Deliverable Number: 2.4

Deliverable Title: Report on feasibility of using a joint sampling frame in selected countries

Work Package: WP2 – Representing the population

Deliverable type: Report

Dissemination status: Public

Submitted by: SHARE ERIC

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Date Submitted: June 2019
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 of Health Ageing 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.

Please cite this deliverable as: Bergmann, M. et al. (2019). Report on feasibility of using a joint sampling frame in selected countries. Deliverable 2.4 of the SERISS project funded under the European Union’s Horizon 2020 research and innovation programme GA No: 654221. Available at: www.seriss.eu/resources/deliverables
Deliverable 2.4: Fieldwork test of a joint sampling frame in selected countries
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1. Introduction

This deliverable is part of SERISS work package 2 “Representing the population” which aims at developing strategies to obtain high-quality samples in social surveys. The central aim of most high quality surveys is to be able to draw inferences about a specific population by using probability-based sampling. This is a complex, expensive and often tedious process as sampling frames vary greatly across countries and only a few countries in Europe have central registers (e.g., Denmark, Sweden). Other countries have municipal or county registers, which sometimes include varying degrees of auxiliary information on basic demographic descriptors. For yet other countries, sample frames have to be built up from scratch, for instance, by random digit dialling or random walk procedures. The effort of constructing a sample frame without access or availability of population registers is large. Therefore, there is room for synergies between both national statistical offices and social surveys. One potential synergy to be evaluated is the building of a joint or shared sampling frame within a country. This might include a common sampling design that could establish a standard enumeration procedure for countries with difficult prerequisites for sampling (e.g., no access to population registers). Additionally, pooling resources between different surveys within SERISS could also lead to cost savings in the end and more efficiency when jointly using register based sampling frames that then have to be drawn only once.

Against this background, the focus of this deliverable is twofold: First, we want to identify potential opportunities and synergies for joint sampling across surveys, especially between the European Social Survey (ESS) and the Survey of Health, Ageing and Retirement in Europe (SHARE). In addition, we also explored possibilities concerning a cooperation between SHARE and the Generations and Gender Programme (GGP), although in the latter case the fieldwork schedule was still uncertain for some countries. Second, and based on a careful evaluation of potential synergies, we aim at deriving recommendations regarding an effective collaboration when combining efforts, but also to highlight possible challenges and obstacles. The remainder of this report is organized as follows: In the following section 2, we give a brief overview about potential synergies but also obstacles for a joint sampling frame with respect to different scenarios in different countries. These are countries, in which two surveys already use the same population register with individual information on age (1); countries, in which only one of the surveys has access to register data or, alternatively, there is no individual information on age available (2); and countries, in which there is no access to any form of a register for sampling purposes at all (3). In section 3, we present our experiences regarding the communication with certain countries, in which synergies would, in principle, be possible. These are Portugal, Bulgaria, Germany, Hungary and Israel. Afterwards, we derive recommendations for a possible cooperation with respect to joint sampling frames (section 4) before we summarize our findings in a conclusion (section 5).
2. Potential synergies and obstacles of a joint sampling frame

This deliverable D2.4 partly builds on the experience of prior SERISS work (Bristle, Bergmann, Scherpenzeel, Butt, & Emery, 2018; Scherpenzeel et al., 2017) that clarified and discussed in which countries it would in principle be possible to use a common sampling frame for the different surveys within SERISS. It was shown, for example, that in many countries the same (central) population register is used; these countries hence would be potential candidates for synergy in the sense of a common register-based sampling frame. Synergies in this first case mainly include cost savings; for instance, by exploring ways to jointly build sampling frames from the same person register, from which each of the studies then could possibly draw its own sample and thus minimize administrative effort. In addition, getting access to the register might be easier when joining forces.

Building a joint sampling frame from a register is not necessarily straightforward however. One issue occurs if only one of the surveys of interest has access to register data. The general idea in that scenario would then be to draw a sample for one of the SERISS surveys based on the available register-based sampling frame, but simultaneously oversample the target population for the other survey. However, the main problem with drawing a joint sampling frame occurs in countries where registers only contain information on the address or household level and are missing information on individuals’ age. In that case, the different target populations in SHARE (50+), ESS (16+) and GGP (18-79) has the consequence that the joint sample must be rather large to cover different target populations and allow for screening by age after the sample has been drawn. Consequently, cost savings based on the use of the same sampling frame might be reduced due to a necessarily larger sample size. Another problem when using the same register (either with or without individual information) for sampling is different field agencies operating the surveys. As survey agencies are commercial service providers aiming at maximizing their profit they have no strong incentive for such a cooperation.

Finally, when surveys have no access to population registers for survey sampling in a certain country, the potential synergies that can be obtained from a joint sampling are, in principle, largest. Here, a (complete) listing or enumeration method has to be applied anyway. This list of units (often building addresses or households) could then be used by different surveys. This could involve a huge cost benefit. Especially regarding SHARE, a further advantage might be a more efficient screening for age eligible persons (i.e. 50+) after the listing is done.

3. Experiences from selected countries

During the preparation phases of SHARE Wave 8 and ESS Round 9, we approached several country teams and the corresponding field agencies operating in countries in which we expected synergies of a joint sampling. In addition, we also explored possibilities regarding a cooperation between SHARE and GGP, although funding and fieldwork schedules in the
latter case were still not entirely clear for some countries. In general, countries fall into the three different categories described above and thus cover different synergy effects. In the following, we describe in detail the communication between us and the representatives in the selected countries.

3.1 Portugal

Portugal was one of our primary candidates for a joint sampling. The reasons for this are rooted in the difficulty to get access to a register for sampling purposes. In 2010, SHARE used a stratified multi-stage sampling design, in which geographical areas were selected at different steps (first 4-digit zip codes, then 7-digit zip codes). The resulting addresses of respondents then should be linked with names of eligible persons from the national health system database. However, it turned out that a screening phase for respondents over 50 years was necessary in the end. In contrast, ESS Portugal used a different sampling frame in ESS Round 8 that was planned to be used for Round 9, too. It is based on a list of (billing) addresses provided by an electricity company (Energias de Portugal, EDP). As the frame consists of billing units from private households, more than one household may share a bill. In addition, there is no access to names, i.e. interviewers have to randomly select persons in the households. During ESS Round 8, it emerged that the list of billing addresses did not fit the population very well for certain regions (based on 7-digit zip codes) as the boundaries of smaller areas were not precisely identified. Therefore, selection probabilities differed a lot – an issue that was intended to be improved in Round 9.

With respect to SHARE Wave 8, it was long unclear if SHARE Portugal would get access to the health system database again. In particular, the newly introduced General Data Protection Regulation (GDPR) complicated the request to get access, because uncertainties on the side of the responsible authorities regarding the use of individual information were high in the beginning. As an alternative, it was discussed whether the use of the EDP-sampling frame could be used both for ESS and SHARE. The main problem in this respect was that EDP only provides billing units to ESS and not individual information. With respect to sampling in SHARE, age is, however, a crucial auxiliary variable needed for narrowing down the sampling frame to target the population 50+ efficiently and to avoid a cumbersome screening procedure. This problem was raised both from SHARE Central, which is responsible for the international coordination of the sampling process, and the country team in Portugal. In addition, even if EDP would be allowed and willing to provide individual information regarding the billing unit, this would only include the age of the person who signed the electricity contract. Because respondents in SHARE are eligible independent of their age when they live in a partnership with a 50+ person, this sampling frame might be biased. Finally, it was argued that, in general, the sampling frame that offers the best coverage should be preferred. Therefore, an individual sample like the health system data would be better than data based on households as then no random selection of respondents by interviewers would be needed.
Based on these problems, and the fact that the different country teams/field agencies for SHARE and ESS showing little enthusiasm to cooperate, it was decided for SHARE to first exploit all possibilities to get access to the national health system database before further investigating the possibilities regarding a probability sample from EDP (preferably with information on age). After several rounds of negotiations, SHARE Portugal finally received access to the national health register. This was seen as better alternative than the EDP sampling frame, which was hence discarded – and thus also a possible cooperation with ESS regarding the use of the same sampling frame. The same holds for GGP, which also focused on getting access to register data and thus had no great ambition to cooperate with ESS on gaining access to an address listing. Finally, a possible cooperation between SHARE and GGP was rejected due to the very different fielding schedules.

3.2 Bulgaria

Bulgaria was selected as a possible candidate for joint sampling because SHARE Bulgaria has access to an address register with the additional information that at least one person living at a certain address is 50+, while in the ESS no register data could be used in the previous rounds. We therefore approached the country teams with the idea of a cooperation regarding sampling. However, our request was rejected based on a number of arguments. It was emphasized that several conditions need to be fulfilled before joint sampling can take place: First, both projects, SHARE and ESS, have to be executed by the same field agency and country team. Second, there should be no legal, timing or funding issues. And finally, data quality connected with high response rates that might be negatively influenced by having two surveys in the field at the same time is also a significant issue to be kept in mind.

These conditions were currently not fulfilled in Bulgaria. At the time of discussing the issue of joint sampling, funding for the current round of ESS was not yet guaranteed. Following ESS’ transition to ERIC status – and ESS making CAPI interviewing compulsory – new arrangements for the country team and field agency had to be made and were still not confirmed. Closely connected to this, the funding for drawing a sample in Bulgaria is earmarked (at least partly) for one certain survey, which makes it very difficult to establish any cooperation, including the use of those earmarked funds for sampling purposes in two surveys. Finally, SHARE only drew a baseline sample in Bulgaria in the preceding wave, with no plans to carry out further sampling via a refreshment sample in Wave 8.¹

To summarize, the Bulgarian field agency operating SHARE clearly stated that a cooperation between ESS and SHARE regarding sampling (currently) is not beneficial in Bulgaria. Instead, their arguments clearly showed that there are strong reservations regarding knowledge sharing, especially when national funding is competitive between surveys, as it is the case in Bulgaria. Further, funding also depends on demonstrating differences between projects,

¹ This also holds for a number of other countries in SHARE that have no or difficult access to a register-based sample and thus dropped out as possible candidates for a joint listing approach.
which also played a role in the view of the country representatives and yielded a rejecting of our efforts regarding a cooperation in sampling.

3.3 Germany

Germany was seen as another country where a joint sampling should be beneficial. In Germany, scientific surveys have access to the same sampling frame that has to be requested from randomly selected municipalities throughout the country. This is a very long and tedious process because every municipality has to be approached separately. The main advantages of a joint sampling frame hence are obvious: The whole process of selecting municipalities and then asking in written form for a random sample of addresses has to be done only once. Further, the verification of the provided addresses to avoid duplicates and commercial addresses, for example, as well as reminding and re-contacting those municipalities that are late in providing their samples can be consolidated. Finally, the corresponding (well-established) sampling design based on this frame can be used for both studies, which guarantees a better comparability.

Despite these advantages, concerning the logistical effort and the costs involved in drawing and back checking the sample, the field agency representatives operating SHARE expressed their doubts. For them, the main problems were twofold: First, they feared that a joint sampling might negatively affect data quality. In this respect, they pointed out the very different structure of sampling points when selecting a sampling frame for 50+ respondents in SHARE compared to a different sampling frame in GGP. This, of course, also holds for other surveys with different target populations. In addition, the different number of sampling points would make the design much more complex and error-prone in their view. Finally, the risk of outdated register information due to different fielding times of the surveys should be carefully considered. If drawing a sample at one point in time but fielding the surveys at two different points in time, at least one of the surveys is going to have a less than optimal time lag between sampling and fieldwork, introducing the risk that more sampling units will become ineligible or untraceable. Especially this last aspect is very difficult to argue against as the need for high-quality data is emphasized and strongly claimed by all of the SERISS surveys.

The second main argument against joint sampling in Germany focused on administrative difficulties. In this respect, it was feared that different (or at least unclear) fielding times could complicate administrative issues very much. This might include the letters to the municipalities that have to be as clear as possible regarding the information provided as to when the sample is really needed. Moreover, the field agency was worried about possible difficulties and extra work caused by a necessary differentiation between projects. Thus, the earmarked use of an address delivery in Germany, which has to be specified for a certain project, would certainly complicate address selection for municipalities very much. For this, a clear separation of projects is necessary, which runs contrary to the aim of a joint
sampling, but also increases the management costs. Additionally, small municipalities might run into problems when a large number of addresses/individuals should be provided and a reserve should be included, simply because there might be too few addresses to properly select from – especially if an oversampling of certain age groups or even years is planned. Finally, the field agency expressed doubts regarding our expectation of a positive reaction by municipalities when being approached with a request of two studies at the same time. Here, they assumed to the contrary that the evaluation by municipalities would even be more difficult and would need more time, probably leading to more rejections. Moreover, a joint request would increase the chances that it will be answered differently by municipalities, i.e. one study will get a sample of addresses, while the other not.

Regarding cost savings that we initially assumed to be rather high, it should be recognized that municipalities in Germany have very different billing models. This might reduce cost savings, in particular when expenses arise per unit and not per a fixed amount for a certain number of individuals. This is not to say, that there are no cost savings at all – this was clearly acknowledged by the field agency; however, savings might be smaller than expected.

To summarize, the field agency operating SHARE in Germany was clearly against a joint sampling as rather small cost savings and only little administrative synergies for municipalities and survey agencies would certainly not counterbalance a lower data quality.

### 3.4 Hungary

In Hungary we discussed the joint sampling approach with the country representatives of ESS and SHARE. In Hungary, the same field agency runs SHARE and ESS and for both surveys a population register with information on age is available. Thus, the main advantage of a joint sampling would be in drawing the sample only once. After long discussions, the common field agency representatives decided that they would not like to implement a joint sampling. The two main reasons for this were the following: First, participation of Hungary in the next round in ESS was still uncertain at the time of discussions. Second, the proposed approach was evaluated to be more resource-intensive, both in terms of money and manpower, than doing the sampling separately. In this respect, it became clear that although the access to the registry is rather easy, the drawing of a sample with different target populations in SHARE and ESS has to be done separately. Therefore, possible benefits are very low.

Besides these main points a lack of overlap in fieldwork times between SHARE and ESS was also an aspect contributing to the rejection. For the involved field agency there would only be a benefit if the two surveys would run in parallel. However, due to operational restrictions this could not be realized for the main data collection. There was the small chance that a test run in SHARE could be arranged in parallel to the main data collection in ESS, but the small sample size of the SHARE pilot would have reduced any benefits from joint sampling to a large degree. So, this idea was also rejected in the end.
3.5 Israel

In Israel we also have the situation that the same field agency is operating both ESS and SHARE, which offers possibilities for synergies of a joint sampling. However, similar to Hungary, the drawing of a sample is rather easy and often very fast. Thus, also here, the field agency representatives do not see many advantages of using a joint sampling frame. The main problem, in their view, is that the sampling approach/design is very different between SHARE and ESS so that it does not make much sense to have a joint sampling frame. SHARE mainly uses strata based on language (Arabic, Hebrew, Russian), while ESS has a more complex sampling design stratified by region and urbanization, but also on education and ethnicity and to some part even based on election results to build homogeneous strata/PSUs. In addition, the common field agency is currently exploring ways to change their sampling frame from the previously used population register with individual information on age to an address register that is much less error-prone. In the past, the individual register proved to show very high numbers (about 40%) of erroneous entries that made fieldwork much more cumbersome. However, the pitfall of an address register offering data that are more up to date lies in the fact that drawing a joint sample from an address register without individual information on age would make the sampling much less efficient and more costly as it has to be very large to guarantee enough 50+ respondents. Therefore, our ideas for a joint sampling were rejected in the end.

4. Recommendations for cooperation in sampling

Innovative ideas, such as joint sampling, always have a risk of failure. Thus, while we tried hard to convince representatives of country teams and field agencies mainly from SHARE and ESS (and later also GGP, despite large uncertainties regarding the fieldwork schedule) to take part in a joint sampling, we received rejections. This was for several reasons that have been explained above. Nevertheless, whilst disappointing, this outcome contains valuable information on the countries’ considerations (or reservations) and can help to better understand the rationale for or against realizing a joint sampling. This report should hence be seen as a careful description of things we have tried, ideas that are likely to work or not to work and why this is the case.

In the beginning, we assumed that benefits should be largest in countries in which (access to) a register that can be used for sampling purposes is not available. However, a cumbersome listing/enumeration procedure often is only the least preferred alternative, which is why there is usually no great ambition to initiate a cooperation – especially when there is uncertainty about important aspects of a study or funding is not reserved exactly for this purpose. In addition, we also expected strong synergies for countries, in which one survey has access to a register but not the other. Even when register access is guaranteed for both surveys under consideration there might be possible benefits when the sample has
to be drawn only once. Despite our initial expectations, however, it turned out that we overestimated the degree of synergy and hence the attractiveness of drawing a joint sample or using a common sampling frame. Moreover, it seems that we did not consider enough the administrative and operational complexity of implementing a joint sampling or possible negative consequences for data quality. These difficulties might be less of an issue when not otherwise having register data for sampling at all. However, data-quality aspects definitely have to be considered when a register is available for sampling purposes and thus minimizes the attractiveness of a joint sampling.

One key finding of this deliverable hence is that joint action regarding sampling is per se a complex endeavour; but it is likely to be more difficult (if not impossible) if country teams of surveys work with different field agencies (1), are on different fieldwork schedules (2) or have different specifications of the target population (3). These conditions are very hard to overcome as many factors are fixed or difficult to change. Different target populations, for example, are set as they are in order to allow surveys to address specific research questions and policy concerns. The different target populations also imply important differences in the actual sampling design, including different strategies for the structure and number of PSUs. Forcing similarity regarding these aspects in two different surveys might have negative consequences on data quality. Furthermore, in those countries in which synergies had been expected it turned out that each country team/field agency followed its own strategy with respect to getting access to the most suitable sampling frame, which differs due to the non-overlapping target populations in SHARE, ESS and GGP. In addition, strong concerns were expressed regarding whether jointly drawn sampling data would be sufficiently up to date. In this respect, (at least approximately) parallel fieldwork – and fieldwork preparations – is a prerequisite for cooperation between surveys. This was a key obstacle regarding ESS, SHARE and GGP as fieldwork times in all three surveys differed too much or scheduling was not yet fixed. Together with the problem of a frequently expressed resistance to cooperation between commercial (and competing) survey agencies this clearly prevented efforts towards a joint sampling.

Another important finding of this deliverable is that joint sampling bears no great advantages in terms of efficiency and cost savings when there is already (easy) access to a register for sampling. Bilateral meetings and conversation clearly showed that joint sampling strategies might not always generate synergies, especially if there is already a well working sampling procedure in place. Here, more burden than benefit from the cooperation across surveys was expected by field agencies, because the proposed approach promises to be more resource-intensive (both in terms of money and manpower) than doing the sampling separately.

Despite these major concerns and while the concrete implementation of a joint sampling is country-specific, the underlying obstacles to high-quality sampling are often very similar across countries and it was emphasized that more cooperation and exchange should, in general, be prioritized over national competiveness between surveys. For this, SERISS is the ideal environment to discuss ideas and joint initiatives. However, our results also showed
that joint sampling might not be the most effective way of realising synergies. A seemingly more important requirement is easy access to high-quality register data that can be used for sampling purposes. Joint effort could hence be invested more efficiently with respect to facilitating this access. For example, a joint recommendation letter sent to the responsible authorities to lobby for use of the sampling frame by individual surveys might be much more effective in generating cost savings than drawing a joint sample across two or more surveys.

5. Conclusion

The idea of this deliverable was to explore synergies within countries and across studies, especially between ESS and SHARE (and to a certain degree also GGP), regarding a possible cooperation in drawing a joint sample or optimizing common sampling procedures. Synergies in this respect were assumed to include benefits in terms of getting access to a register-based sample when this was not possible before as well as cost savings when a joint listing/ enumeration procedure can be jointly applied or a sample has to be drawn only once. However, it turned out that both country representatives and field agencies operating the surveys either do not see many synergies or even emphasize important disadvantages as a result of implementing a joint sampling frame (e.g., with respect to data quality). The reasons for this are related to various conditions that have to be fulfilled simultaneously: First, synergies are obviously larger for countries with difficult prerequisites for sampling (e.g., no access to population or address registers) than for countries where access to register data is possible. Therefore, survey agencies in the latter countries do not see much advantage of a joint sampling frame. In the former countries, however, building a joint sampling frame requires that the same survey agency is operating at least two of the large surveys that are involved in SERISS. Unfortunately, this is not very often the case. In the rare cases where we have a match between survey agencies a further condition must apply: fieldwork has to be at least in a similar time period in order to guarantee high-quality probability sampling. This also holds for countries without any register data, because listings of addresses or households have to be as up-to-date as possible, too. Compromises concerning this matter are difficult to justify, in particular because all surveys involved in SERISS put a great emphasis on accurate and sound sampling procedures to achieve the highest possible data quality and representativeness of the target population. As target populations of the surveys involved in SERISS, however, differ a lot (e.g., SHARE: 50+, ESS: 16+, GGP: 18-79) this together with many uncertainties regarding the funding as well as the scheduling of the surveys are important hurdles preventing the implementation of a joint sampling.

Against this background, we think it is more promising to focus our efforts towards overcoming potential barriers in accessing population registers held by statistical offices. We already took steps in this direction with the inventory of the use of population registers as sampling frames in European countries (D2.1; Scherpenzeel et al., 2017). This inventory
proved to be helpful for other surveys (e.g. those run by Eurofound) as well as for certain country teams of the surveys within SERISS by clearly demonstrating in how many other European countries it is already possible to use register data for sampling purposes. Currently, the inventory is being updated to cover the most recent rounds of data collection.

In addition, deliverable D2.3 (Scherpenzeel, 2018a, 2018b), which provides a template letter for researchers working on high-quality national or cross-national social surveys and seeking access to national population registers for sampling purposes, further shows how joint efforts within SERISS can improve sampling practices. In the case of this deliverable, our explicit aim was to take a step beyond addressing the national authorities and put access to all European (person) registers for scientific sampling on the agenda at the European level. Therefore, the SERISS sampling expert network had advised to address the European Statistical Advisory Committee (ESAC) and to request that ESAC would publicly support the efforts of the surveys in SERISS to gain access to population registers for sampling. Following up on this advice, a memo regarding the efforts done in SERISS and the need for support at the European level was submitted to the ESAC in February 2019, and, after minor revision, accepted by the ESAC. ESAC acknowledges that if a population register is under the control of a national statistical institute (NSI), the Regulation (EU) no. 223/2009 on European Statistics prevents it from being used for the sampling of any surveys unless this survey is formally part of the European Statistical System. In contrast, if a register is under the control of another authority (e.g., a ministry), then it is legally possible to provide such access, and ESAC decided to support the SERISS efforts to obtain access to such registers for survey sampling. To do so, ESAC will publish an opinion on its website, which strongly urges the register authorities that are not NSIs and do not permit access to registers to provide such access. In order to help register owners to decide on which surveys they can give access, ESAC will supply a “white list” of high-quality pan-European surveys that ESAC has approved and recommended. This white list will focus on international surveys, which are publicly funded and deliver input for EU policy making, EU social statistics, and EU social indicators, in line with ESAC’s recommendation to reinforce the EU social science research infrastructure. Moreover, ESAC goes even beyond the request of the SERISS experts and recommends changing the legal situation regarding the Regulation (EU) no. 223/2009 on European Statistics in the next round of legal reviews such that NSI-controlled registers can also be used to draw samples. The public support of a European body, such as ESAC for the efforts of the SERISS expert network to improve sampling practice in European surveys outside this system, is a very welcome development.

References:

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