

Improvements in CATI algorithm to reduce Non response.

Victor Balsa Criado

The Spanish LFS is based in a 6 waves mixed model CAPI – CATI. Each quarter 1/6 part of the sample is renewed. For each dwelling, first interview is made face to face and subsequent interviews are supposed to be conducted by CATI (only dwellings without a telephone number or people who expressly ask for it have their subsequent interviews face-to-face).

In order to assess the importance of CATI it must be known that every quarter the sample of Spain LFS consists of more than 80,000 households of which more than 55,000 are finally surveyed (40,000 of them by the CATI mode).

As the sample is homogeneously distributed throughout the 13 weeks of the quarter, every week there are about 3500 new households in CATI that must be managed with an optimal algorithm, which at each moment must offer to the interviewer the household with higher probability to be resolved.

Beyond the logical rules that manage the algorithm, the constant loss of human resources encourage us to look for new rules that could optimize the results.

In recent years, in order to reduce the number of non-contacts, we have obtained some results:

- 1- The first days of the week are more productive, and on Thursdays and Fridays, the number of successful questionnaires is much lower.
- 2- The number of calls necessary to get a success depends significantly on the type of household, in terms of age and activity of its members.

Relating both concepts, a modification has been made in the algorithm as follows:

A partition in the sample has been made based on the composition:

- Type 2. Households composed only of people over 65 (in theory retired)
- Type 1. Households with people over 65 or inactive people under 65.
- Type 0. Rest of households

Empirical data show that households of types 1 and 2 are easier to obtain and require fewer contact attempts (2.6 and 1.7 call on average, respectively). On the other hand, type 0 households require more call attempts on more different days. With this distinction, we can force the algorithm to offer us “difficult” households first, leaving behind the simplest homes, which are released on Thursdays and Fridays each week.

The presentation explains the effects that this measure has had. With this measure. The number of calls to “active” households has increased very slightly, but it has been significantly affected the number of different days in which those contact attempts are distributed.

Now, a home type 0, is called during all the days of the week (if it remains not contacted), with what the average number of days with contact attempt, increases and the final success increases proportionally.

The rates of non-contacted households in CATI have been smoothly improved and also the composition of the final surveyed sample.

On the other hand, the pattern of interviews completed by day of the week has been significantly modified.