expected that at the end the probability of belonging to the set of intervieweds will be nearly the same for all individuals of all strata.</td>
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<th>Improvements introduced in Round 2 with respect to Round 1:</th>
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<td>• Increase in the number of strata</td>
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<td>• Removal of the intermediate step of address selection</td>
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<td>• Reduction of the number of individuals selected in each PSU</td>
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