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COLLECTING SURVEY DATA AMONG THE 50+ POPULATION IN EUROPE DURING THE COVID-19 PANDEMIC: CONSEQUENCES OF A MODE SWITCH ON DATA QUALITY IN AN ONGOING PANEL STUDY

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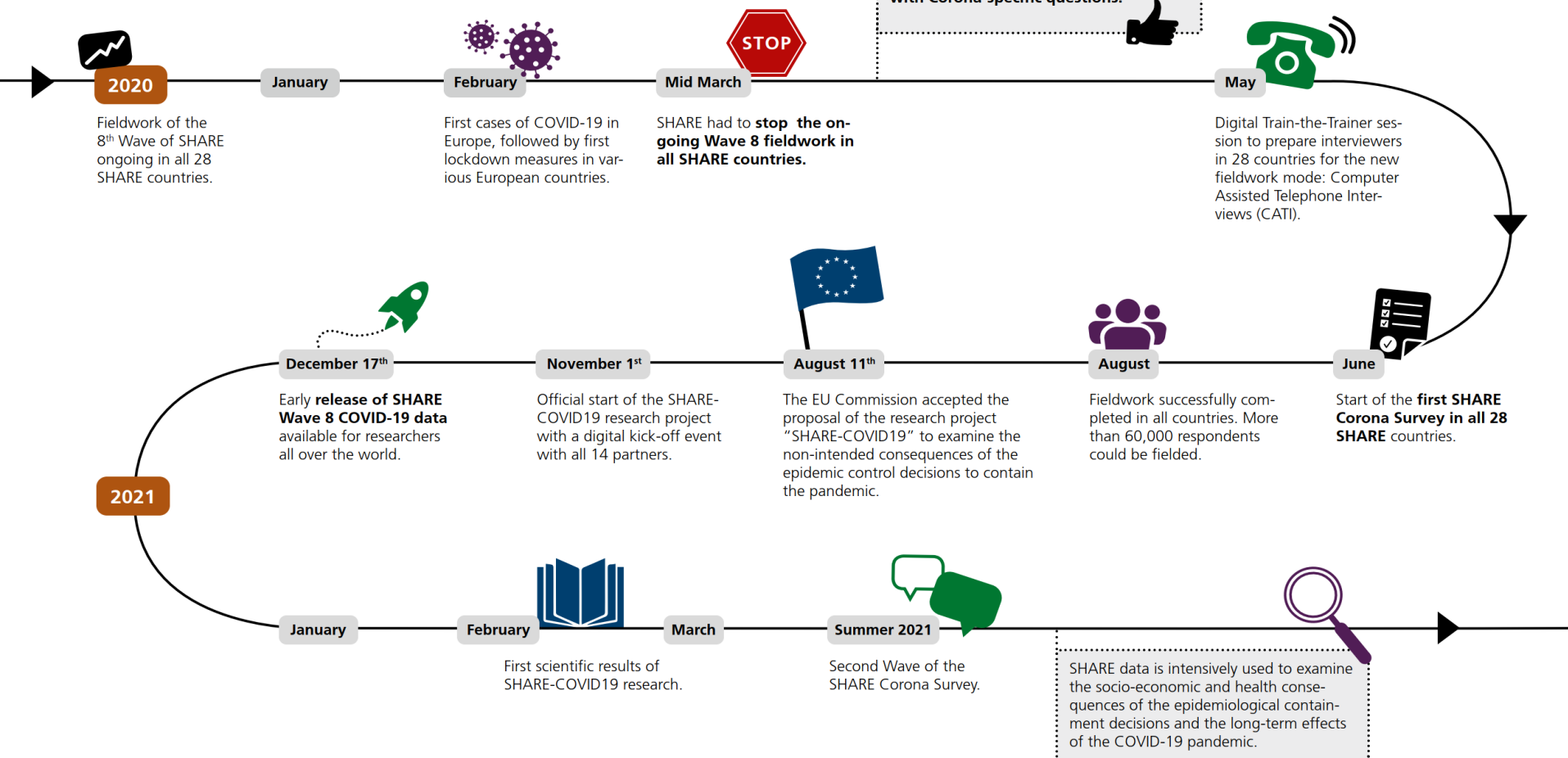


- 1) How did SHARE react to the pandemic?
→ *presentation by Elena Sommer*
- 2) Impact of mode switch (CAPI → CATI) on:
 - a) Participation
 - b) Data quality
 - Representativeness
 - Comparability of data
- 3) Lessons learned & outlook

How did SHARE react to the pandemic

Please find here an overview of SHARE's most important developments from the beginning of the COVID-19 crisis in 2020 until beginning of 2021. This timeline aims to give a brief and clear impression on SHARE's challenges and achievements during the crisis:

SHARE managed to turn a challenge into a chance: In midst of the pandemic, the SHARE team digitalized all events, **re-designed Wave 8 to its first ever SHARE telephone survey and added a module with Corona-specific questions.**

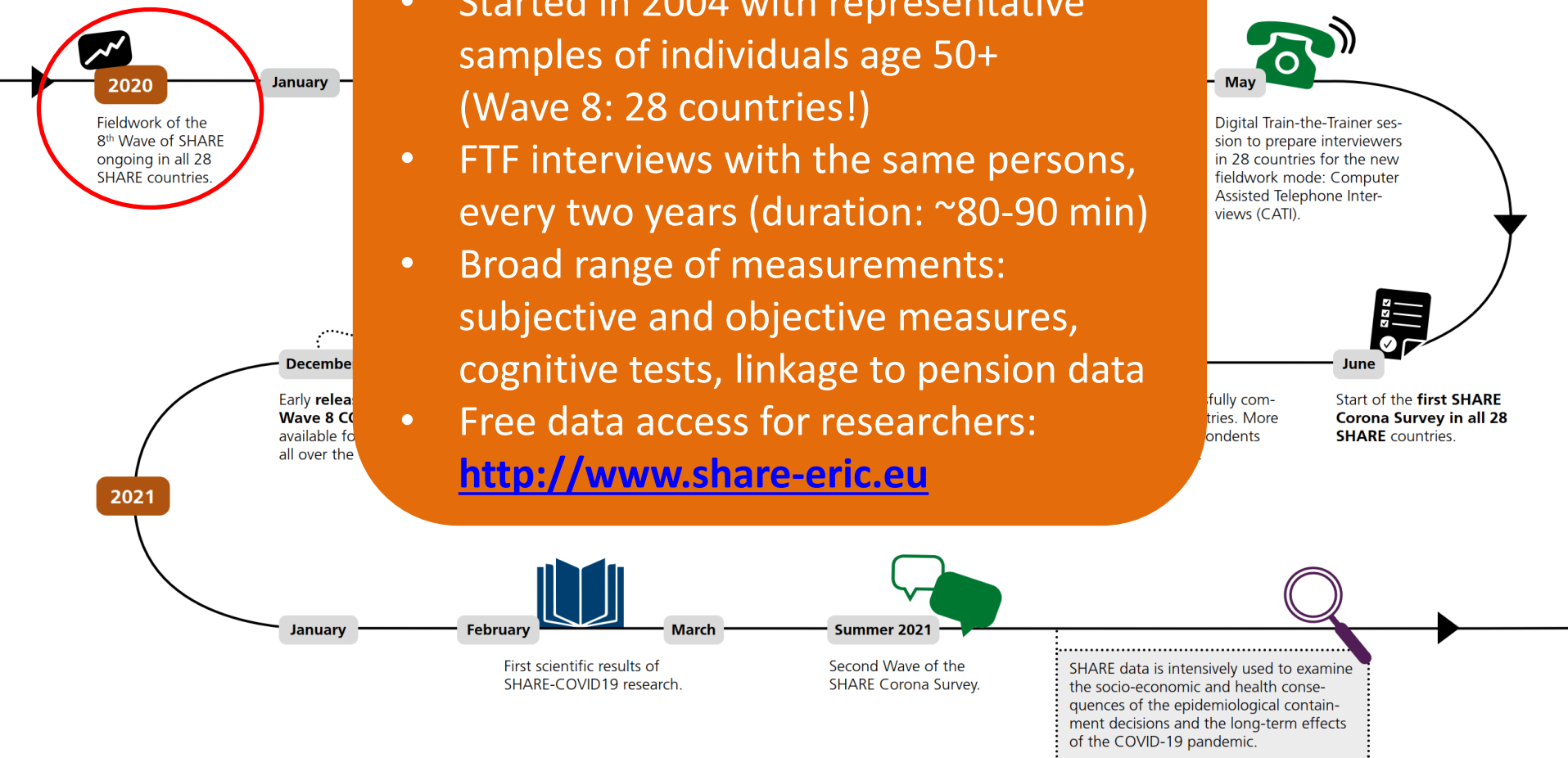


How did SHARE react to the pandemic

Please find here an overview of SHARE's most important activities during the COVID-19 crisis in 2020 until beginning of 2021. This timeline highlights challenges and achievements during the crisis:

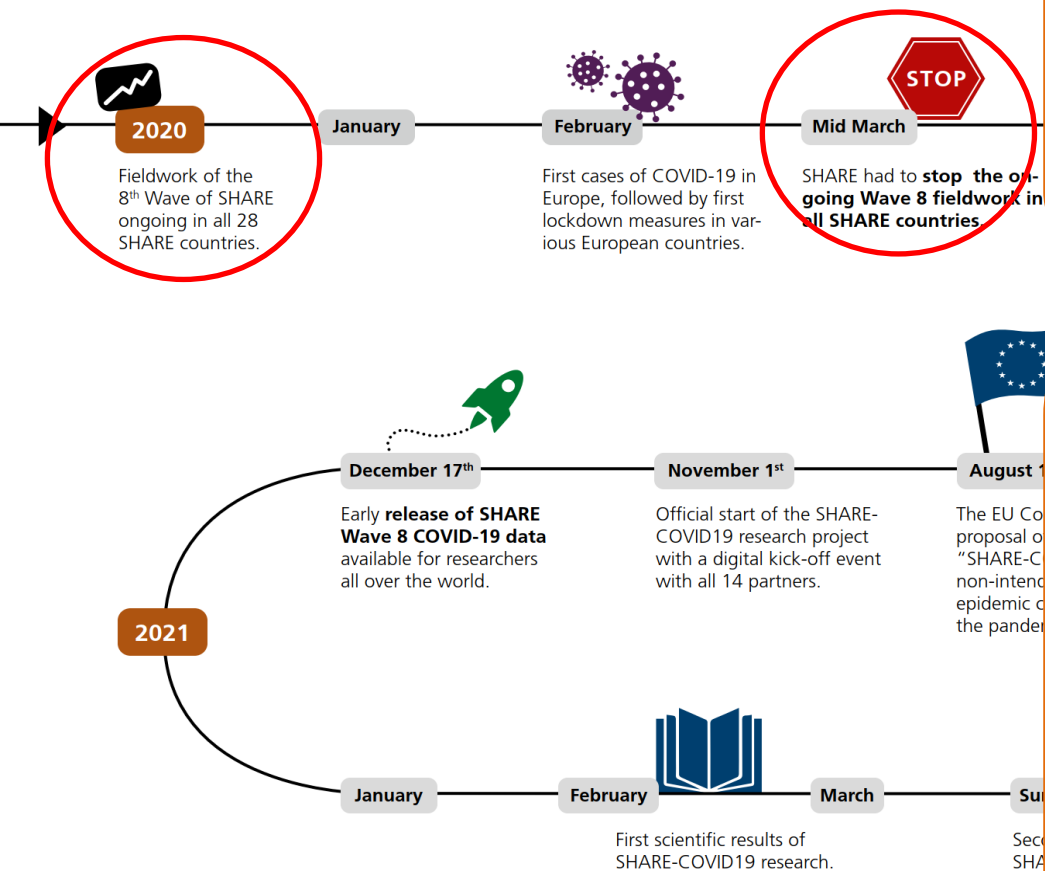
SHARE (so far) in a nutshell:

- Started in 2004 with representative samples of individuals age 50+ (Wave 8: 28 countries!)
- FTF interviews with the same persons, every two years (duration: ~80-90 min)
- Broad range of measurements: subjective and objective measures, cognitive tests, linkage to pension data
- Free data access for researchers: <http://www.share-eric.eu>



How did SHARE react to the pandemic

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Reasons for switch to CATI:

- Interviewer-administered mode to minimize mode effects
- Low internet usage of respondents 80+

Assisted Telephone Inter-

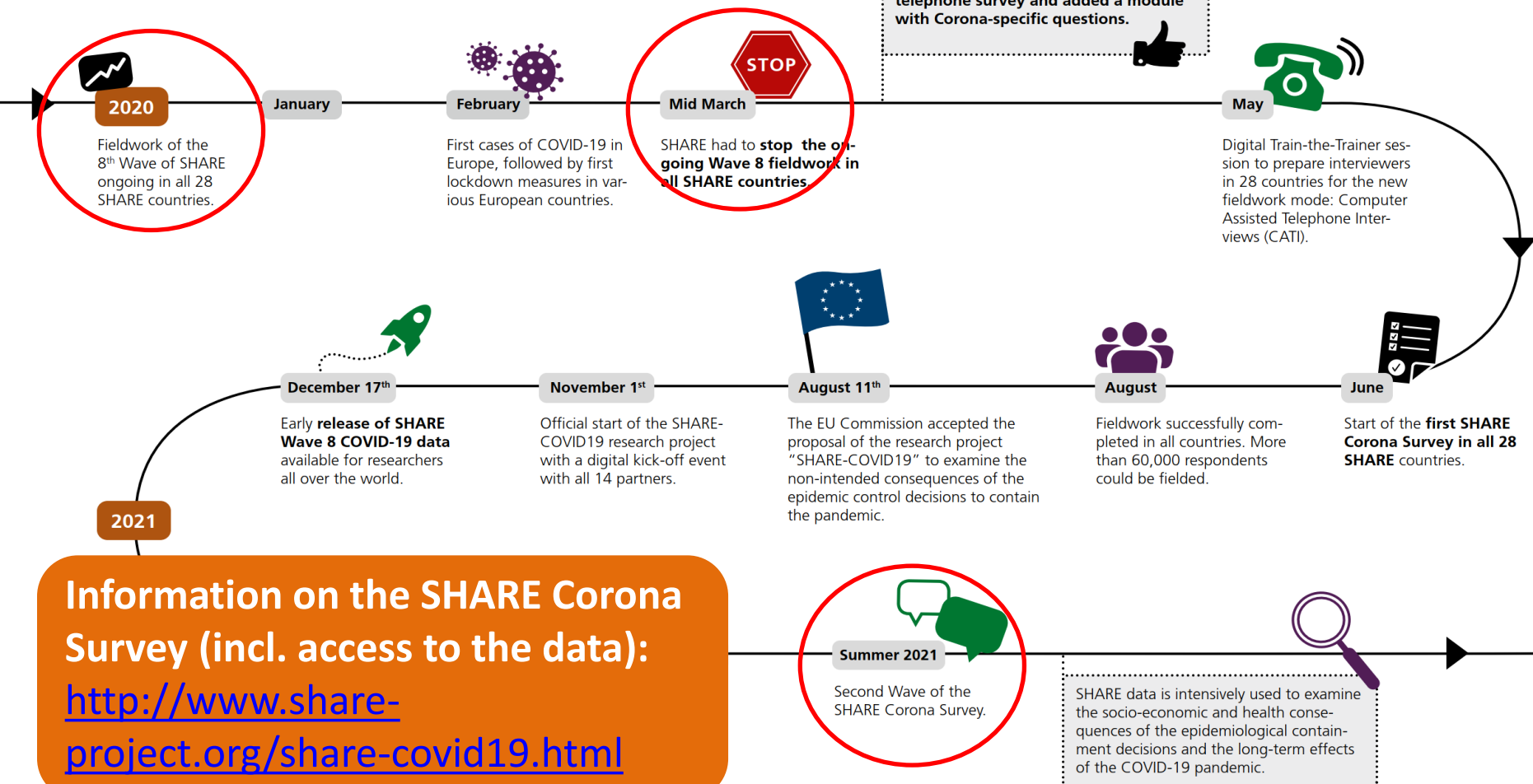
Challenges:

- Shifting the complex SHARE questionnaire to another mode infeasible
- SHARE Corona Survey as add-on (duration: ~20 min)
- Adaption of software tools → web-based application (Quest)
- Programming, translation & testing of 40 national instruments/languages

How did SHARE react to the pandemic

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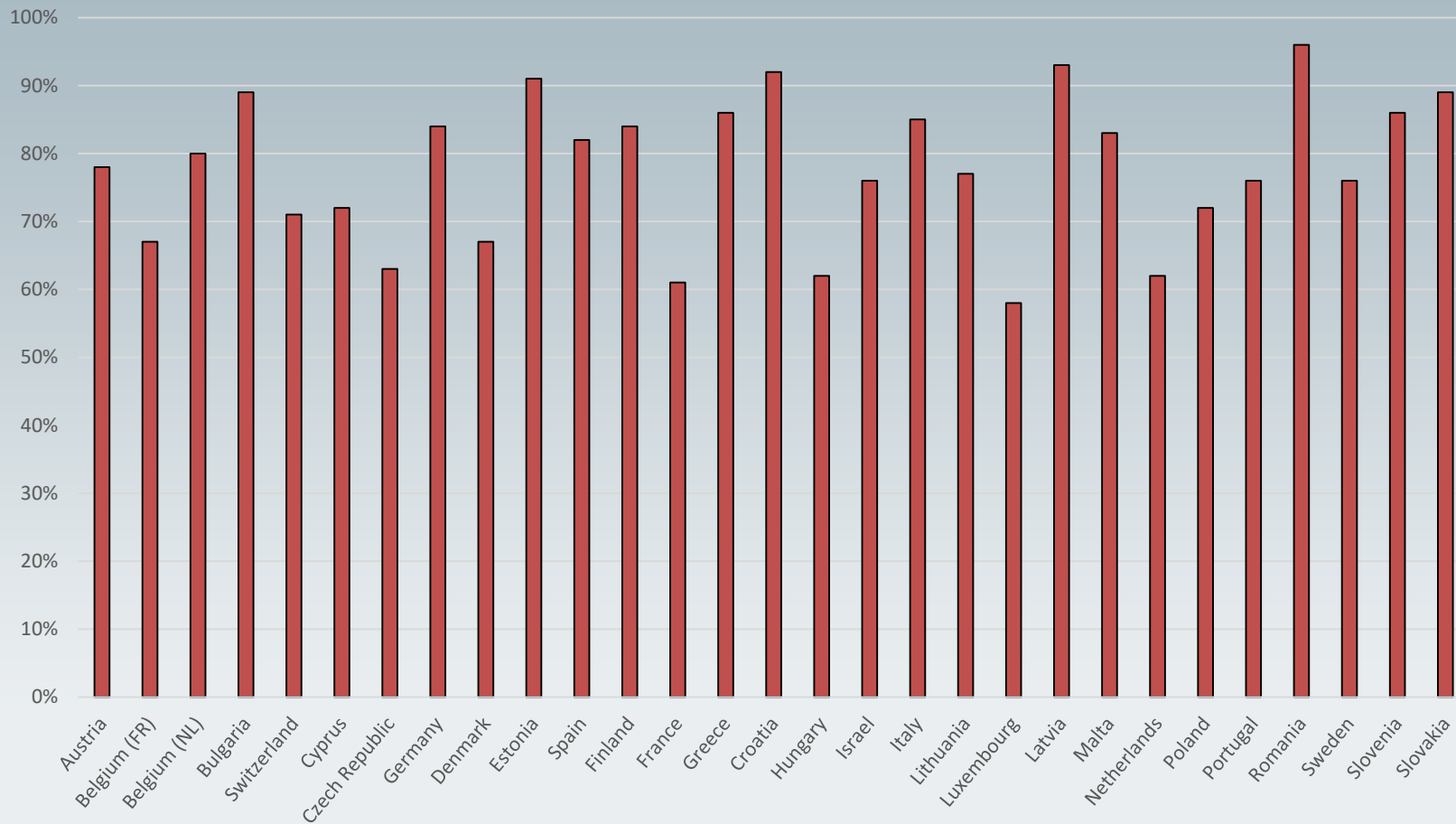


Information on the SHARE Corona Survey (incl. access to the data):
<http://www.share-project.org/share-covid19.html>

Participation - SHARE Corona Survey (CATI)



Preliminary individual response/retention rates (AAPOR, RR4; households without valid telephone number excluded)



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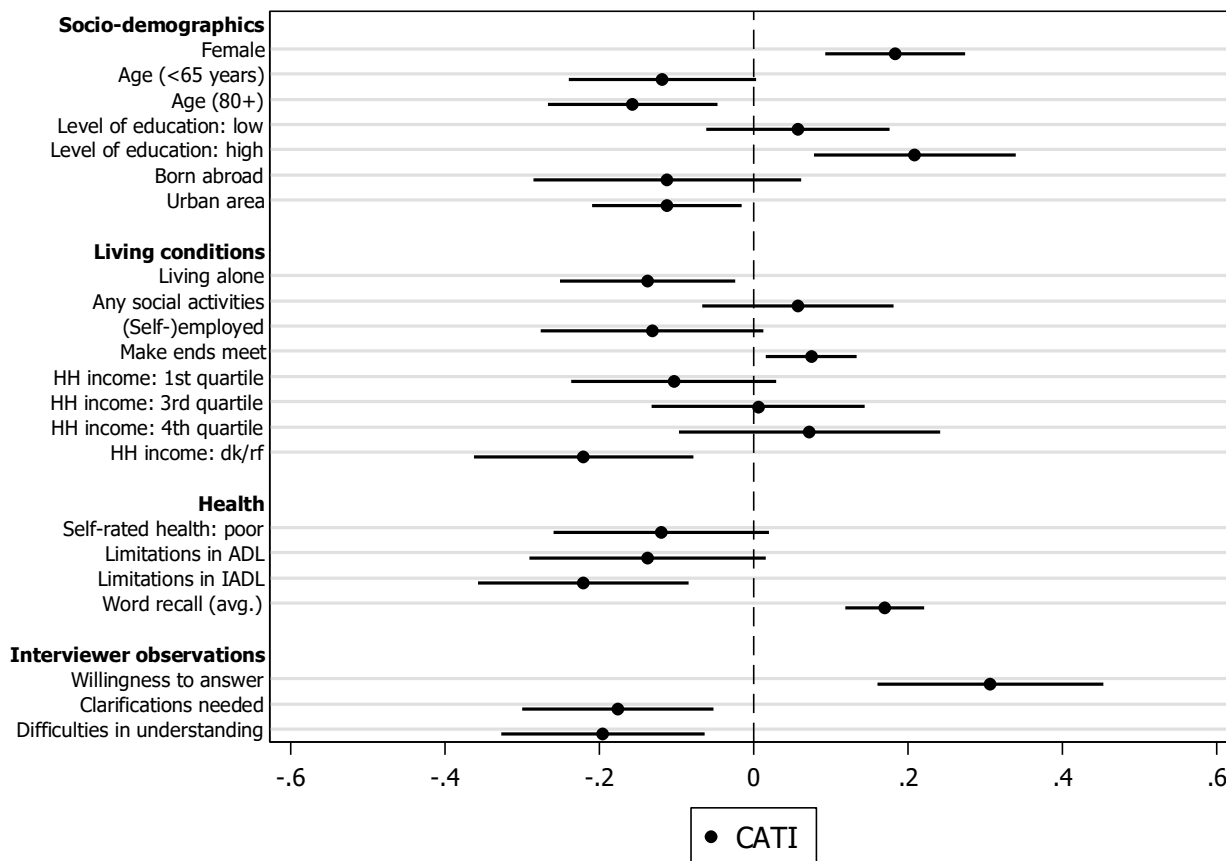


Key question: Who does and who does not respond in a certain mode? Are CATI respondents different?

- Investigate predictors for attrition and interview mode to uncover clues about selective participation
- Logistic regression models for all respondents who participated in the (pre-pandemic) Wave 7
 - The dependent variable measures participation in Wave 8 (CATI)
 - The independent variables are from Wave 7 → analyze pathways of panel respondents

Representativeness: Results I

Average marginal effects (AMEs) for participation in 1st SCS

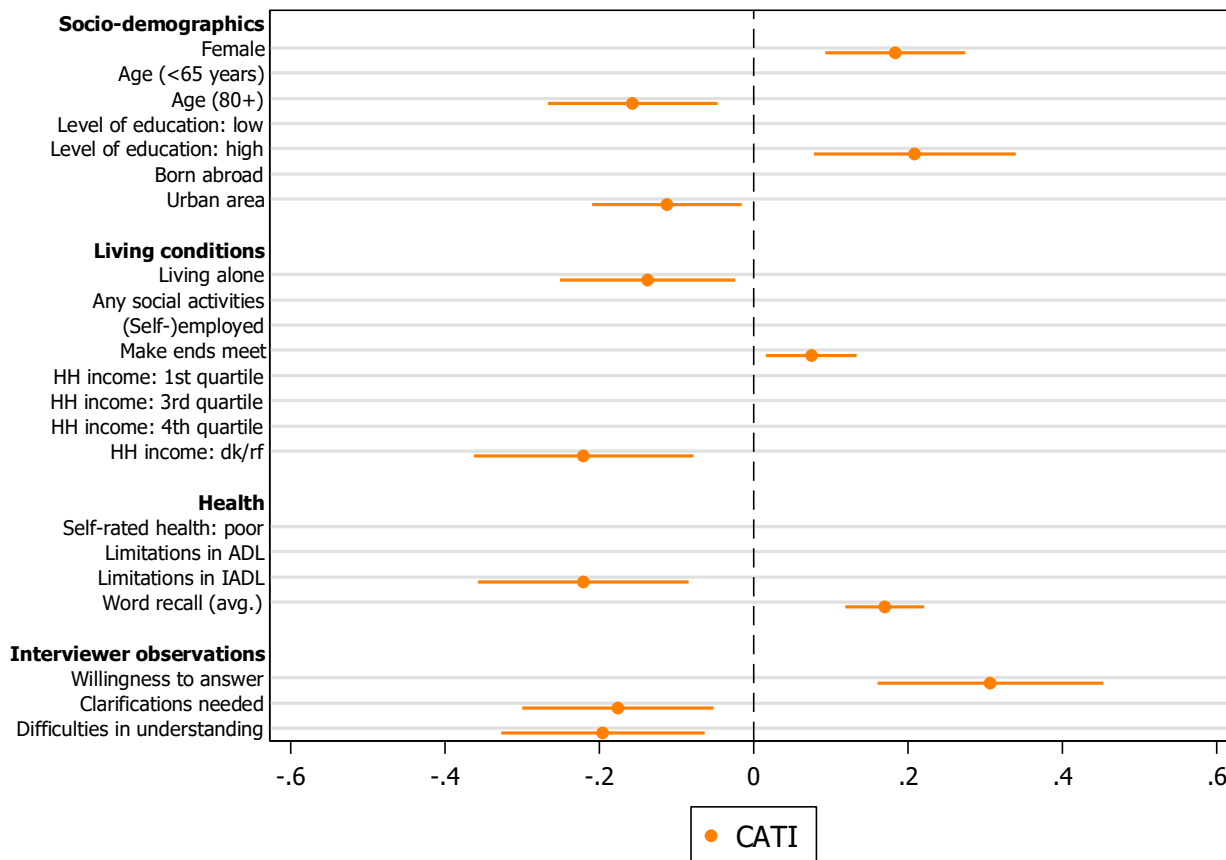


R^2 CATI = .073
(.026)

Data: SHARE Wave 8, preliminary data (CATI: n=57,317). Displayed are average marginal effects (weighted) with 95%-confidence intervals.

Representativeness: Results II

Average marginal effects (AMEs) for participation in 1st SCS



$R^2 \text{ CATI} = .073$
(.026)

Data: SHARE Wave 8, preliminary data (CATI: n=57,317). Displayed are average marginal effects (weighted) with 95%-confidence intervals.

Key question: How is a question answered in a certain mode?

Same questions in the regular SHARE Wave 8 and the 1st SHARE Corona Survey:

- Feeling sad/depressed: “In the last month, have you been sad or depressed?”
- Sleeping problems: “Have you had trouble sleeping recently?”
- Loneliness: “How much of the time do you feel lonely?”

Item nonresponse:

- “How much was the overall income, after taxes and contributions, that your entire household had in an average month (CAPI) / in a typical month before Corona broke out (CATI)?”

Comparability of data: Results I

Difference between CAPI and CATI responses (AMEs in %-points)

	CAPI (in %)	CATI (in %)	Mode
Feeling sad/depressed	43.6	29.0	-14.6***
Sleeping problems	36.8	27.3	-9.5***
Feeling lonely	29.6	29.9	0.3

Data: SHARE Wave 8, release version: 0 (CAPI) and SHARE Wave 8 COVID-19 Survey 1, release version: 0.0.1 beta (CATI). The analysis sample includes all respondents who did both a CAPI and a CATI interview (n=34,848). Note: Regressions include controls for differences in sample composition: age categories (60-69, 70-79, 80+; reference: 50-59), female, educational level (ISCED level 3+4, ISCED level 5+6; reference: ISCED level 0-2), living alone, living in an urban area, and born abroad.

- Mode measurement effects seem to play a role
- However, without further assumptions/experimental designs true changes are difficult to separate from mode effects!

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Comparability of data: Results II

Prevalence of feeling sad/depressed in Germany by survey mode (in %)

	W8 CAPI Oct `19 - Mar `20	W8 CATI Jun/Jul `20	W6 Oct - Mar `15	W6 Jun/Jul `15	W7 Mar `17	W7 Jun/Jul `17	CAWI Jun/Jul `20
Feeling sad/depressed	53.7	26.7	48.8	51.6	43.1	46.2	25.6

Data: SHARE Wave 8, release 0 (CAPI, n=4546; weighted) and SHARE Wave 8 COVID-19 Survey 1, release 0.0.1 beta (CATI, n=4532; weighted).

SHARE Wave 6, release 7.1.0 (n=3357; weighted); SHARE Wave 7, release 7.1.0 (n=314; weighted).

CAWI data is from the Mannheim Corona Study (n= 11,017; sample restricted to June and July 2020 and 50+ respondents; weighted).

- Prevalence for CAPI seems rather stable at a high level; no huge difference between summer and winter
- Prevalence for CAWI during the pandemic is even lower than for CATI (despite a potential lower social desirability bias!)

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Comparability of data: Results III

Difference between CAPI and CATI responses (AMEs in %-points)

	CAPI (in %)	CATI (in %)	Mode
Household income (<750 €)	7.6	8.1	0.5
Household income (>=4000 €)	17.6	10.5	7.1***
Household income (dk & refusal)	15.8	19.2	3.4***

Data: SHARE Wave 8, release version: 0 (CAPI) and SHARE Wave 8 COVID-19 Survey 1, release version: 0.0.1 beta (CATI). The analysis sample includes all respondents who did both a CAPI and a CATI interview (n=34,848). Note: Regressions include controls for differences in sample composition: age categories (60-69, 70-79, 80+; reference: 50-59), female, educational level (ISCED level 3+4, ISCED level 5+6; reference: ISCED level 0-2), living alone, living in an urban area, and born abroad.

- Underrepresentation of high household incomes with CATI
- Higher item nonresponse, esp. regarding refusals
- Bracket questions further decrease item nonresponse for CAPI

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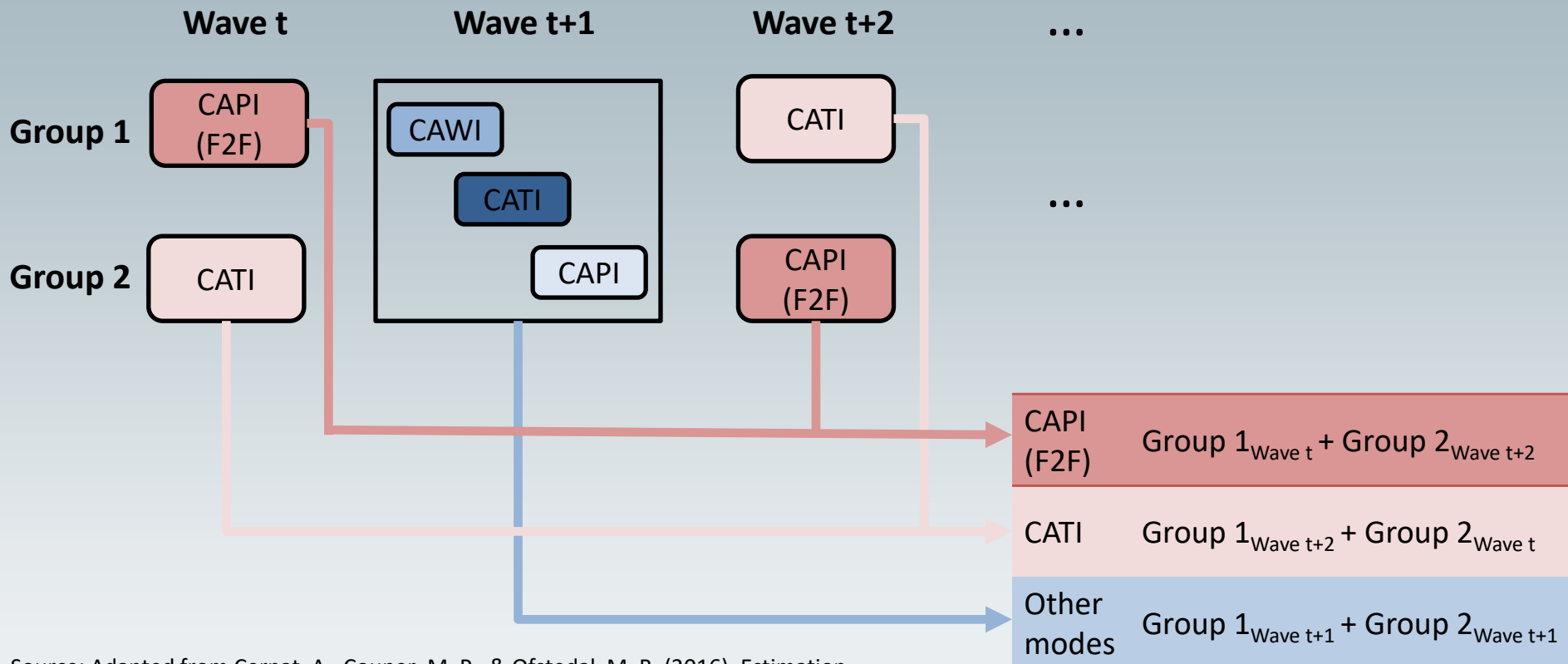
- Mode switch from CAPI to CATI has paid off
 - about 60,000 interviews
 - understand the non-intended effects of epidemic control measures
 - use results to design better social, economic & public health policies
- CATI response rates were considerable (short timeframe!)
- Mixed picture regarding mode effects, but only first results!
 - Moderate selection effects, but potentially large time effect due to COVID-19
 - possible data quality issues in CATI (underrepresentation of high household incomes; higher item nonresponse)
 - social desirability/less legitimacy, satisficing

- Lessons from the recent pandemic are precipitating a major update of SHARE's methodology
 - ➔ Shortened face-to-face interview of a ***stable and concise core*** questionnaire every two years
 - ➔ Additional ***topical modules*** between the core surveys using other interview modes to address new developments more quickly
- But: Interviewers still play an important role in SHARE
 - to collect physical data (e.g. handgrip strength)
 - to motivate respondents (recruitment!) and build-up of rapport
 - to help with complex/cognitively demanding questions (esp. oldest old!) → data quality!

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Lessons learned & outlook II

Quasi-experimental data collection design and analysis strategy



Source: Adapted from Cernat, A., Couper, M. P., & Ofstedal, M. B. (2016). Estimation of mode effects in the Health and Retirement Study using measurement models. *Journal of Survey Statistics and Methodology* 4(4): 501-524.

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THANK YOU!

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