

Social science data infrastructure
as a social precaution at the
European level: How flexible data
collection (could) have helped in
the Corona, Migration, Financial
and Environmental crises

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ESS is a European Research Infrastructure Consortium (ESS ERIC)

ESS Background

- The European Social Survey (ESS) is a cross-national survey conducted with newly selected, cross-sectional samples across Europe every two years since 2002/03.
- Fieldwork collected via face-to-face interviews since the first round for all participating countries.
- Now 30+ countries taking part in each round
- Historic aim is to measure long-term change

ESS Background

- Round 10 (2020-22) of the ESS was implemented during the COVID-19 pandemic: self-completion mode allowed for the first time.
- Round 10 was subject to long delays due to restrictions conducting face to face interviews – showed fragility of traditional survey research
- From Round 13 onwards, there will be a mode switch from face-to-face interviews to self-completion modes (web and paper).
- Change in mode has been brought forward by the experience of the pandemic

European Research Infrastructures' responses to the COVID-19 pandemic

Responses to COVID-19 Pandemic: Other Sciences

- **ELIXIR**
Free open access to data and literature relating to COVID-19.
- **BBMRI**
600+ biobanks providing key services to researchers, with a new COVID-19 directory filter.
- **ECRIN**
Created a COVID-19 task force to provide support to multinational clinical studies.
- **Instruct-ITALIA**
Extended its facilities to provide computational services aimed at drug development.
- **ACTRIS**
Continued to provide virtual access to the near-real time data on air quality and atmospheric composition.
- **EATRIS-ERIC**
Made COVID-19 related services freely available for researchers developing therapies, vaccines or tools.
- **LIFEWATCH ERIC**
Formed a group to provide dedicated epidemiology and data support services throughout the pandemic.
- **ERINHA**
Provided high containment facilities and project management services.

Responses to COVID-19 Pandemic: Other Sciences

- **Alliance of Medical Research Infrastructure**
Coordinated COVID-19 Fast Response Service for medical Research Infrastructures.
- **CERIC-ERIC**
Set up rapid, remote access for COVID-19 research at its facilities.
- **EURO-Biolmaging**
Provided fast access to biomedical imaging COVID-19 related research and resources.
- **EGI and EOSC Synergy**
Set up a Cloud Computing Platform supporting COVID-19 research efforts.
- **EU-OPENSREEN**
Offered fast access track for scientists wishing to use their pilot compound library for their COVID-19 research.
- **Instruct-ERIC**
Biology service that offered priority access and resources for COVID-19 related research.
- **DARIAH-ERIC**
Nine funded projects that seek specific responses to the pandemic that engages arts and humanities sources.

ELIXIR

COVID-19 Data Portal

- Single-entry point that provides free and open access to viral and host sequence data and other relevant data including proteins, imaging, and literature relating to COVID-19.
- Accelerates coronavirus research through rapid and open sharing of data.
- Two connected components:
 - 1) SARS-CoV-2 Data Hubs
 - 2) Federated European Genome-phenome Archive

BeYond-COVID Project

- A project aiming to make COVID-19 data accessible to scientists, medical staff, and government officials.
- Enables scientists to respond faster to new strains and aids policy makers in accurately assessing the impact of disease.
- Provides a framework for making data from other infectious diseases accessible and open to all.

Social Science responses to the COVID-19 pandemic

Responses to COVID-19 Pandemic: Social Sciences

- **German Internet Panel**
Developed Mannheim Corona Study, a probability-based online panel for fast and frequent data collection during the pandemic.
- **Community Life Survey**
Flexibility of numerous modes allowed time-series comparison of pre-pandemic and mid-pandemic data.
- **Understanding Society (ISER)**
Conducted a monthly add-on survey investigating the impact of COVID-19.
- **Life in Australia**
14 surveys collected data throughout the pandemic.
- **Office of National Statistics**
UK COVID-19 Infection Study included web surveys, nose and throat swabs, and blood samples.
- **SHARE ERIC**
Ran several corona surveys on the telephone with their established cross-national panel.

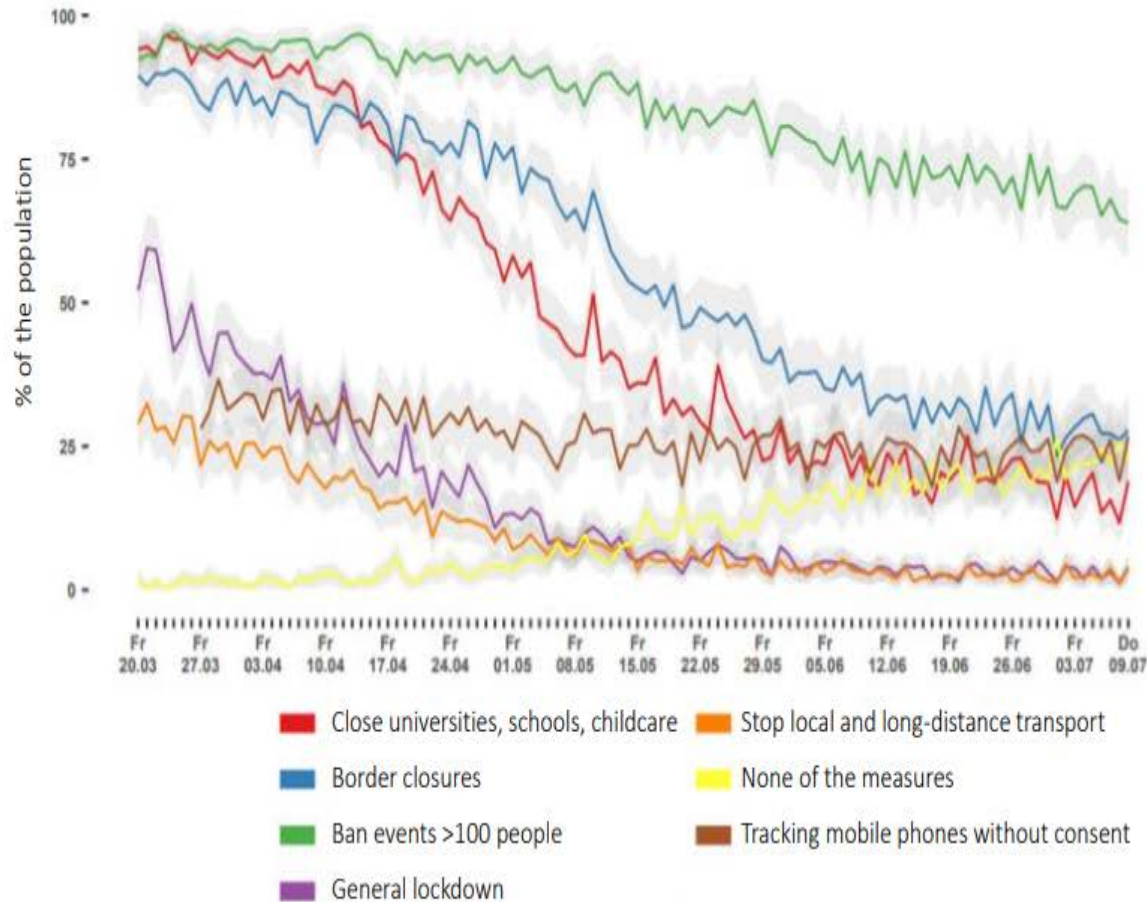
German Internet Panel – Mannheim Corona Study

- Probability-based online panel that was adapted for fast and frequent data during the early stages of the COVID-19 pandemic.
- Participant interviews were evenly distributed over the days of the week, providing daily insights into any developments.
- Response rates and average absolute relative bias was stable across the study period, with biases similar to the full GIP sample and the ‘gold standard’ ALLBUS sample (Cornesse *et al.*, 2021).
- As the study built onto the existing German Internet Panel, the long-term consequences of the pandemic for Germany can be examined.



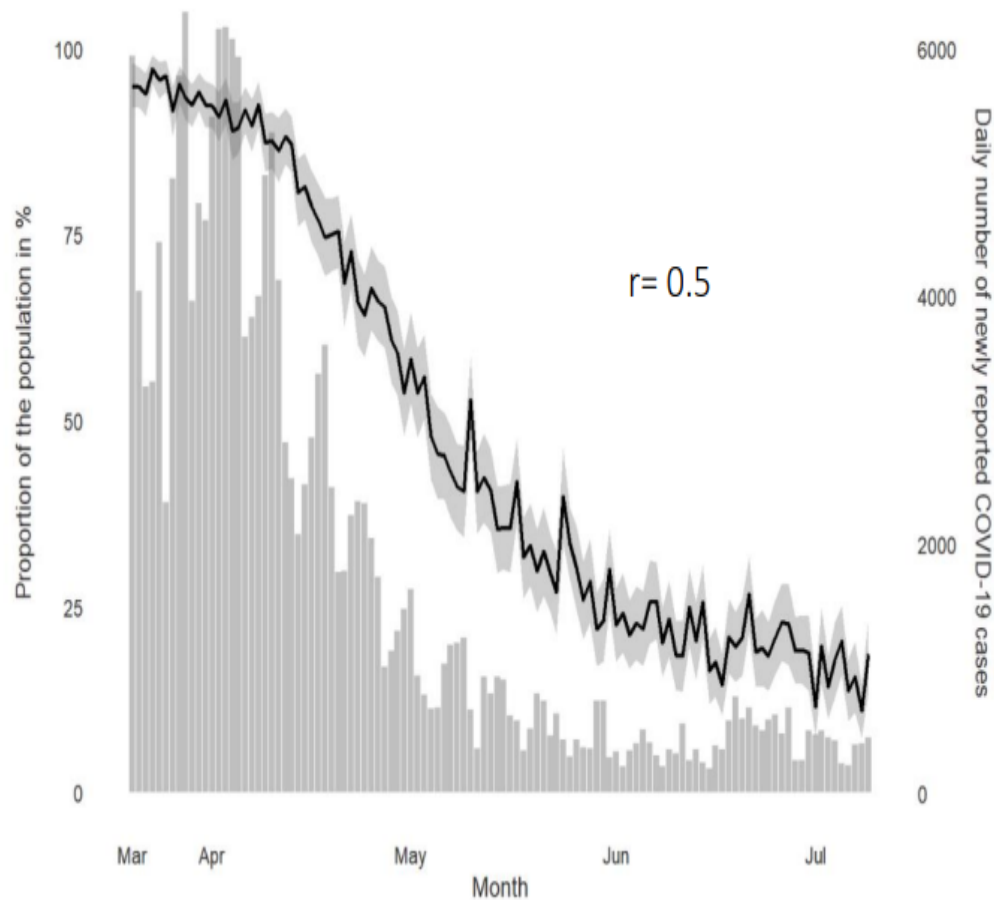
Which of the following measures do you consider appropriate in the current situation?

Percentage of the population in favour of certain measures per day





Proportion of the population endorsing the closure of public facilities



Line: proportion of the population that endorses the closure of universities, schools, childcare

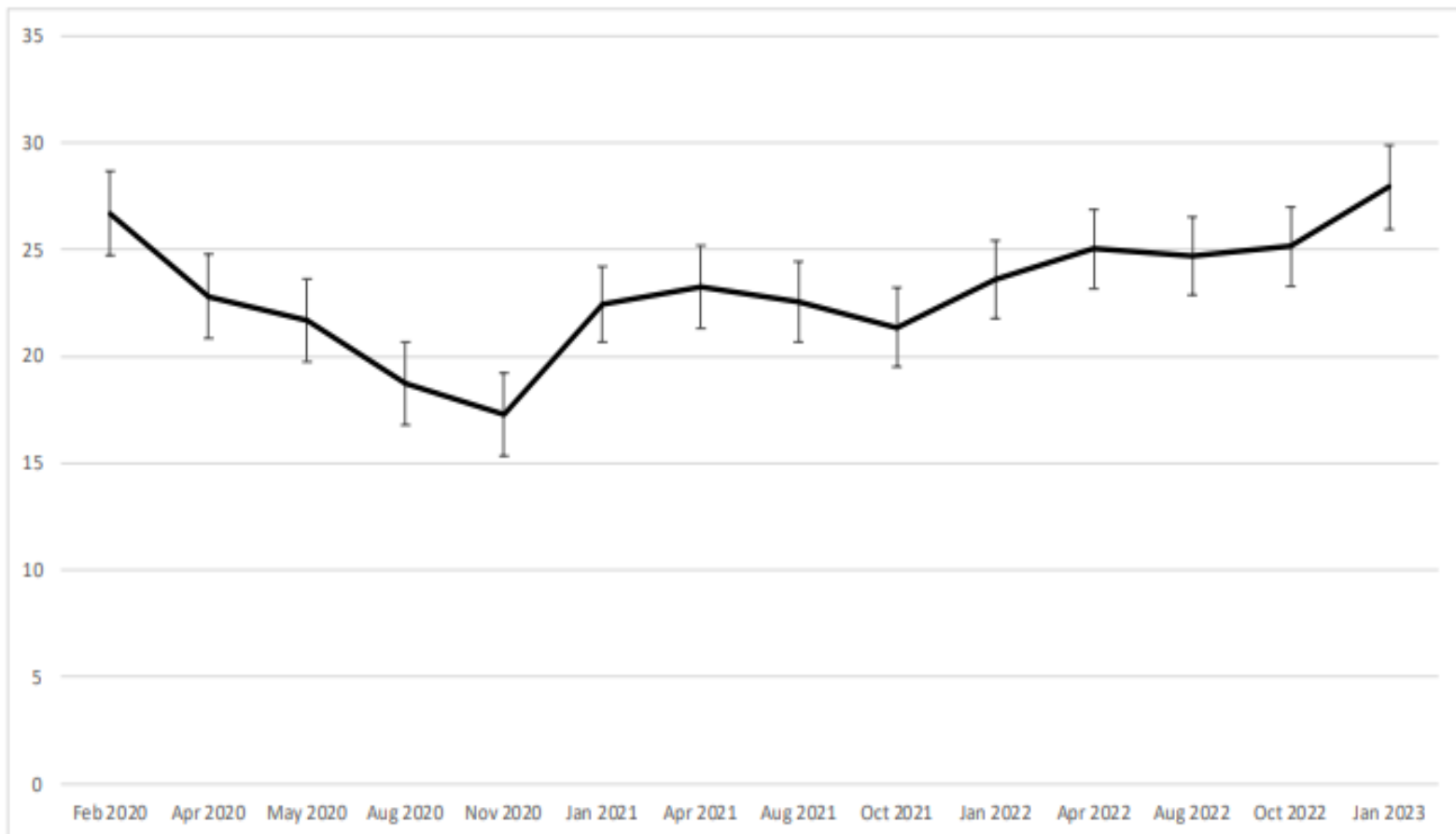
Bars: number of new COVID-19 cases per day as reported by Robert Koch Institute

Life in Australia – Social Research Centre

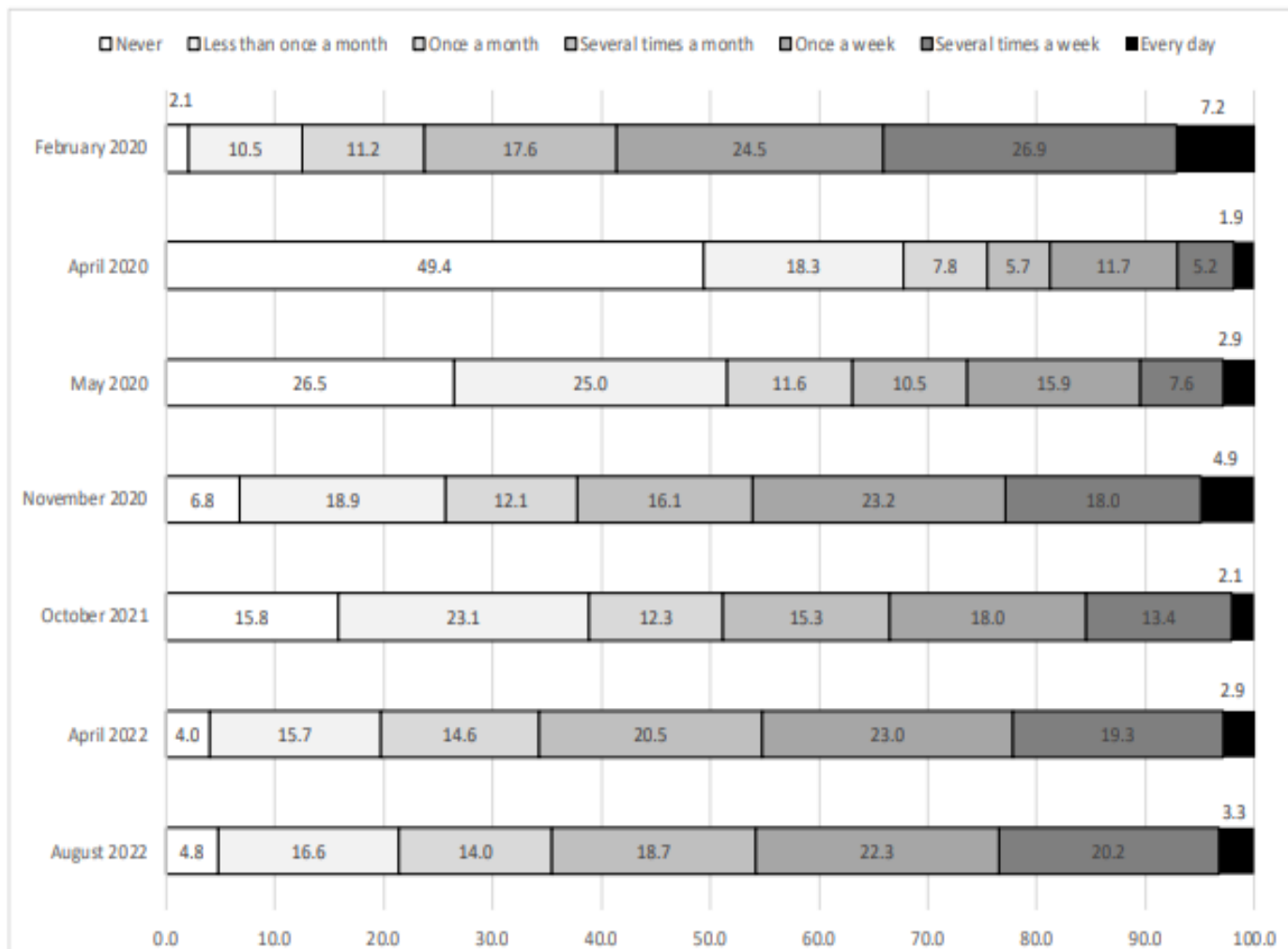
- Random probability-based survey using both web and telephone modes.
- The Australian ESS survey was fielded just prior to the onset of the pandemic and, therefore, provided pre-pandemic data.
- 14 surveys have been fielded since the start of the pandemic, monitoring the impact of COVID-19.
- Other surveys included within this collected data on the 2022 election (CSES) and 2020 bush fires.
- Influence on policy included providing up to date data to the Department of Health.

Changes in financial stress

Difficulty getting by on current income, Australia, February 2020 to October 2022



Changes in social interaction



The European Social Survey's response to COVID-19

COVID-19 Pandemic Impact – Round 10 Fieldwork

- The initial planned period for ESS Round 10 data collection was from September 2020 to December 2020.
- Revised to run from September 2020 to December 2021.
- During 2020, only Slovenia managed to conduct in-person fieldwork, with around half of the interviews conducted before restrictions stopped their work.
- The fieldwork end date for all countries was then extended to June 2022.
- Three countries had their deadlines further extended to August 2022.

COVID-19 Pandemic Impact – Self-Completion Modes

- Face-to-face fieldwork impossible in many countries forced a sudden mode switch from December 2021.
- An online and paper self-completion version of the questionnaire was created.
- A fieldwork protocol for self-completion was quickly developed – recruitment, contact, and incentives.
- 9 out of 31 participating countries adopted the self-completion approach.

COVID-19 Pandemic Further Impact on the ESS

- Fieldworker capacity: Issues with the number of fieldworkers lead to flexibility of the usual maximum of 48 sample units per interviewer. Capacity remains a serious challenge in many countries
- Video interviewing: Initially permitted as a backup option to in-person interviewing, but later allowed as an equal alternative to in-person interviews. Not a viable complete alternative for a cross-sectional survey
- Data release: Delays due to COVID-19 resulted in three of data releases, including a self-completion release and a final release still to take place.

Lessons learned from the COVID- 19 pandemic

Lessons Learned

- The aforementioned research infrastructures were able to extend their existing operations during the COVID-19 pandemic.
- Social science research often relies on the representative face-to-face probability-based social survey, that is not equipped for producing accurate and fast data in times of crises.
- Like other scientific domains, the social sciences now needs its own more flexible and responsive high-quality scientific instruments in order to service its users in the future.

Pilot Application in Urban Landscapes (PAUL) project

PAUL Project

- Supports the European Green Deal by creating capabilities to observe and verify greenhouse gas emissions from densely populated urban areas across Europe.
- A specifically innovative approach is the co-design of services, models and observations between city administrators and scientists from multiple disciplines including social and governmental sciences.
- Overall €13 MIL project, with 0.5 MIL just invested to the ESS for 3 short surveys implemented in two European cities.
- Underlines lack of investment in cross-national social science RI

EURO PANEL proposal

EURO PANEL PROPOSAL

- Aims to produce a blueprint for a new Research Infrastructure for the future to fill the aforementioned gaps whilst ensuring Europe remains at the forefront of empirical comparative social science.
- Social science Research Infrastructures will join in establishing and using the new Research Infrastructure for data collection.
- Allows the collection of high quality data from representative samples of the general population cross-nationally.
- Will enable social science Research Infrastructures to be responsive to future events and crises.

EURO PANEL – Involved Research Infrastructures

- ESS ERIC
- SHARE ERIC
- CESSDA ERIC
- KNAW (for GGP)
- PEW
- National Centre for Social Research
- The Australian National University
- European Values Study
- University College London
- Stichting Koningin Wilhelmina Universiteit Brabant
- Fondation Nationale des Sciences Politiques
- Fundamental Rights Agency
- European Quality of Life Surveys
- Centerdata
- Generations and Gender programme

EURO PANEL – Panel Sharing

- Completing quarterly surveys, the sample will be split into several groups, with each group allocated to different combinations of survey programmes.

R Groups	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A	ESS	ESS	ESS	ESS	EVS	EVS	EVS	EVS
B	GGP	GGP	GGP	GGP	GGP	GGP	GGP	GGP
	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE
C	GGP	GGP	GGP	GGP	GGP	GGP	GGP	GGP
	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE
D	ISSP	ISSP	ISSP	ISSP	FRA	FRA	FRA	FRA
E	EQLS	EQLS	EQLS	EQLS	FRA	FRA	FRA	FRA
F	PEW	PEW	PEW	PEW	PEW	PEW	PEW	PEW
G	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN

n = 2000 per group, per country

	Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A	ESS	ESS	ESS	ESS	ISSP	ISSP	ISSP	ISSP
B	GGP	GGP	GGP	GGP	GGP	GGP	GGP	GGP
	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE
C	GGP	GGP	GGP	GGP	GGP	GGP	GGP	GGP
	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE
D	BESPOKE	BESPOKE	BESPOKE	BESPOKE	FRA	FRA	FRA	FRA
E	EQLS	EQLS	EQLS	EQLS	FRA	FRA	FRA	FRA
F	PEW	PEW	PEW	PEW	PEW	PEW	PEW	PEW
G	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN

n = 2000 per group, per country

EURO PANEL – Initial Blueprint

- Individual frame recruitment: Initial postal contact > postal follow-up recruitment > telephone recruitment for non-contacts > face-to-face recruitment for non-contacts and those without a matching telephone number.
- Address frame recruitment: Initial postal contact informing of face-to-face visit > face-to-face recruitment > within household random selection.
- Each panel member will receive four to five 20-30 minute surveys per annum to collect frequent data.
- The modes of the survey will be web, with postal, telephone or provided Tablet modes set up for respondents without online access.

EURO PANEL – Opportunities

- Inclusion of a longitudinal dimension, increasing the power of the data and allowing casual explanations.
- Flexibility – panellists already available and can be interviewed at short notice
- Examination of conceptual overlap between existing survey programmes, providing greater harmonisation of key measures.
- Inclusion of data linkage at the individual level with existing studies and other additional data.
- Establishes a resource that is unique and world leading, allowing for unprecedented levels and depth of substantive and methodological research.

Conclusions

- Other research infrastructures were set up to be responsive to the COVID-19 pandemic, specifically those outside the social science domain.
- The ESS was not well-equipped to handle data collection during the pandemic, with continuous extended fieldwork periods and the quick addition of self-completion modes.
- The EURO PANEL would allow the ESS and other social science Research Infrastructures to be responsive to future crises events with continued probability-based data collection across the European Research Area.

