INTERVIEWING METHODS AND DATA QUALITY: THE CASE OF THE SPANISH SURVEY OF HOUSEHOLD FINANCES (EFF) 2020

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- The **EFF** is a nationally representative survey conducted by the BdE since 2002 every three years (every two since 2020) that contains detailed information on household assets, debts, income and consumption for the population of households living in Spain.

- Given the complexity and the length of the questionnaire, interviews are **computed assisted** (CAPI) and conducted by **interviewers with specific training**.

- However, the health and mobility restrictions imposed by the COVID-19 pandemic led us to revise some methodological aspects of the 2020 edition, mainly, to switch **the interviewing mode from CAPI to CATI**.

- The goal of this analysis is to estimate the **overall impact of this change** for the 2020 edition on the **quality of the data** collected.

MAIN IDEA: CAUSAL INFERENCE FROM OBSERVATIONAL DATA
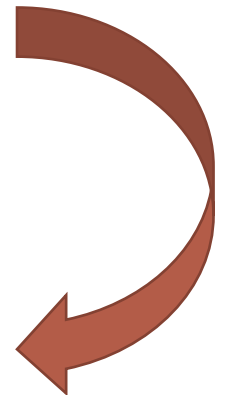
- To assess the **mode effect** we compare data quality indicators based on telephone interviews from the EFF2020 with those based on the personal interviews conducted during its preceding wave, the EFF2017.

- **Method's main idea:** we adjust for differences in the covariates between the treated and the control sample units using a weighting procedure based on the propensity score of being treated.

- The comparison of data quality indicators between the 2020 (treated) sample and the reweighted (control) 2017 sample provides an estimate of the overall impact of the change in the interviewing mode.

- This analysis is useful to:

    - Assess the comparability of the EFF2020 data with previous waves.

    - Open the possibility of implementing mixed modes in the data collection for subsequent waves.

OUTLINE

1. **The EFF: purpose and methodological features**

2. **The EFF2020: a survey in the middle of the pandemic**

3. **Estimation strategy**

4. **Average effect on:**
   - **Interviews length**
   - **Item non-response**
   - **Respondents' attitude.**

5. **Takeaways**

- The EFF is a nationally representative survey conducted by the BdE since 2002 that contains detailed information on household assets, debts, income and consumption for the population of households living in Spain.

- Frequency:
  - Every three years (2002, 2005, 2008, 2011, 2014, 2017, 2020).
  - Every two years since 2020.
  - The field for the eight edition (2022) has just finished this June. More to come in 2024, 2026,…

- Main characteristics:
  - Oversampling of wealthy households based on individual wealth tax files.
  - Panel component.
  - Full CAPI in the period 2002-2017; full CATI in 2020; mixed mode (CAPI first option) in 2022.

- Sample size: around 6300 HHs interviewed in each wave. Out of those, around 50-60% corresponds to panel households (HHs interviewed at least in the previous wave).

- The questionnaire: the info that we get
1. Demographic characteristics (all members of the HH)
2. Real assets and associated debts
3. Other debts
4. Financial assets
5. Insurance and pension plans
6. Labour market situation and related individual income (all adult members. Income referring to the moment of the interview and to the whole calendar year previous to the interview)
7. Incomes not related with labout market (for the moment of the interview and to the calendar year previous to the interview)
8. Means of payment
9. Expenditure
10. In the **EFF2020** a new section on the impact of the covid-19 crisis on the economic situation of households was included.

- Information is collected at the household level (except demographics and labour market outcomes).

- It is reported by the so-called "reference person of the HH", i.e., the most knowledgeable HH member about the household's finances.

- Seventh edition of the survey, following those of 2002, 2005, 2008, 2011, 2014 and 2017 (biennial frequency from 2020 on)

- Interviews were collected from mid November 2020 until end of June 2021

- The pandemic mobility and health restrictions led us to change several aspects related to the fieldwork:

  - The interviewing mode from CAPI to CATI (most salient change).

  - Longer duration of interviewers' training and more time to practice.

  - Close monitoring of interviewers' performance (e.g., through audio records).

- The number of valid interviews was 6313, 60.7% corresponds to panel households (hhs inteviewed in 2017)

- We study **the effect of the telephone mode** (as opposed to F2F) on several outcomes of interest:

    - **Time durations** of different sections at the interview level
    - Interview completeness ratios: point-value ratio and wide ratio
    - Prevalence of item non-response for specific monetary questions
    - Respondents' attitudes when completing the interview.

- **Limitations:**
    - No experimental design or random assignment to treatment.
    - The telephone mode was applied to all interviews in the EFF2020 so there is not within sample variation.

- Given the lack of an experimental design, **what we do** is to use as control the sample of the EFF2017.

- The EFF2017 represents a good benchmark to compare with since it is the nearest wave in time to the EFF2020 edition and it is similar regarding important dimensions of the fieldwork (e.g, fielwork company and the pool of interviewers).

- **BUT:** Interviews in the treatment and control groups belonged to different contexts, samples and fieldworks so that we adjust for **confounding** using an extensive set of covariates that measure households' characteristics, interviewers characteristics, and municipality size:

  - Age, education and gender of Reference Person (RP)
  - Number of household members
  - Proxy respondent
  - Ownership status of main residence
  - Municipality size
  - Interviewer characteristics: gender, experience in the EFF, years of experience at the survey agency

- In addition, we use those covariates **to reweight observations** in the control sample (EFF2017) so that the characteristics of both the treatment and control samples are similar at least in observables.

- Weights are such that they increase the relevance of those observations in the control sample that are more similar in observables to those in the treated (telephone) sample, where similarity is defined by the predicted probability of being CATI as computed from a logit model estimated using both samples.

- **BASIC IDEA: to make both groups more similar in terms of observables so that we can use the EFF2017 sample as counterfactual for the treated sample.**

Table 1. Demographic distribution of 2020 and 2017 samples

	2020 (Treatment sample)	2017 (Control sample)	2017 (Control sample, reweighted with propensity scores)
NUMBER OF HOUSEHOLDS	6.326	6.430	6.430
AGE OF RESPONDENT			
Under 35	5%	4%	5%
Between 35 and 44	15%	14%	17%
Between 45 and 54	22%	19%	23%
Between 55 and 64	23%	22%	23%
Between 65 and 74	19%	22%	17%
Over 75	16%	19%	15%
GENDER OF RESPONDENT			
Man	60%	62%	58%
Woman	40%	38%	42%
EDUCATION OF RESPONDENT			
Below secondary education	35%	40%	39%
Secondary education	28%	25%	29%
University education	37%	35%	33%

	2020 (Treatment sample)	2017 (Control sample)	2017 (Control sample, reweighted with propensity scores)
TENURE STATUS OF MAIN RESIDENCE			
Rented	15%	12%	15%
Ownership	80%	82%	80%
Free use	5%	5%	5%
NUMBER OF HOUSEHOLD MEMBERS			
One	20%	20%	21%
Two	36%	38%	35%
Three	20%	19%	20%
Four	17%	16%	18%
Five or more	7%	7%	7%

Table 3. Average survey duration (minutes)

	2020	2017*	Difference 2020-2017	SE of the difference
By section				
Section 1: Demographics	9,7	9,7	0,0	0,1
Section 2: Real assets and their associated debts	16,5	14,5	2,0	0,2
Section 3: Other debts	3,5	2,5	0,9	0,1
Section 4: Financial assets	7,9	6,9	1,0	0,1
Section 5: Pension plans and insurance	5,7	4,9	0,9	0,1
Section 7: Non-labour income in the previous calendar year	1,7	1,5	0,3	0,0
Section 8: Means of payment	6,4	5,2	1,2	0,1

* Reweighted sample

- Results show that the average duration of the sections comparable across waves stayed almost unchanged.

- Small increases of around 1 or 2 minutes in some sections when using the telephone.

Table 4. Effect on item non-response indicators

	Percentage of monetary questions answered with point value	Percentage of monetary questions answered with point value or ranges
EFF2020	-0.007***	0.001
	(0.002)	(0.001)
Constant	0.914***	0.962***
	(0.002)	(0.001)
Observations	12,736	12,736
R-squared	0.001	0.000

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

- We observe a moderate decrease in the percentage of monetary questions answered exclusively with point values (0.7 p.p.), going from 91.4% in 2017 to 90.7% in 2020.

- We do not observe changes in the percentage of monetary questions answered (either through point values or intervals) throughout the interview.

- Putting all together, the evidence suggests that although households were somewhat more likely to respond providing ranges, item non-response did not increase overall for monetary questions within the interview.

Table 5. Difference in answer to monetary questions between 2020 and 2017 (reweighed). Only for households having the item.

	Punctual value (p.p.)		Interval value (p.p.)		Don't know/ No answer (p.p.)	
	Difference 2020-2017	SE	Difference 2020-2017	SE	Difference 2020-2017	SE
Real assets						
Own main residence	0,4	0,8	1,0	0,7	-1,4	0,4
Other real estate, 1st property	-0,4	0,9	2,5	0,7	-2,1	0,5
Business market value (RP)	1,8	1,7	0,1	1,4	-1,9	1,3
Financial assets						
Accounts usable for payments	-3,0	0,6	2,7	0,5	0,4	0,4
Accounts not usable for payments	-0,1	1,4	-1,2	1,0	1,3	1,0
Listed shares	-0,4	1,2	1,2	0,9	-0,8	0,8
Unlisted shares	1,3	2,6	4,8	1,9	-6,1	2,0
Fixed income securities	3,2	5,0	-3,7	2,6	0,5	4,4
Mutual funds, first fund	-3,7	1,4	0,1	0,7	3,6	1,3
Pension plans, first plan	0,0	1,1	0,3	0,7	-0,4	0,8
Life insurance (first policy) coverage	-3,1	1,9	3,0	1,3	0,1	1,6
Debt						
Amount owed, 1rst loan main residence	-1,6	0,9	1,4	0,8	0,2	0,5
Monthly payment, 1rst loan main residence	-0,3	0,5	0,2	0,5	0,1	0,2
Interest rate*, 1st loan, main residence	-5,7	1,8			5,7	1,8
Amount owed, 1rst loan 1st other real estate	-1,2	1,8	0,3	1,4	0,8	1,3
Interest rate*, 1st loan, 1st other real estate	-4,5	3,0			4,5	3,0
Interest rate*, 1s other loan	-4,1	1,7			4,1	1,7

- For most of the questions we do not observe substantial differences in the prevalence of item non-response.

- But some degree of heterogeneity across questions:

  - Item non-response decreased for all questions on real assets and also for unlisted shares.

  - Significant increases in item non-response for questions on mutual funds and debt interest rates.

Table 6. Interviewee attitude during the interview

	2020 (%)	2017* (%)	Difference 2020-2017 (p.p.)	SE
Suspicious before the interview				
No	81,9	79,6	2,4	0,7
To some extent	15,0	17,4	-2,4	0,7
Absolutely	3,0	3,0	0,0	0,3
Understanding of the questions (0-10)				
0-5	2,6	1,8	0,8	0,3
6-8	33,8	34,5	-0,7	0,8
9-10	63,6	63,7	0,0	0,9
Interest/Reliability shown by the interviewee (0-10)				
0-5	1,6	1,2	0,4	0,2
6-8	37,7	40,8	-3,0	0,9
9-10	60,6	58,0	2,6	0,9
Frequency of consulting information				
Frequently	14,3	10,8	3,4	0,6
Sometimes	19,8	13,1	6,8	0,7
Rarely	21,1	16,6	4,5	0,7
Never	37,1	59,5	-22,4	0,9
Don't know	7,6	0,0	7,6	0,3

- The percentage of respondents who were "not suspicious at all" increased by 2.4 pp to almost 82%.

- The distribution of the variable on "how the respondent understood questions" remained unchanged with a large proportion of respondents among the highest values (63.7%).

- The proportion of interviews with very reliable answers increased by 2.6 pp to 60.6%.

- The proportion of respondents using documents as consultation at some point during the interview increased by 22 pp (to 37%).

- In this paper, we estimate the overall impact of the change in the interviewing mode from CAPI to CATI on specific data quality indicators by comparing the values of those indicators in the EFF2020 (CATI) sample with those in the EFF2017 (CAPI) reweighted sample.

- Our results show that this change did not impact substantially on dimensions such as the length of the interviews, the prevalence of item non-response, and respondents' attitudes when completing the interview.

- This evidence is useful when exploring the possibility of implementing mixed modes in the data collection of subsequent waves.

- However, our results could be driven by the very particular context of the COVID-19 crisis, when social mobility was very restricted, people stayed at home for longer, had less social life, and were more willing to talk and to participate in surveys.

More information on the Spanish Survey of Household Finances at:

https://app.bde.es/efs_www/home?lang=ES

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THANK YOU FOR YOUR ATTENTION