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SERISS (Synergies for Europe’s Research Infrastructures in the Social Sciences) aims to exploit synergies, foster collaboration and develop shared standards between Europe’s social science infrastructures in order to better equip these infrastructures to play a major role in addressing Europe’s grand societal challenges and ensure that European policymaking is built on a solid base of the highest-quality socio-economic evidence.

The four year project (2015-19) is a collaboration between the three leading European Research Infrastructures in the social sciences – the European Social Survey (ESS ERIC), the Survey for Health Aging and Retirement in Europe (SHARE ERIC) and the Consortium of European Social Science Data Archives (CESSDA AS) – and organisations representing the Generations and Gender Programme (GGP), European Values Study (EVS) and the WageIndicator Survey.

Work focuses on three key areas: Addressing key challenges for cross-national data collection, breaking down barriers between social science infrastructures and embracing the future of the social sciences.

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1 Introduction

The ‘SERISS Survey Experts Network’ is a series of workshops thematically based around SERISS work packages. The aim of the workshops is to bring together survey practitioners and researchers (e.g. representatives from national statistics institutes, cross-national European surveys, survey agencies and survey methodologists) in order to facilitate a productive exchange of knowledge and practices in state-of-art survey research, to initiate a discussion on how to tackle specific challenges in survey methodology and data harmonisation, and to encourage future cooperation between different organisations.

A number of large organisations involved in cross-national survey research agreed to join the forum including: Eurostat, Eurofound, PIAAC (OECD), ISSP, European Union Agency for Fundamental Rights (FRA), Gallup World Poll, RTI, Kantar Public and Ipsos MORI. These organisations were invited to send representatives to all workshops. Further, external participants with expertise in particular topics discussed during the workshops (e.g. representatives from national statistics institutes, academics) were also invited to each workshop.

There were in total four annual workshops over the lifetime of the SERISS project. The first workshop ‘Representing the population in surveys’ dealing with sampling challenges took place on 8th December 2016 and was hosted by Munich Center for the Economics of Aging (MEA). The second workshop ‘Harmonised coding for socio-economic survey questions’ was organised around the outputs of the SERISS Work Package 8 ‘A coding module for socio-economic survey questions’ and took place on 4th-5th September 2017 in Amsterdam. The third workshop ‘Legal and ethical issues of combining survey data with new forms of data’ was hosted by CITY, University of London on 19th June 2018. The fourth workshop ‘Survey fieldwork cost’ took place at the Netherlands Interdisciplinary Demographic Institute (NIDI) in The Hague of 17th May 2019. The workshop reports are available on the SERISS website.

This report is a summary of the fourth SERISS Survey Experts Network workshop ‘Survey fieldwork cost’. The main purpose of the workshop was to bring together researchers, survey practitioners (e.g. cross-national survey infrastructures, commercial survey agencies) and other stakeholders (e.g. national statistics institutes, funders) involved in design, operation and funding of social surveys in order to present and discuss approaches to analysing fieldwork costs in a cross-national setting as well as possible strategies, such as changing the mode of data collection, to reduce fieldwork costs and their potential effect on survey quality.

In total 20 participants attended the fourth workshop (see Appendix for the workshop agenda and the participants list). To enable exchange between participants, the workshop had an interactive format with presentations followed by discussion slots. The report summarises the presentations given during the workshop and the discussion session outcomes. Due to the topic of the workshop several presentations included sensitive or confidential information that cannot be made publicly available for various reasons (e.g. potential conflict of interest, preventing giving away information for the next tendering, confidentiality regulation in contracts) and, therefore, some of the presentation summaries included in this report are the shortened versions of the presentation excluding potentially sensitive information.
2 Fieldwork cost analysis across countries and waves in the Survey of Health, Ageing and Retirement in Europe (SHARE)

Presentation by Annette Scherpenzeel & Michael Bergmann (Survey of Health, Ageing and Retirement in Europe - SHARE ERIC)

The Survey of Health, Ageing and Retirement in Europe (SHARE) conducted a fieldwork cost analysis exercise to evaluate the cost of fieldwork in a cross-national panel survey. They assessed the cost in 22 participating countries after correcting for price level in these countries. The aim of the exercise was not only to identify countries where the overall fieldwork cost is particularly high but also to analyse cost for different parts of fieldwork and to potentially develop cost-saving strategies.

SHARE follows a centralised procurement approach with a standardised model contract and price sheet where variable and fixed costs and bonus/malus payments for fieldwork progress are specified. The cost analysis that was presented has been conducted for 22 countries that participate in SHARE as so-called European Research Infrastructure Consortium (ERIC) countries in Wave 8. In the analysis, the different costs across countries were corrected for purchasing power parities (PPP, 2017) and adjusted for the sample size. The cost analysis looked at overall costs per European region after these adjustments, as well as how cost differ for different parts of fieldwork (unit price, interviewer payment, incentive for panel respondents, panel care, and management cost) across countries.

The results were presented as deviation from a reference country rather than as actual costs, and compared across European regions rather than individual countries. Nevertheless, the figures that were presented in the small expert working group are not published here, to protect price information of agencies.

To sum up the results of the conducted cost analysis, fieldwork cost across European regions look different when adjusting for price levels and sample size. Moreover, cost for different parts of fieldwork differ across regions. For unit price (price per interview, variable cost) there is less variation across countries than for the overall cost. Higher cost does not necessarily result in higher value for the project as the most expensive part of the fieldwork cost in all offers in the analysis was the management cost. A relatively small part of the fieldwork cost is generally invested in respondent incentives, panel care and interviewer payments that have a potential to increase response rate and to decrease panel attrition. In terms of cost-saving strategies, the scope for action is affected by the availability of offers. In the case of SHARE, in 12 out of 22 countries only one offer was submitted as a result of the call for tender for Wave 8. In nine further countries two offers were submitted and in one country three offers. The cost in countries with more than one offer were about two thirds of the cost in countries with one offer (PPP-adjusted). More competition between survey agencies within the same country seems to be a cost reducing factor.
3 “Single survey agency” approach – fieldwork cost and monitoring aspects

Presentation by Daphne Ahrendt (Eurofound)

Eurofound conduct three large Europe-wide surveys: the European Working Conditions Survey, the European Quality of Life Survey, and the European Company Survey. Through this long-time involvement in multiple surveys, Eurofound can benefit from cross-learning and sharing of experience internally in relation to procurement and management of surveys.

Eurofound follows a single survey agency approach which involves a call for tender for preparation and implementation of the survey in all EU Member States (plus candidate countries and EFTA members) by one single contractor. The contract is awarded to the winning proposal based on evaluation of non-exclusion and selection criteria and a 70/30 quality/price ratio. The selected contractor needs to execute all stages of the survey process, meeting or exceeding the requirements and targets set in the quality framework and quality indicators. Further, the contractor is required to set up a single central coordination team as well as national teams. This single survey agency approach differs from the approach taken by most large-scale European surveys where different agencies are invited to tender for fieldwork in each country.

The advantages of the single agency approach are the following:

- One single contact point for Eurofound
- Central coordination by provider: central training and supervision should enhance quality (control)
- Common software/sample monitoring among local agencies
- Close collaboration between central coordination team and Eurofound staff

Despite certain advantages of the single agency approach mentioned above, there are also some challenges associated with this approach:

- Limited number of tenderers – only large commercial data collection agencies tend to tender/meet requirements (currently only two agencies participate in the tender)
- Large differences in cost proposal between tenderers
  - Variations in cost of preparation and in cost of implementation per country and per interview
- Less influence over what happens at local level
  - Differences in quality of local agencies
  - Difficult to manage poor performance
- Commercial agencies often do not have access to national registers for sampling
- Wide geographic coverage of the Eurofound surveys usually requires involvement of local agencies that are not part of a big network of the selected contractor that might have different practices and there are sometimes information sharing difficulties

To sum up, the single survey approach offers the advantage of one single contact point between Eurofound and contractor but the downside is that there is little direct contact with national agencies. Further, only commercial data collection agencies tend to meet the required specifications but their central coordination team does not necessarily have the required survey knowledge or overview of the local situation in the countries as compared to an experienced national PI. To improve this situation, there are currently some recent initiatives to have more direct contact with national agencies though different national seminars.
4 Cost estimation of setting up EuroCohort

Presentation by Gary Pollock (Manchester Metropolitan University), Giulio Ecchia (University of Bologna), Chris O’Leary (Manchester Metropolitan University), Chiara Monfardini (University of Bologna)

The European Cohort Development Project is a pilot study to develop a specification and business case for the EuroCohort research infrastructure - a first attempt to set up a Europe-wide comparative longitudinal survey on child and youth well-being (see www.eurocohort.eu for more information). The survey is designed to be conducted in a 3 years cycle from the age of two to age 25 (see Figure 1 for the survey cycle design).

Figure 1: EuroCohort survey cycle design

Source: Presentation by Pollock et al., 17.05.2019, The Hague.

In terms of population coverage, the target populations are the following (assuming Cohort 1 will take place in September 2022):

- Infant cohort (C1): all persons born between 01-09-2013 and 31-08-2014 and resident within the country at age 8 years 3 months, regardless of nationality, citizenship or language.

- Birth cohort (C2): all persons born between 01-09-2023 and 31-08-2024 and resident within the country at age 3 months, regardless of nationality, citizenship or language.

As attrition rates will differ over a 25 years period for both cohorts and between countries, in setting the initial target sample sizes for each cohort it is necessary to anticipate likely levels of attrition in such a way as to ensure that the later data collection waves retain sufficient respondents for inferential statistical analysis. Therefore, it is proposed that wave 1 minimum effective sample size should be set at 10,000 for the birth cohort (C2) and 8,000 for the infant.
coat (C1), with a waiver for the smallest countries, for whom the effective sample size will be not smaller than 5,000 for the birth cohort and 4,000 for the infant cohort.

The collaborative cost estimate approach was developed using experience and knowledge from the consortium (European Social Survey, Generations and Gender Programme, Kantar Public, Ipsos), consultations with CentERdata and Survey of Health, Ageing and Retirement in Europe), as well as evidence from publicly available data from Eurostat and OECD. The aim of the cost estimate exercise was to produce realistic estimates for the cost of producing high quality data adjusting costs in relation to target sample, PPP, national income, and mode of data collection.

To estimate the central team cost, three types of cost estimates were produced: 1) estimates for different parts of survey management (e.g. coordination of national teams, survey agencies, and core scientific teams, respondent engagement, dissemination and communication); 2) estimates for technical support for various survey tasks (e.g. for CAPI, CAWI, TRAPD translation approach, Train-the-Trainer sessions, fieldwork procedures, data processing and storage); 3) estimates for scientific development (questionnaires / sampling / piloting / fieldwork strategies). The estimate for central cost of the Survey of Health, Ageing and Retirement in Europe was used as a starting point. The country contribution to central running costs will vary according to their GPD. Initiatives to reduce country burden through funding support from EU and host country are desirable.

National costs will include costs of each phase of piloting, costs of main fieldwork data collection, cost of maintaining national scientific team as well as the national contribution to central running costs.

The following variables were accounted for when estimating data collection costs:

- Staffing costs (based on average earnings & PPP)→ Low/Medium/High cost countries
- Sample size C1 (age 8) = 8K/4K, C2 (birth) 10K/5K
- Attrition W1 RR of 75%, W2 = -15%, W3= -10%, then Wx -5%
- Frequency of data collection C1 = 6 waves, C2 = 9 waves
- Cost per interview in high, medium and low cost countries
- Mode of interview (from CAPI to CAWI) savings
- Incentives at €10 per respondent

The total cost over a 27 year period is estimated to be €1.2 Billion (€48 Million per year) for 28 EU countries. However, cost variation over the life cycle of the survey is expected. In the first two years, for example, it is essential to develop infrastructure and initiate piloting (still being computed). In the subsequent three years, the first waves of both cohorts (F2F CAPI) will be conducted. In the following 12 years, the two cohorts will be in the field. The final years of the project are planned only for the birth cohort. The most expensive years are likely to be years 3 to 15.
Adaptive Survey Design at Statistics Netherlands with an application to the Health Survey

Presentation by Kees van Berkel & Barry Schouten (Statistics Netherlands)

Adaptive survey design (ASD) assigns different sample units to different strategies in order to identify an optimal trade-off between survey quality and costs. The increased interest in ASD at Statistics Netherlands is prompted by:

- More urgency: Declining response rates push designers from average response propensity to variation of response propensities
- More meters: Emergence of rich paradata and administrative data
- More levers: Multi-mode and multi-device designs

ASD aims at improving response rates and data quality but not primarily at cost reduction. Such an approach can in fact even result in higher cost. The advantage of the ASD is that it offers more flexibility to allocate resources and to exploit potential interaction between characteristics of the target population and treatments.

The key elements of the ASD are:

- Auxiliary data (frame, administrative, paradata, survey): relevant
- Design features/interventions: effective
- Quality-cost functions: clear and accepted
- Optimization strategy: feasible and transparent

The ASD was so far implemented at Statistics Netherlands with the following features:

- For person and/or household surveys
- With pre-determined number of data collection phases and fixed set of possible treatments
- Using covariates from frame, administrative data, paradata and/or survey data from earlier waves or rounds
- Different types of nonresponse (e.g. no contact, refusal)
- Pre-determined quality and cost functions

Several projects at Statistics Netherland have had experience with ASD since 2007 and it has been implemented for the Labour Force Survey (LFS) and the Health Survey since 2017. In the first step, the ASD framework was developed for nonresponse error (see Figure 2).
Adjusting by design and not by estimation (on same X) is supported by the following arguments:

- Empirical evidence based on 14 data sets that more balanced designs have smaller bias after adjustment (Schouten, Cobben, Lundquist, Wagner, 2015)
- Adjustment necessary regardless of ASD: new and/or updated X
- Smaller CV of adjustment weights increases effective sample size
- Theoretical conditions for reduced bias after nonresponse adjustment (explored in Schouten, 2018)

In the second step, the ASD framework was extended to measurement error. At Statistics Netherlands, between 2006 and 2012 all surveys have been re-designed to multi-mode surveys including Web. There were two options to include measurement error:

1. Method effects relative to X towards a benchmark design - not suited for multi-purpose surveys (Figure 3)
2. Response styles (item nonresponse, fast responding, underreporting) and response quality propensities based on X (Figure 4)
Extending ASD to measurement error – option 1

Option 1 – Adjusted method effects towards a benchmark
LFS unemployment rate with F2F as benchmark

<table>
<thead>
<tr>
<th>Strategy</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<td>-4.5*</td>
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<td>-2.2*</td>
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<td>-2.6*</td>
<td>-6.8*</td>
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<td>-1.1</td>
<td>0.2</td>
<td>-1.3*</td>
</tr>
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<td>-0.1</td>
<td>-2.3*</td>
<td>-4.9*</td>
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<td>-1.0</td>
<td>-0.8</td>
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<td>0.0</td>
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<td>0.9</td>
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</tr>
<tr>
<td>Web-cati2+</td>
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<td>-0.1</td>
<td>-3.7*</td>
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<tr>
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<td>0.0</td>
<td>-1.2</td>
<td>-2.0</td>
<td>0.6</td>
<td>-0.3</td>
<td>-1.2</td>
<td>0.4</td>
<td>-0.2</td>
</tr>
</tbody>
</table>

Source: Presentation by van Berkel & Schouten, 17.05.2019, The Hague

Extending ASD to measurement error – option 2

Option 2 – Include response quality propensities
Motivated underreporting in the LFS (relative to administrative data)

<table>
<thead>
<tr>
<th>Constraint</th>
<th>R-indicator</th>
<th>Constraint # visits</th>
<th>Maximal response rate</th>
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<td></td>
<td></td>
<td></td>
<td>Without underreporting</td>
</tr>
<tr>
<td>No constraint</td>
<td></td>
<td>20000</td>
<td>51%</td>
</tr>
<tr>
<td></td>
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<td>30000</td>
<td>64%</td>
</tr>
</tbody>
</table>

Source: Presentation by van Berkel & Schouten, 17.05.2019, The Hague
In the third step, options to optimise and implement ASD were identified (Figure 5):

- **Trial-and-error**: Allocate strategies through a mix of expert knowledge and historic survey data
- **Probability sampling with quota**: Stop data collection, once specified stratum response rates are obtained
- **Case prioritisation**: Order remaining nonrespondents based on their current response propensities or conditional bias and start with lowest propensities or largest conditional bias
- **Mathematical optimisation**: Formulate ASD as a decision problem in which strategy allocation probabilities act as decision variables

Figure 5: Optimisation of ASD

```
<table>
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<th>Strategy</th>
<th>Strata based on age, employment, ethnicity and hh size</th>
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</thead>
<tbody>
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<td></td>
<td>1</td>
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<tr>
<td>Web</td>
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<td>0,07</td>
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<td>0</td>
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</tbody>
</table>
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Source: Presentation by van Berkel & Schouten, 17.05.2019, The Hague

ASD demands advanced case management and monitoring tools. In the fourth step, tools for ASD were developed. For about a decade Statistics Netherlands has tried to redesign and restructure their case management and monitoring systems. Since 2015, Statistics Netherlands has started using the program Phoenix to develop such tools based on Blaise. Phoenix supports dynamic ASD but assumes pre-defined strategies and decision rules based on frame, administrative data and paradata. So far five household surveys went through this transition and are now running under Phoenix.

Based on extensive experience of Statistics Netherlands with the ASD, the following recommendations emerged for practical implementation:
- ASD requires consensus within the office about quality objectives and quality indicators.
- The survey mode is an obvious design feature in ASD, given the strong quality-cost differential, but may require including measurement error.
- ASD is easier when focusing on structural deviation, i.e. longer run profit.

The following part of the presentation illustrates the application of ASD to the Dutch Health Survey at Statistics Netherlands. The implemented ASD is presented in Figure 6. The methodology and assumptions are based on random response model:

- The sample is a simple random sample of size n.
- Response follows the ‘Random response model’ in which person k responds with response probability ρk. Each ρk is only known to person k.
- Answers are independent of the observation mode.
- Aim of survey: estimation of population mean for several target variables. An estimator for the population mean is the response mean. In general this estimator is biased, unless all response probabilities ρk are equal.
- The bias can be approximated by $\frac{R(\rho, Y) \times S(\rho) \times S(Y)}{\bar{\rho}}$, with $Y$ : Target variable $R$ : Pearson's correlation coefficient, $|R| \leq 1$ $S$ : Population standard deviation

Aim: reduce bias by minimizing $CV(\rho) = \frac{S(\rho)}{\bar{\rho}}$.

Figure 6: Adaptive Survey Design for the Health Survey

*Observation strategy: CAWI → CAPI.*

*Feature to adapt: CAPI follow-up.*

Source: Presentation by van Berkel & Schouten, 17.05.2019, The Hague
The aim of the Dutch Health Survey is to describe developments in health, medical care and lifestyle. The target population are individuals living in the Netherlands. The survey uses a simple random sample of 1500 individuals per month with a desired number of 9500 respondents per year. The survey is conducted first in CAWI mode and then in CAPI mode.

ADS was used to determine the proportion of respondents that should be offered the CAPI follow up option. Respondents are divided into target groups based on personal characteristics. The main personal characteristics used in determining the target groups are ethnicity, urbanisation, age, income, ethnicity of parents, marital status, educational level, gender, place in household, type of household, wealth, and home ownership (used dataset Health Survey, January – June 2017). Clustering is carried out through the R package rpart with which a classification tree (see Figure 7) is generated.

![Classification tree](source: Presentation by van Berkel & Schouten, 17.05.2019, The Hague)

Four characteristics were selected and merged into larger groups:

- **ethnicity:** Western, non-Western
- **age:** 0-11, 12-24, 25-64, 65+
- **income:** low, not low
- **urbanization:** very strongly urban, not very strongly urban

In total there were nine target groups with response rates presented in Figure 8.
Minimising $CV(\rho) = S(\rho)/\bar{\rho}$ is effected by following constraints:

1. CAWI sample size $\leq 18000$
2. Expected response size $\geq 9628$
3. CAPI sample size $\leq 8039$
4. One CAPI sampling fraction per target group

From constraints 1 and 2 it follows that $\bar{\rho} \geq \frac{9628}{18000} = 53.5\%$.

The minimization problem is solved with the R package Alabama that uses the Augmented Lagrangian Adaptive Barrier Minimization Algorithm for optimizing smooth nonlinear functions with constraints. The algorithm may end up in a local minimum, so different starting values were used and the best solution was selected. The results are presented in Figure 9.
The ADS approach, concentrating CAPI resources on those groups with the lowest initial CAWI response rates, helped to minimise differences in the overall response rate achieved per group. In terms of the effect of adaptive data collection on survey results, most of the survey results with adaptive data collection do not differ much from those without adaptation.

References


Responsive mixed-mode experiences of European Values Study (EVS) Germany

Presentation by Tobias Gummer, Pablo Christmann, Sascha Hähnel, Christof Wolf (GESIS – Leibnitz Institute for the Social Sciences)

Given the trend of decreasing survey response rates and increasing costs for face-to-face interviewing, the question arises whether a self-administered mixed-mode survey could be a cost-efficient alternative to face-to-face surveys. To address this question, a responsive mixed-mode design was implemented within the 2017 European Values Study (EVS) in Germany. There were uncertainties regarding possible outcome conditions in terms of survey design (i.e., incentives, mode choice sequence), response rates, nonresponse bias, as well as cost and effort required to conduct a mixed-mode survey.

Responsive survey design consists of several phases and the procedures in each phase are based on the outcomes of the previous phases aiming at identifying the best perform ing design to meet the goals of the study (Groves & Heeringa, 2006; Schouten et al., 2018). The research team employed a responsive design to optimize survey outcomes in terms of response rates, risk of nonresponse bias, and survey costs.

The self-administered mixed-mode study was conducted as part of the EVS 2017 in Germany (EVS face-to-face survey: N~1,500 interviews & EVS mixed-mode survey aimed at N~3,000 interviews). A register-based sample was used and the gross sample was randomly split into face-to-face sample and mixed-mode sample. The face-to-face survey featured the full EVS-questionnaire with an average length of 59 minutes. Split-questionnaire design with six versions of the face-to-face questionnaire of projected length of 35 minutes each was applied in the self-administered mixed-mode survey to reduce the overall interview duration.

As part of the responsive survey design, all experimental groups were run in the first phase of the survey. Approximately half of the mixed-mode sample was randomly allocated to this phase. After data collection in the first phase, the outcome of each survey design (i.e., experimental group) was evaluated and a best-performing design was selected (with respect to mode choice sequence and incentive strategy). Based on this evaluation, the remaining sample was surveyed in the best performing design.

Figure 10 illustrates the full experimental design. Potential respondents aged 60 years and older were assigned to the simultaneous mode choice only. Two incentives strategies (5€ prepaid unconditional incentive vs. €10 postpaid conditional incentive) were tested for all groups.
Figure 10: Experimental design

Probability-based register sample of the German population

<table>
<thead>
<tr>
<th>aged 18-59 years</th>
<th>aged 60+ years</th>
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<tbody>
<tr>
<td><strong>mode choice</strong></td>
<td><strong>incentive</strong></td>
</tr>
<tr>
<td>sequential vs. simultaneous</td>
<td>5€ prepaid vs. 10€ postpaid</td>
</tr>
</tbody>
</table>

Group 1: sequential prepaid
Group 2: sequential postpaid
Group 3: simultaneous prepaid
Group 4: simultaneous postpaid
Group 5: simultaneous prepaid
Group 6: simultaneous postpaid

Source: Presentation by Gummer et. al., 17.05.2019, The Hague.

Figure 11: Implemented mixed-mode designs

Sequential mode choice sequence and prepaid incentive

1st contact
- invitation letter
- online link and password

2nd contact
- reminder letter
- online link and password
+ 1 week

3rd contact
- reminder letter
- online link and password
- paper questionnaire
+ 2 weeks

Simultaneous mode choice sequence and prepaid incentive

1st contact
- invitation letter
- online link and password
- paper questionnaire
+ 1 week

2nd contact
- reminder letter
- online link and password
+ 2 weeks

3rd contact
- reminder letter
- online link and password
- paper questionnaire

Source: Presentation by Gummer et. al., 17.05.2019, The Hague.
After the first phase of the responsive design, the outcomes were evaluated regarding AAPOR RR6 response rate, risk of nonresponse bias measured by Coefficient of Variation (CV) based on predicted probabilities from a nonresponse model with register data (age, sex, nationality, region of residence, size of municipalities), and costs consisting of projected total costs based on offers by fieldwork agencies and projected costs for materials.

Prepaid incentives worked better than post-paid incentives for all experimental groups in terms of response rate. Comparing sequential and simultaneous mode choice sequences, the simultaneous design further resulted in a slightly higher response rate.

In terms of the risk of nonresponse bias as measured by the CV, no significant differences were found between the experimental groups.

Regarding survey costs, the sequential mode choice with prepaid incentive design was the cheapest of all experimental groups closely followed by the simultaneous mode choice with prepaid incentives. Overall, using post-paid incentives resulted in higher costs compared to prepaid incentives.

Considering the findings on the different outcome indicators, the simultaneous prepaid design was implemented in phase two of the responsive design.

However, a responsive survey design does not necessarily lead to the best possible solution. Fielding the best performing design from the start of data collection would result in better outcomes (in this case a simultaneous prepaid design). However, the very reason for using a responsive design often is uncertainty about what the best performing design is, so it might help to identify procedures that enhance target indicators during data collection.

References


7 Mixed-mode cost saving experience of Understanding Society

Presentation by Michaela Benzeval (Understanding Society, University of Essex)

Understanding Society (the UK Household Longitudinal Study) is a multi-purpose household panel survey conducted since 2009 which is built on and incorporated the British Household Panel Survey that was introduced in 1991. It is an infrastructure project funded by the Economic and Social Research Council (ESRC) funding, with additional co-funding by government departments. It consists of two core data collection streams: the Main Study with approximately 38,000 households and the Innovation Panel for experimentation with approximately 2,500 households. All members of a household over 10 years are interviewed annually. In the initial phase all interviews were face-to-face but now sequential mixed mode design is applied. Fieldwork is undertaken by an external agency, selected based on open competition EU procurement procedures every three waves. Usually only one or two fieldwork agencies have large enough infrastructure to conduct such a survey and fieldwork agencies provide broad prices for the overall project, so actual costs of specific changes in activities are unknown.

There is a significant downward pressure on funders’ budgets and funders required the move to sequential mixed mode to cut costs of the survey. By introducing the mixed mode design it was assumed that this would reduce cost as web data collection is per unit cheaper than face-to-face data collection. At the same time, it was hoped that response rate would increase due to flexibility and choice of preferable mode for respondents, while measurement would improve by asking the right question in the right mode. To test these assumptions mixed mode experiments were introduced in the Innovation Panel over multiple waves to evaluate its impact on response, data quality and cost. In the Main Study additional CATI mode for mop-up (<2%) was introduced at wave 2 and long term non-responders were offered web-only mode at wave 7. Starting from wave 8, a targeted 40% of households are offered web-first, then face-to-face and CATI with a goal of 25% to be completed on web. There is a long-term planned wave-on-wave increase in web completion: in wave 12 70% of household are planned to be issued to web with a targeted proportion of 55% completing the survey on web.

The evidence on cost saving from the Innovation Panel suggests a saving of 10% of fieldwork cost if 25% of interviews are completed on the web. Cost savings are not as high as might be anticipated. To maintain high response rate, the incentive for web interviews was increased. Whole household completion on the web is required to save the costs of the interviewer trip(s). Further, there was an increase in the unit cost for face-to-face interviews due to greater geographic spread for interviewers and a larger proportion of hard to reach respondents in the face-to-face group.

When introducing adaptive design in wave 8 the goal was to promote web uptake by changing design during fieldwork to save fieldwork costs. All changes to promote web take up were expected not to harm overall response rates and to cost less than was saved through reduced interviewer costs. Several different designs (e.g. early bird incentive, various email and postal reminder, telephone calls to email “bounce-backs”, telephone reminders before case is issued to interviewer, email reminder to CAPI-first at the end of fieldwork, etc.) were evaluated quarterly, and those that seemed cost effective were implemented and another initiative...
introduced. As presented in Figure 12, savings from adaptive design and other savings contributed to overall savings in wave 8 but face-to-face cost per unit increased.

Figure 12: Overall impact of adaptive design on wave 8 price

Overall impact on wave 8 price

- Increased expenses (less ints in area)
- Harder to contact cases
- Less interviews per day (paid based on exp no ints per day)

Source: Presentation by Michaela Benzeval, 17.05.2019, The Hague

From Wave 9, an adaptive design approach is underpinned by changes in the nature of the contracts held with the survey agency. Up to and including Wave 8, Understanding Society, the contracts included a fixed price for a set of waves with a range of productivity adjustments, e.g. for issued sample, response rate, questionnaire length. But the contracts did not effectively manage the risk associated with cost differences if the balance of modes was different to the plan and did not allow for flexibility in design mid contract. Wave 8 had to apply adaptive design with experiments to increase web take up assuming neutral impact on response and neutral cost. From Wave 9, a new contract system has been introduced. Open book -contracts allow the volume and activities to be varied based on agreed variable costs within a fixed budget to maximise response and data quality.

Starting from wave 9, the contracts are based on an initial budget that assumed 10% reduction of fieldwork cost due to mixed mode. For Understanding Society, given past work on the Innovation Panel, there have been only modest development costs associated with the move to mixed mode. At the same time the balance of fixed to variable costs increased . At the end of wave 9, a 1% saving was achieved due to overachieving web interviews. This was reinvested in an additional letter and payment to interviewers for enabling web interviews. The new contracts included a detailed spreadsheet of variable costs/prices associated with different modes (specified in tender), linked to predicted responses in different modes and
showing the predicted impact of changing number of issued or achieved households in different modes. Price can vary based on changes in:

- the number of households and individuals issued at each wave
- the proportion of households issued web-first
- the proportion of web-first households in which all adults complete online during the web survey period (and, as a result, do not need to be visited by an interviewer)
- achieved interviews
- agreed changes in the survey design

There is a quarterly monitoring of actual against predicted mode outcomes and costs and if either budget or response rate by mode differ significantly from what was planned, detailed variable cost/price information is required to alter activities as appropriate.

To sum up the evidence from the Understanding Society so far, mixed mode led to modest cost savings only, but this may be associated with the household design. As the proportion of web completions increases, modest savings from reduced face-to-face interviews will be balanced by increased unit costs for remaining face-to-face interviews and possibly additional between wave contacts to engage respondents. Ways of reducing the increase in unit face-to-face costs are being considered, for example by a more selective approach e.g. no face-to-face interviews in remote locations or not offering face-to-face interviews to the last adult respondent in an otherwise complete web household. The key issue for cost savings going forward is to develop more efficient processes across the leadership team and fieldwork agency that will reduce fixed costs.

8 The Generations & Gender Survey: The Future of a Cross-National Survey Online

Presentation by Tom Emery (Generations and Gender Programme, Netherlands Interdisciplinary Demographic Institute)

The Generations and Gender Survey (GGS) is a longitudinal cross-national survey of men and women aged 18 to 49 (or 79) years old with a focus of family dynamics and life course analysis. It covers the following aspects: full fertility histories, full partnership histories, sexual health and fertility behaviour, family and household dynamics, labour market behaviour, as well as attitudes and values. GGS is a successor of the Fertility and Family survey introduced in the 1990s. The first round of the GGS wave 1 (GGS1) was conducted in 2004 in 19 countries. For 15 countries longitudinal data is available. The second and the third round of GGS1 were conducted in 2007 and 2010. The first round of wave 2 of the GGS (GGS2) is planned to be fielded in 2020 with a further two rounds at an interval of three years.

The initial discussion of introducing additional web data collection was a reaction to falling response rates and rising face-to-face fieldwork costs as well as fieldwork agency instability. A further motivation to move to web were emerging new data forms and demand for high frequency, responsive data collection infrastructure. At the same time there were no significant
arguments against the web mode as GGS does not contain any face-to-face dependent measures (e.g. objective health measures) and its target population covers the age range of 18 to 49, that is at the vanguard of internet penetration. The introduction of the self-completion web mode could even be advantageous as GGS contains a lot of sensitive questions with high social desirability bias. In addition, there are serious cost constraints in many participating countries and previous rounds of data collection had high attrition in selected countries.

A pilot study to evaluate whether a web-first approach can be used to reduce costs and burden was conducted in three countries: Germany, Portugal, and Croatia. The main questions of the pilot study were the following:

- Are response rates on web-first good enough to produce cost savings?
- What contact protocols could work for a web-first GGS approach?
- What are the mode effects on GGS items from both selection and response?

The pilot study consisted of a CAPI only group and mixed mode (CAWI first, then CAPI follow-up) group. The aim of the pilot study was to analyse the proportion of web take-up in the mixed-mode design and how different response rates and sample selectivity would be in the mixed-mode design. A further goal was to test the new GGS questionnaire and how large measurement effects are for questions sensitive to measurement effects, to collect extensive paradata (including key strokes) to analyse the questionnaire, and to test how the transition from web to face-to-face should be made within the mixed-mode design. The countries for the pilot study were selected to cover a range of different specific characteristics that are presented in Table 1. Incentives and contact approaches varied across counties.

Table 1 also shows the response rates for the face-to-face only and the web mixed-mode achieved in the GGP pilot study: the web mixed mode resulted in higher response rates in all groups except Germany Web with a low financial incentive (Web-Lo). Especially in Croatia, the mixed mode design worked particularly well in terms of response rate (28% vs. 54%). Also in terms of data quality, the web mode did not show any obvious disadvantages.

### Table 1: Characteristics of countries participating in the mixed mode pilot study

<table>
<thead>
<tr>
<th></th>
<th>Germany</th>
<th>Portugal</th>
<th>Croatia</th>
</tr>
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<tbody>
<tr>
<td>Challenge</td>
<td>High Interviewer Costs</td>
<td>Poor Household Sample</td>
<td>Good Individual Level Sample</td>
</tr>
<tr>
<td>Covered region in pilot study</td>
<td>Bavaria</td>
<td>Lisbon Area</td>
<td>National Sample</td>
</tr>
<tr>
<td>Source of the sample</td>
<td>Municipal Registers</td>
<td>Household Listing</td>
<td>Electoral Register</td>
</tr>
<tr>
<td>Response rate in other f2f surveys</td>
<td>ESS 2016: 30.6% SHARE 2013: 31.1%</td>
<td>ESS 2015: 45.0% SHARE 2011: 38.4%</td>
<td>EES 2008: 45.7% SHARE 2015: 41.9%</td>
</tr>
<tr>
<td>Response rate in the GGP mixed mode pilot</td>
<td>GGP F2F: 29.6% GGP WEB-Lo: 23.7% GGP WEB-Hi: 39.5%</td>
<td>GGP F2F: 27.4% GGP WEB: 29.8%</td>
<td>GGP F2F: 28% GGP WEB: 53.8 %</td>
</tr>
</tbody>
</table>
Indications are that moving to the web may result in cost savings. The cost for Croatia to achieve a 5,000 net sample CAPI only are approximately 350,000€. In case of web, the main cost would consist of unconditional incentives cost (50,000€) and sample costs, mailing cost, and national team costs result in a further 75,000€ costs. The cost for Germany to achieve the 5,000 net sample face to face is about 1,000,000€. Moving to web based data collection, unconditional incentives cost is about 187,000€ and sample costs, mailing costs and national team costs sum up to about 281,000€.

Although the first results of the pilot suggest that a web-based mixed mode approach is promising, there are a few concerns that need to be kept in mind: design issues remain, individual level samples (not always available) are required for web mode to be worthwhile and there is no information on attrition yet. At the same time the web data collection offers the potential for new longitudinal opportunities such as more frequent and more diverse data collection.

9 Discussion session

Chaired by Annette Scherpenzeel, Survey of Health, Ageing and Retirement in Europe (SHARE ERIC)

Participants were asked to write down topics and issues related to cost of survey fieldwork they would like to discuss. Issues were grouped into three main themes for discussion, with participants forming three break out groups, one to discuss each theme:

- Group 1: Cost savings in contracts
- Group 2: Adaptive design
- Group 3: Roles in survey fieldwork

Participants shared their experiences within their group and discussed how specific challenges could be tackled and how the group could collaborate in future to contribute towards improvements.

Group 1 “Cost savings in contracts” discussed opportunities and challenges of sharing face-to-face fieldwork resources between survey infrastructures, in particular developing a central pool of interviewers on standby from where survey projects could approach interviewers. In some countries there is a lack of interviewers. More training and enforcing a minimum wage for interviewers would be important steps to make interviewers’ job more attractive.

Further, Group 1 discussed potential ways of reducing fixed costs for survey fieldwork. Among the challenges related to rising fixed cost is finding a way of calculating and breaking down fixed cost as well as getting more transparency from fieldwork agencies in terms of fixed costs which often remains a black box. Developing a standard cost definition for social surveys could benefit survey infrastructures. There is a collaboration potential to share costing templates, e.g. in SHARE the cost break down is listed in the model contract and SHARE is willing to provide a template listing type of cost without actual cost to other surveys on request.

Group 2 “Adaptive design” noted that there is a lack of literature on how to specifically target different groups and how to design interventions. There is also a lack in terms of practical
knowledge and explanations as to why specific groups do not participate in surveys. Sharing details of response rate per subgroup between surveys could be helpful. Although there has been a recent increase in mixed-mode surveys, partly due push-to-web, face-to-face mode will still remain relevant in future to achieve acceptable response rates. In addition to using details of respondents’ characteristics from other or previous studies to identify and target response rates among hard-to-reach subgroups, interviewer incentives could be another strategy to improve survey participation (e.g. higher interviewer incentives for hard-to-reach respondents). Experiments with different interviewer incentives schemes are rare although they are ethically more acceptable than respondent incentives experiments. However, it might be difficult for interviewers to justify different payment. Another issues discussed in the group, was the relationship between cost and data quality and in particular the (lack of) demand among researchers for high cost high quality data as they rarely take into consideration such methodological quality issues as response rates and mode effects when they analyse the data.

The third group “Roles in survey fieldwork” discussed advantages and challenges of moving survey fieldwork to academic agencies (e.g. universities) and/or national statistics institutes. In some countries participating in the ESS and SHARE, data collection has already been moved to universities as there were no bids from commercial survey agencies. Commercial companies often perceive large academic surveys as too demanding with high requirements (e.g. technical requirements or high response rate) that do not pay off in terms of earnings relative to required input. In addition, academic organisations have better access to population register data for sampling as compared to commercial agencies. Also more collaboration between statistical institutes and social surveys infrastructures or universities to share cost and resources for data collection was discussed. Among mentioned challenges, data ownership issue was noted. To achieve more stability and to take advantage of prior knowledge, it was suggested that data collection contracts for two survey rounds rather than just for one round as is usually done, could be helpful. Another topic discussed in the group was monitoring of interviewers. In the case of central monitoring it is not always clear how the feedback is passed to the interviewers. In addition, the monitoring often does not focus enough on quality of the interviewing – during fieldwork monitoring usually looks at the length of interviews but not at other patterns in the survey data. More could be done in this area and standards for monitoring could be shared between different survey projects.

10 Future collaboration suggestions

As the SERISS project has finished, there will be no further SERISS Survey Expert Network meetings. However, workshop participants were interested to continue cooperation. To enable further exchange, it was suggested that network meetings for specific topics could be organised on the back of conferences that are usually attended by workshop participants, e.g. European Survey Research Association (ESRA) or Big Data Meets Survey Science (BigSurv). However, volunteers are needed to organise such follow-up meetings and to contact network members. There was a particular interest in organising meeting for the following topics: country-specific sampling frames issues in cross-national surveys, sharing information between surveys about which parameters increase/decrease survey cost, and developing a tool that can estimate survey cost and can be shared by survey infrastructures.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td><strong>PART 1: FACE-TO-FACE FIELDWORK COST IN CROSS-NATIONAL SURVEYS</strong></td>
<td></td>
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<tr>
<td>10:00 – 10:15</td>
<td>Welcome and introduction of participants</td>
</tr>
<tr>
<td>10:15 – 10:35</td>
<td>Fieldwork cost analysis across countries and waves in SHARE</td>
</tr>
<tr>
<td>10:35 – 10:55</td>
<td>“Single survey agency” approach – fieldwork cost and monitoring aspects</td>
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<tr>
<td>10:55 – 11:15</td>
<td>Cost estimation of setting up EuroCohort</td>
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<tr>
<td>11:15 – 11:45</td>
<td>Discussion</td>
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<tr>
<td>11:45 – 12:00</td>
<td>COFFEE BREAK</td>
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<tr>
<td><strong>PART 2: ADAPTIVE SURVEY DESIGN FROM COST PERSPECTIVE</strong></td>
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<tr>
<td>12:00 – 12:25</td>
<td>Implementing adaptive survey design at Statistics Netherlands</td>
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<td>12:25 – 12:45</td>
<td>Responsive mixed-mode experiences of European Values Study (EVS) Germany</td>
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<td>12:45 – 13:00</td>
<td>Discussion</td>
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<tr>
<td>13:00 – 13:30</td>
<td>LUNCH BREAK</td>
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<tr>
<td><strong>PART 3: MIXED-MODE COST SAVING APPROACHES</strong></td>
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<tr>
<td>13:30 – 13:50</td>
<td>Mixed-mode cost saving experience of Understanding Society</td>
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<tr>
<td>13:50 – 14:10</td>
<td>Mixed-mode cost saving experience of Generations and Gender Programme (GGP)</td>
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<td>14:10 – 14:30</td>
<td>Discussion</td>
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<tr>
<td>14:30 – 14:45</td>
<td>COFFEE BREAK</td>
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<tr>
<td><strong>PART 4: DISCUSSION SESSION</strong></td>
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<tr>
<td>14:45 – 16:15</td>
<td>Group discussions and exchange of ideas</td>
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<td>16:15 – 16:30</td>
<td>Future collaborations suggestions and closure of the workshop</td>
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<tr>
<td>Participant</td>
<td>Organisation</td>
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<tr>
<td>Daphne Ahrendt</td>
<td>Eurofound</td>
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<tr>
<td>Michaela Benzeval</td>
<td>Understanding Society, University of Essex</td>
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<td>Kees van Berkel</td>
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<td>Daan Bijward</td>
<td>IPSOS International Public Affairs</td>
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<td>Sarah Butt</td>
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<td>Joris Voskuilen</td>
<td>The Netherlands Organisation for Scientific Research (NWO)</td>
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