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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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Report on sampling practices for the institutionalized population in social surveys

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Summary

The large European social surveys usually exclude residents living in institutions from their samples. In 2016, the SERISS project started to investigate the possible consequences of this exclusion. The project examines the feasibility to sample and survey the institutionalized population. This report introduces the first release of an inventory of surveys that include the institutional population and describes contents and sampling approaches of national and cross-national surveys that interviewed institutionalized respondents. Moreover, the report advances a detailed definition of institutions and the institutionalized population and briefly describes the quantitative size and statistical distinctiveness of this subgroup in European countries.

1. Introduction

Approximately 1.3 percent of the entire European population lives in institutions, such as retirement and nursing homes, prisons, or refugee hostels. Social surveys usually do not classify this subgroup as part of their target population and exclude institutionalized residents as ineligible units. Researchers justify this exclusion with practical concerns and the assumed higher costs of data collection (Pickering et al. 2008). Taking a classification of Tourangeau as an underlying scheme of hard-to-survey populations in general, the institutionalized population could be described as hard-to-sample, hard-to-contact, and hard-to-interview (Tourangeau 2014; Schepers et al. 2015).¹ In comparing the European countries the relative size of the institutionalized population ranges from 0.5 to 3.0 percent. Hence, according to a definition by Leslie Kish, the institutionalized population is a minor group, or even a mini-subgroup in Europe (see Kish 1987).

In the light of recent societal developments (e.g. demographic aging, old age poverty, increasing immigration of refugees), technological and scientific advances, the SERISS project (*Synergies for Europe's Research Infrastructures in the Social Sciences*) started to investigate whether it is feasible to include the institutionalized population into cross-national social surveys in European countries. Within Workpackage 2 of the SERISS project, the *European Social Survey* (ESS ERIC) collaborates with the *Survey of Health, Ageing and Retirement in Europe* (SHARE ERIC) and the *Generations and Gender Programme* (GGP). This report on sampling practices for the institutionalized population in social surveys is part

¹ The following report mainly focuses on the hard-to-sample aspect. Further aspects like addressing gatekeepers of institutions, getting access to institutions, or overcoming barriers of cognitive and functional impairments during the interview will be discussed in the second deliverable of SERISS work package 2.5.

of the first deliverable from the task.² Apart from this report, Deliverable 2.16 also consists of a data set, which contains a non-exhaustive survey inventory of nearly 210 European and international surveys. More than half of these surveys have included respondents in institutions to a certain extent. The SERISS inventory of surveys that include the institutionalized population is to be considered work in progress until the end of the SERISS project in 2019.³

In the next chapter, the report advances a definition of institutions and the institutionalized population and distinguishes this subgroup from the population living in private households. The third chapter contains a brief quantitative description of the institutionalized population and elaborates on the statistical distinctiveness of the institutionalized population compared to the population living in private households. Chapter four describes the methods we used to compile the survey inventory and gives an overview of the variables included in the inventory. This chapter also deals with possible constraints and limitations of the survey inventory, which are mainly reflected in a language bias and a reporting bias. On the basis of the inventory, the fifth chapter contains descriptive analyses and insights into survey practices regarding the institutionalized population. The sixth chapter focuses on the sampling procedures of the surveys that have been identified as relevant. Chapter seven concludes by summing up the results of this report and providing an outline for the upcoming research within this task of the SERISS project.

2. Defining institutions and the institutionalized population

The United Nations report *Principles and Recommendations for Population and Housing Censuses* distinguishes between two general housing frameworks for individuals: The first framework comprises the large group of private households, while the second framework consists of hotels, camps, and institutions, which are subsumed under the category of collective living quarters (United Nations 2008). In Europe, most large social surveys exclude all the individuals living in collective living quarters by definition of their target population.⁴ For instance, the European Social Survey (ESS) specifies that it intends “to cover only the population living in private households. Those living in institutions are excluded from the sample of the ESS” (ESS 2014: 16). A private household is defined as “one person living alone or a group of people living at the same address (and have that address as their only or

² I would like to thank Thomas Alcock, Sarah Butt, Galit Gordoni, Achim Koch, Ma’ayan Levinson, Annette Scherpenzeel, Angelika Scheuer, Leah von der Heyde, Christof Wolf, and Stefan Zins for helpful reviews of different drafts of this paper. Thomas Alcock, Galit Gordoni, Ma’ayan Levinson, Sabrina Weber, and Leah von der Heyde also contributed in compiling the SERISS survey inventory.

³ The survey inventory is available at www.seriss.eu/resources/deliverables and will be updated biannually. The research team is open to feedback and amendments of interested users.

⁴ See section 5.2 for further examples of cross-national surveys only covering private households.

main residence), who either share at least one main meal a day or share the living accommodation (or both)” (ibid.: 14). The ESS sampling guidelines also mention a lockable entry door as a criterion for private households (ESS Sampling Expert Panel 2016). According to this definition, “people who have been away for 6 months or more, students away at university or college; temporary visitors and people living in institutions” are excluded from the survey (ibid.: 5).

We employ a top-down approach to derive a clear-cut and detailed definition of the institutionalized population and distinguish this subgroup from the population living in private households. In a first step, institutions are defined as centers of aggregation for the institutionalized population. In a second step, all persons who live in an institution, or, more precisely, have their usual place of residence within an institution, are described and classified as belonging to the institutionalized population. The chapter relies on various examples of definitions provided by the United Nations and several national statistical institutes.

2.1 Institutions

On the basis of a list of institutions developed by Eurostat, the OECD glossary of statistical terms classifies institutions as educational institutions⁵, health care institutions⁶, institutions for retired and elderly persons⁷, military institutions⁸, religious institutions⁹ and other institutions (OECD 2006). The latter group comprises, among others, penal or correctional facilities (prisons), homeless shelters, worker’s dormitories, women’s refuges, children’s homes, orphanages, and refugee accommodations (Geiger and Styhler 2012; Groom et al. 2009; Schnell 1991; United Nations 2006; U.S. Census Bureau 2012). De facto, some institutions fall under several of those categories (Geiger and Styhler 2012; OECD 2006). In the field enumerators and interviewers of surveys will encounter hybrid institutions, which mix and combine different of those types.

As a consequence, it is more viable to extrapolate the characteristics that distinguish an institution from a private household, instead of trying to name all possible manifestations and combinations of institutions.¹⁰ Institutions are permanent structures “intended for habitation by large groups of individuals or several households” with “certain common facilities, such as cooking and toilet installations, baths, lounge rooms or dormitories, which are shared by the

⁵ E.g., boarding schools, student dorms

⁶ E.g., hospitals, hospices, mental institution, care home for disabled people

⁷ E.g., nursing homes, retirements homes

⁸ E.g., barracks for military or police staff

⁹ For instance, monasteries

¹⁰ This especially holds true for cross-national surveys.

occupants” (United Nations 2008: 196).¹¹ Premises and buildings of institutions are owned by a collective actor, such as a public agency or a private company, while private residences can be owned by private individuals. The owners of institutions are responsible for the operational organization of their facilities and employ staff for the accommodation of their residents and the full-time or part-time supervision of the facility and its residents.

The operators of institutions address their services to a well-defined target group with specific requirements (see OECD 2006). In contrast to private households, institutions serve a “common public objective” and/or a “common personal interest” (United Nations 2008: 196). The public interest in having different types of institutions is located at a societal level and can be called the *raison d’être* of the various institutions. Institutions provide a society with education, health care, detention of socially deviant individuals, and (military) security. At the micro level there are a variety of different reasons for individuals to be living in an institution. These reasons do not differ much within an institution, but they certainly differ between various types of institutions. Some residents *choose* to live in an institution because they want to be educated, nourished, receive medical attention, participate in a religious community, or search for an accommodation while working or studying. Another group of residents *is forced* to live in an institution, for instance prisoners, military staff, orphans, or refugees. This suggests a distinction between a voluntary and a mandatory residence. The following section will further elaborate on those differences within the institutional sector.

2.2 The institutionalized population

A person *only* belongs to the institutionalized population, if the person’s *usual place of residence* is within one of the above-mentioned institutions. Where someone lives most of the time can be specified with various operationalizations. The least standardized way would be to ask a contact person within a sampled household whether another institutionalized household member still belongs to the private household or not. The European regulation that determined the implementation of the censuses in EU member states Iceland, Liechtenstein, Norway, and Switzerland defines the usual residence as “the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage” (European Commission 2008: 15).

Most people do not change their usual residence very often and (intend to) stay at one place for some time (United Nations 2010). By stressing the temporal qualification of the

¹¹ In contrast to institutions, camps are not permanent but temporary structures intended for a short- or medium-term accommodation (ibid.).

usual residence, short-term visitors of some institutions¹², as well as residents in hotels and temporary camps, would not change their usual place of residence during their stay and would consequently be counted as part of the population living in private households (European Commission 2009; Manners 1999; United Nations 2008). However, the underlying assumption that every individual has one and only one usual residence does not hold true for every unit in the population (Martin 2007; United Nations 2008). Especially some parts of the institutional population with its tenuous ties to private households risk being under- or double counted even in a census data collection (Sweet and Albertini 1994). The criterion of a continuous usual residence within an institution is *a necessary*, but *not a sufficient condition* to obtain a clear-cut definition of the institutionalized population. Sometimes employees of an institution (and their families) live within the institutions and have an own living room, bath room, and kitchen at their disposal. Those households have to be considered as private households.¹³

Being institutionalized not only amounts to the tangible dwelling place but also encompasses a social dimension. Often people living in the same private household are bound by family ties, whereas institutionalized residents are mostly unrelated and do not share such relationships with most of their co-tenants (Groom 2009). A second key difference between private and institutional households can be embraced with the *housekeeping concept*, which is advanced by the European Commission in consonance with the United Nations (2009; United Nations 2008). People living in institutions are generally not able to run their own household independently due to various reasons. The institutional operators step in and substitute the incapacity with their tailored services (U.S. Census Bureau 2012). Within the group of institutionalized residents, the degree of dependency on those services and the capacity for own housekeeping differs a lot. Some residents need to rely on medical and custodial services provided by the operator, while other institutions do not offer such services because it is not required (U.S. Census Bureau 2012: B-14).

3. Quantitative description of the institutionalized population

The following chapter describes the quantitative distribution and the statistical distinctiveness of the institutionalized population in Europe. The description of aggregate numbers mainly relies on data collected in the 2011 European censuses. In most countries the census is the most comprehensive source of information regarding the institutionalized population (see Groom et al. 2009). At the European level, little information on the institutionalized

¹² E.g., clients of hostels, inpatients in hospitals, short-term prisoners, or inhabitants of convalescent homes

¹³ For instance, see the ESS instructions for the “caretaker’s flat” (ESS 2014: 13).

population is publicly available. Interested users have to search for those numbers in publications by the various national statistical institutes. The first part of the chapter focuses on the European aggregate and continues to exemplify some of the characteristics of the institutionalized population with German and English census data. The second part presents results of survey research on the statistical distinctiveness of the institutionalized population compared to the population living in private households.

For a cross-national analysis it is very important to note that differences in the underlying method of census data collection can influence the comparability across countries. The methods followed the respective national legislations and pre-conditions: The Scandinavian countries and Austria took the data entirely from their administrative registers, while other countries in Central Europe combined the registers to a larger or lesser extent with a very large survey sample of the household population (Poulain and Herm 2013; United Nations 2009; Valente 2010).¹⁴ Another group of countries in South-East Europe, as well as Portugal, Ireland, and the United Kingdom conducted a conventional census with full coverage of the population (ibid.). Even though the European Commission proposed certain definitions and procedures for private households and institutions (see chapter 2), differences in data collection and definitions of institutions persist.¹⁵

As far as the institutionalized population is concerned, the national statistical institutes and Eurostat only published aggregated numbers collected within the 2011 censuses (Eurostat 2016a). The relative size of the population living in collective households (see *Figure 1*) reveals country-specific differences.¹⁶ Twenty out of 30 European countries reported a share of collective households higher than one percent of the entire population. Only in seven countries (Bulgaria, Cyprus, Finland, Italy, Norway, Poland, and Spain) collective households reached a proportion of less than 0.6 percent of the entire population.

A first conclusion of *Figure 1* is the absence of a clear geographical pattern in Europe. The aggregate number of collective households does not show a North-South or West-East divide. But as the definition of institutions and the institutionalized population presented in chapter 2 indicates, an analysis of aggregate numbers may fail to give the full picture due to the heterogeneous groups within the institutionalized population.

¹⁴ Even countries that do not use a conventional census but collect data with a very large-N survey (e.g. Germany, Poland, the Netherlands) also combine the sample with register-based data (Poulain/Herm 2013; Valente 2010).

¹⁵ For instance, Germany classified institutions as sensitive and non-sensitive. Britain defined hotels with more than 10 beds as institutions. It would go beyond the scope of this paper to discuss further differences.

¹⁶ Collective households are defined as “premises which are designed for habitation by large groups of individuals or several households” (Eurostat 2011: 63). In most countries this group only contains institutional households, while in other countries slight deviations occur between the number of collective households and institutional households. In those countries institutional households are a subset of collective households.

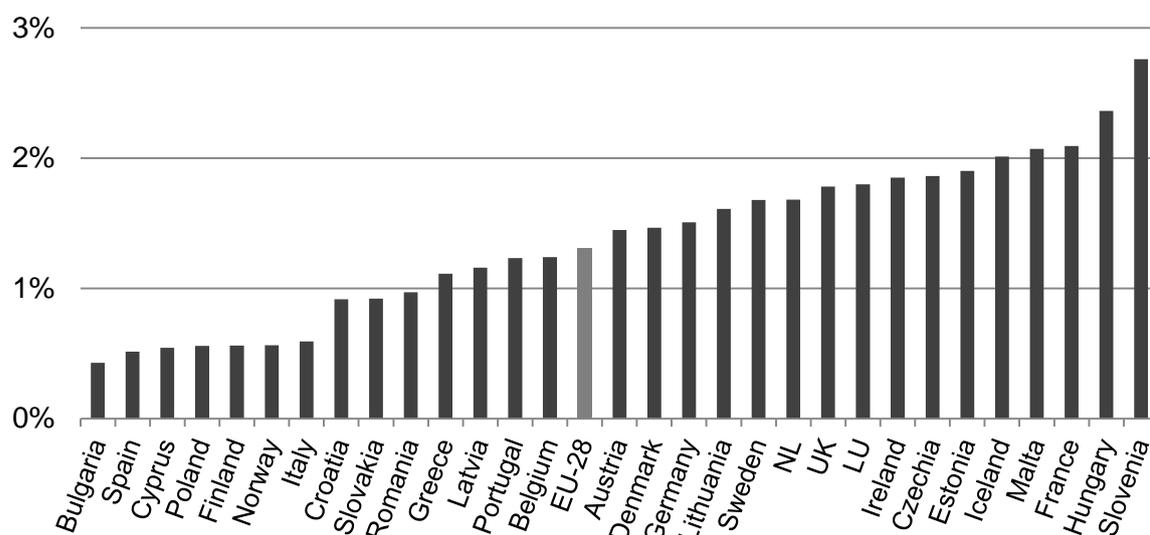


Figure 1: Share of the national populations living in collective households (Eurostat 2016a)¹⁷

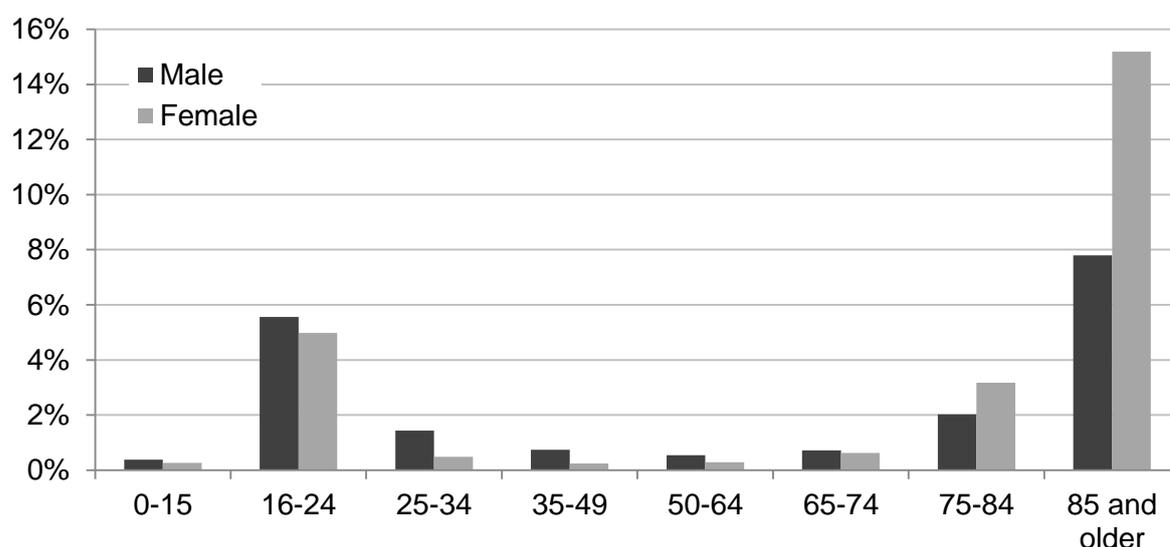
The Census Hub tool as well as other publications by Eurostat and the national statistical institutes do not contain any data on the numbers of residents in the different types of institutions so far. The available data only allows analyses of the aggregate institutionalized population with the age and gender variables. Under the assumption that most people older than 65 years live in institutions for the elderly and health care institutions (Eurostat 2015a), those institutions accommodate most of the institutionalized residents. In Europe, 2.7 million people are aged 65 or older and live in a retirement home, nursing home, or a health care institution (Eurostat 2015a: 147; see Laferrère et al. 2013). A little less than 50 percent within this group is 65 to 84 years old; they represent 1.7 percent of their respective age cohorts. Within the group of the Europeans of age 85 or older, 12.6 percent live in an institution.

Eurostat plotted the results of the national censuses on a map showing the share of institutionalized residents within the group of people older than 85 years (Eurostat 2015a: 148; see Appendix). The map documents huge regional differences at the NUTS 2 level regarding the institutionalization of the oldest age cohorts. Those differences occur between and within countries. Generally, the map reveals a pattern of higher numbers in the north-western parts of Europe and lower proportions in the European South-East. Luxembourg, the French regions Pays de la Loire and Bretagne, the Dutch region of Groningen, and Malta are the parts of Europe with the highest share of institutionalization (between 25 and 33 percent). Iceland and large parts of Portugal are also among the regions with a very high share, followed by the United Kingdom, northern and southern Sweden, northern Germany, Austria and Slovenia (15 to 20 percent of those aged 85 and over live in institutions). In contrast, very low figures can be observed in Bulgaria, Romania, southern Italy and parts of

¹⁷ Switzerland did not report any numbers to Eurostat.

Greece, where less than two percent of people aged 85 and over live in institutions. Those patterns are not only determined by individual decisions, but also reflect the country-specific supply of institutional care, public subsidies for an institutional residency, and the geographical distance to other family members (Laferrère et al. 2013).

Surveys need to consider the absolute size and the relative importance of the institutionalized population for the research topic when making a decision about the inclusion or exclusion of non-private residents. The British Office for National Statistics (ONS) published more detailed statistics of the institutionalized population based on data collected in the 2011 census (ONS 2015). *Figure 2* shows the relative size of the institutionalized population in different age and gender groups in England and Wales in 2011. An English survey, which excludes institutionalized residents, disregards 15 percent of women aged 85 and over and nearly 8 percent of the oldest men.



*Figure 2: Share of institutionalized population within age and gender cohorts in England & Wales (ONS 2016)*¹⁸

The distribution of age and gender bears a lot of resemblance to the equivalent numbers in Germany for instance (Bayerisches Landesamt für Statistik 2016). Only the higher share of institutionalized adolescents aged 16 to 24 seems to be a particularity of Wales and England. In Germany, the share of institutionalized residents in the respective age cohort amounts to less than 2 percent. In England and Wales, more than 40 percent of the institutionalized population lives in educational institutions, compared to a group of 37.6 percent living in retirement and nursing homes (ONS 2015). In the German census, the laws prohibited the statistical office from collecting information on the types of institutions. In two

¹⁸ Own calculations

federal states of Germany¹⁹ statistical institutes collected and published such information prior to the census. According to those numbers, approximately 15 percent of the institutional population lives in educational institutions in both federal states in 2010; 16 percent (Rhineland-Palatinate) and 20 percent (Lower Saxony) of the institutional population lives in health care institutions; and more than 43 percent (Rhineland-Palatinate), respectively nearly 39 percent (Lower Saxony) lives in retirement and nursing homes (Maier 2011; Thomsen 2011).

Apart from the quantitative size providing a reason for inclusion in the survey population, the statistical distinctiveness of the institutionalized population also plays an important role. The British Office for National Statistics (ONS) carried out two rounds of the Communal Establishment Survey (CES) in 2000 and 2009. In 2000, the ONS interviewed more than 700 institutionalized residents living in 130 institutions of all kinds (ONS 2002). Adding those respondents to the sample of private households within the British Labour Force Survey (LFS) had a statistically significant impact, despite the small share of institutionalized respondents in the weighted LFS sample (Gatward 2002; Groom et al. 2009; ONS 2002).

The CES, as well as a meta-analysis of surveys on the institutionalization of respondents²⁰ proved that institutionalized residents differ in the distribution of age and gender, the economic activity, medical condition, functional and cognitive impairments, social networks, and housing (Groom et al. 2009; ONS 2002; Luppá et al. 2012). Lower educational level and lower income levels also increase the probability that an elderly person needs to move to an institution (Laferrère et al. 2013; Luppá et al. 2012). Considering the statistical distinctiveness of the institutionalized population, it can be assumed that the inclusion of the institutionalized population in surveys will change estimates, especially regarding specific topics related to health and health care, old age discrimination, or retirement and welfare.

4. SERISS inventory of surveys including the institutionalized population: Method

The following chapter describes the underlying methods of the SERISS survey inventory. The inventory serves as the main resource for this deliverable and the future research conducted within task 2.5 of the SERISS project. As the inventory is publicly available at the SERISS homepage, interested researchers can also work with it and have a look at the methodology and practices employed by the surveys that sampled and interviewed

¹⁹ Rhineland-Palatinate and Lower Saxony

²⁰ Most of the surveys analyzed by Luppá et al. have been conducted in the USA.

institutionalized respondents.²¹ The compilation of surveys aimed to be as inclusive as possible. Qualitative surveys with a low number of interviews were registered just as quantitative surveys with a larger number of observations. No survey should be excluded ex ante; we wanted to examine as many surveys from as many countries as possible. The work on this inventory will continue throughout the SERISS project.

Generally, the inventory covers surveys that have collected data after 1990 in European countries, the USA, Canada, Australia, and Israel. Excluded, by definition, are data collections in the course of the decennial European censuses. The censuses, last time conducted in 2011, do not rely on a sample in most countries and face different pre-conditions compared to social surveys. The survey inventory applies a broad definition of the term “social surveys” and includes health examination surveys for instance, which address medical researchers rather than social scientists. Nevertheless, those surveys can provide us with valuable information on sampling and fieldwork in institutions.

The identification of surveys for the SERISS survey inventory mainly relied on other survey inventories, data catalogues, meta-analyses, and scientific literature that analyzed relevant data. With this research strategy we tried to diversify our sources. We made use of data catalogues (ICPSR, UK Data Archive, GESIS Datenbestandskatalog, *among others*) and relied extensively on *general overviews of surveys and cohorts* (Joint Programming Initiative 2016; Nationale Akademie der Wissenschaften Leopoldina 2015). The research team also checked sources dealing with more specific topics, such as *health and disability* (Beukenhorst et al. 2011; Deeg and van der Zanden 1991; European Health Interview & Health Examination Surveys Database 2010; Gudex and Lafortune 2000; Cohort profiles of the International Journal of Epidemiology), *aging and care* (Grammenos 2003; Kaiser 2013; Luppá et al. 2010; Seematter-Bagnoud and Santos-Eggimann 2006), *refugees* (SVR für Integration und Migration 2016; Fazel and Danesh 2007), *prisoners* (Fazel and Danesh 2002), or the *homeless population* (Busch-Geertsema et al. 2014). Governmental homepages and publications were also used to identify surveys and gather information about the target populations, sampling procedures and fieldwork (BAMF 2016; Eurostat 2016b; data.gov.uk, *among others*).²²

Finally, we also employed two less structured approaches to become aware of relevant surveys. First, we registered all the surveys we came across during our literature review for the SERISS project.²³ Secondly, we got in touch with international survey experts (social scientists as well as researchers from fieldwork agencies) and asked them to share with us

²¹ SERISS survey inventory available at www.seriss.eu/resources/deliverables

²² The Joint Programming initiative is also a collaboration of 12 European ministries.

²³ Our intention to go through all issues of 35 scientific journals proved to be time-inefficient for identifying surveys.

their input and country-specific expertise.²⁴ Whenever we identified a survey, we checked the homepage, technical reports, methodological documentation, or journal articles for relevant paragraphs and sentences referring to the definition of the target population; we also had a look at the questionnaires of surveys, or contacted researchers of the surveys.

Several reasons led to the decision to abstain from using an automatic web scraping method to identify relevant surveys. First of all, it took the research team a couple of months to identify a list of relevant search terms that could have been applied in an automatic catalogue query for all European countries. It would have been necessary to use a large number of different terms²⁵, find the right balance between a broad and a narrow query, and apply the web crawler in accordance with those principles in several different languages. Moreover, a simple web crawler could easily fail whenever the relevant topic is just a minor aspect in the description of the target population of a survey. The inclusion or exclusion of respondents in retirement homes or student dorms is not a key aspect for most documentation reports or technical papers. We did not want to exclude any European survey because it did not mention one of the pre-determined key words.

4.1 Description of variables included in the SERISS survey inventory

The survey inventory is ordered alphabetically according to the abbreviations of the surveys. If the survey documentation did not specify an abbreviation, the SERISS research team created one. Those abbreviations are printed in italics. Apart from the original names of the surveys in their respective native language, the names are also translated into English. Furthermore, users can filter the inventory for their purposes by using the ISO country codes and the subsequent column, which lists the years of data collection for all surveys. Cross-national survey programs are tagged as international surveys (“INT”) and participating countries are indicated in brackets.

The fifth column extrapolates the general topic of all surveys. It includes the categories health (HEA), aging (AGE), social surveys (SOC), education (EDU), and economic surveys (ECO). Many surveys included in the inventory combine the topics health and aging. We decided to label all those surveys using a target population restricted to the elderly with the AGE category, unless the survey itself put a strong emphasis on the health topic.

Columns six through eight are essential for the survey classification. The sixth column states whether a survey included residents living in institutions or not. Apart from the dichotomous yes/no classification, we also added a “partly” category. Note that this category

²⁴ So far, we did not structure the input with a questionnaire. We got in touch with various survey experts at two ESS ERIC National Coordinators Forums, the ESS ERIC Field Directors Meeting, and the SERISS Sampling Workshop.

²⁵ “institutional”, “non-resident”, “community-dwelling”, “collective”, “communal”, “non-private”

does not provide any information regarding the scope of institutional types covered, but points out that some (cross-national) surveys do not cover the institutionalized population across all countries or all waves. The second classification column offers more information about the concrete types of surveys. If a survey covered the institutionalized population, it was classified according to an ordered five-level scale; the first two levels contain all cross-sectional surveys; the remaining three categories describe the coverage of panel surveys, which interview the same respondents several times. *Cross-sectional surveys* can cover institutions exclusively [1] or integrate institutionalized respondents into a sample of the general population [2]. A very small number of *panel surveys* interviewed only respondents living in institutions in the first wave (baseline) and followed-up on those respondents with another interview [3]. A second group of panel surveys excluded institutionalized respondents in their first wave, but did interview original sample members if they moved to an institution between two waves [4].²⁶ The last group of panel surveys included institutionalized respondents in the baseline wave and tried to follow-up on every respondent, no matter whether the respondent moved to an institution between two waves or not [5].

The eighth column indicates the particular institutions that have been covered by a survey. The majority of surveys do not include all types of institutions. Sometimes the technical reports state very clearly which institutions have been covered by the sampling design and the fieldwork. This is especially the case whenever a survey dealt with a specific topic, such as health, aging, education, homelessness, refugee integration, or literacy skills of prisoners. In addition, a minority of surveys included every institutional resident by definition.²⁷ Users are invited to filter the survey inventory according to their research interests.

The next column contains a more detailed explanation for every survey. We gathered those explanations from technical reports, questionnaires, journal articles, or queries to the research teams, if no written information was found. In most cases the entries provide further insights into the definitions of the target population and the sampling designs of the surveys. The column is also relevant for all surveys that excluded institutionalized residents, as users can get an impression of how surveys restrict their definition of the target population to the population living in private households.

The third and second last columns comprise additional information about the fieldwork of the surveys. Data on the survey mode was available for all surveys. A number of surveys applied a mixed-mode approach and combined an in-person interview (Face-to-Face, F2F)

²⁶ Those surveys also fall into the “partly” category because they excluded the institutional population in one wave.

²⁷ Chapter 5 contains a description and analysis of the research designs in greater detail.

with a self-administered PAPI questionnaire. The second last column registers survey guidelines on proxy interviews. Surveys that want to include a hard-to-interview population like institutionalized residents need to consider whether interviews with a third party are allowed or forbidden. The SERISS survey inventory only collected explicit statements about the usage of proxy interviews (yes/no). If a guideline did not mention its policy concerning proxy interviews, the cell is not filled in.

Finally, the very last column contains a link to the homepage of every survey program. Users can access the original sources and download technical reports, questionnaires, datasets, or other documents, which are available at those homepages.

4.2 Limitations

Three major limitations should be mentioned before moving on to the contents of the SERISS survey inventory. First of all, the inventory certainly suffers from a *language bias*. Our research team could easily identify and register surveys with a documentation written in English, German, French, or Hebrew. Therefore, surveys from the UK, Ireland, France, Germany, Austria, Switzerland, USA, Canada, Australia, Israel, and the Walloon part of Belgium should be well represented. For all other European countries, we had to rely on the availability of homepages and survey documentations written in English or translated into English. It was much more difficult to identify and examine relevant surveys if they only published in a national language other than French, German, English, or Hebrew. If we knew about the existence of a survey, we tried to overcome the language barrier by using the most common online translation tool (Google translate). As a last resort we also contacted responsible researchers.

Secondly, our query for surveys could be also subject to a *reporting bias*. Given the low share of the institutionalized population in the general population, surveys need to be less concerned about covering the institutionalized population if they do not focus on the elderly population for instance. As a consequence, those surveys might not report in their guidelines whether this subgroup is excluded or included.

Finally, our work on the inventory is ongoing and we will continue to work on it in order to make it more exhaustive. We will also continue to search systematically for surveys in some minor subgroups of the institutionalized population, for instance military barracks, or monasteries.

5. SERISS survey inventory: Results

So far 167 European surveys are registered in the survey inventory (+ 42 surveys from the USA, Canada, Australia, and Israel); 80 of those surveys included at least parts of the

institutionalized population at least once (+ 27 surveys from the USA, Canada, Australia, and Israel). The following chapter will present some descriptive statistics from the SERISS survey inventory.

5.1 National survey programs

The vast majority of the registered surveys are geographically restricted to one country. The inventory includes national surveys from 21 countries (17 European countries)²⁸. In 19 of those countries, the research team found at least one survey that conducted interviews in institutions. Many of those countries not registered with any national survey, are covered by one of the cross-national survey programs. *Figure 3* shows that the SERISS survey inventory contains more surveys from larger countries like Germany, the UK, the USA, France, or Netherlands.

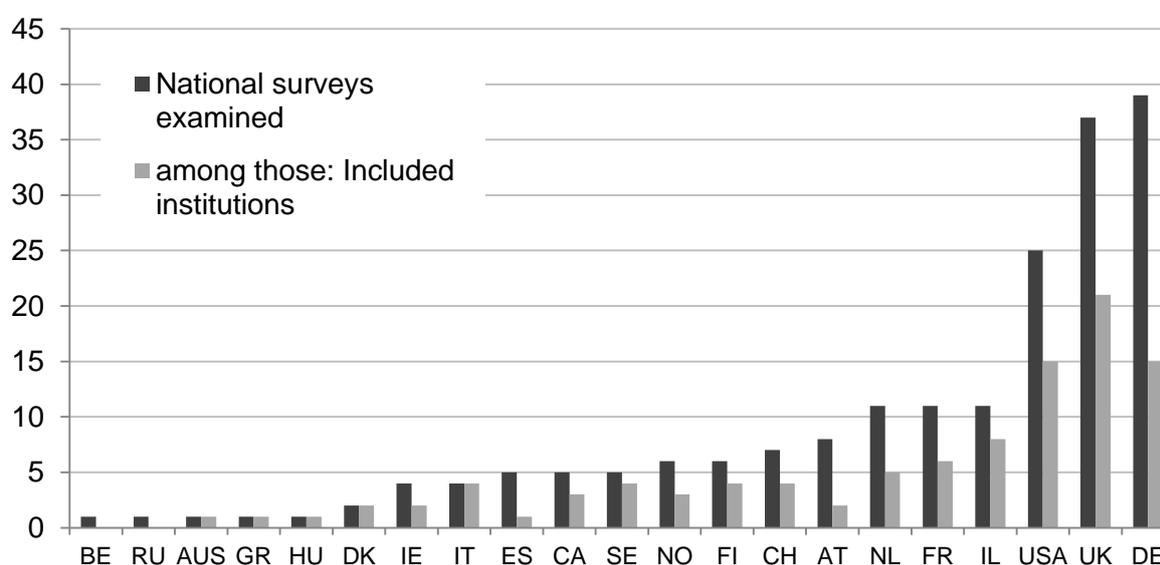


Figure 3: Number of national surveys that included the institutionalized population (SERISS survey inventory 2016)²⁹

Taking into account the previous section on limitations of the survey inventory, the figure does not allow any general conclusion about the country-specific prevalence of surveys within institutions. Although we tried to avoid selection bias and included many surveys that do not deal with aging or health, the inventory represents a selection of surveys. Hence, the

²⁸ Surveys in one or two of the four countries in the United Kingdom were classified as UK surveys.

²⁹ BE (Belgium), RU (Russia), AUS (Australia), GR (Greece), HU (Hungary), DK (Denmark), IE (Ireland), IT (Italy), ES (Spain), CA (Canada), SE (Sweden), NO (Norway), FI (Finland), CH (Switzerland), AT (Austria), NL (Netherlands), FR (France), IL (Israel), UK (United Kingdom), DE (Germany)

inventory rather describes the content of the inventory and shows interested users the regions that have been covered so far.

5.2 Cross-national survey programs

In addition to the national survey programs, the SERISS survey inventory also contains 18 cross-national surveys.³⁰ A minority of these surveys included the institutionalized population. Apart from a small qualitative survey sampling female refugees in Germany and Belgium (*Fem-Ref*), the following surveys included respondents living in institutions at least partly: the **EHIS** (*European Health Interview Survey*), **LFS** (*Labour Force Survey*), **SHARE** (*Survey of Health, Ageing and Retirement in Europe*), and the **WHS** (*World Health Survey*).

The guidelines of these four cross-national surveys apply different strategies regarding the specifications on the institutionalized population. EHIS, LFS and WHS state that the target population generally consists of the population living in private households. The WHO World Health Survey collected data in 70 countries between 2002 and 2004. Apart from the target population living in private households, the WHO also defined sampling units as eligible if they lived “in an institution due to a health condition (such as a hospital, hospice, nursing home, home for the elderly, etc.) at the time of the visit to the household” (WHO 2002: 3). People living in other group quarters or military barracks were excluded from the target population.

The EHIS leaves it to the member countries to decide whether they want to extend the coverage to the institutionalized population or not (Eurostat 2013). In Belgium and Denmark, the national Health Interview Surveys included institutions, while the national teams of Austria and the Czech Republic only sampled private households. In 2008, the EHIS even implemented a task force working on the inclusion of the institutionalized population into the survey (Beukenhorst et al. 2011). The task force collected experiences of the national teams with surveys in institutions via an expert survey and dealt with implications of an inclusion of the institutionalized population on different stages of the survey cycle (ibid.).

The LFS applies the same approach as the EHIS. The supranational guidelines only demand the coverage of private households and allow the countries to interview respondents living in institutions either directly or indirectly (Eurostat 2014). A little more than half of the LFS countries excluded institutionalized residents. Institutional households were not excluded, but remained in the sample in Denmark, Estonia, Germany, Finland, Iceland,

³⁰ The following cross-national surveys exclude the institutionalized population: AES (Adult Education Survey), EMAS (European Male Ageing Study), EQLS (European Quality of Life Surveys), ESS (European Social Survey), EU-SILC, EVS (European Values Study), FFS (Fertility and Family Surveys), GGS (Gender and Generations Survey), HBS (Household Budget Survey), PIAAC, among others.

Norway, Sweden, and the United Kingdom. A third group of countries³¹ collected proxy information about all the household members, who were absent in a sampled private household because they lived in institutions. The Portuguese team specified that it only includes institutionalized household members if they “represent a potential for the labour market, insofar as they have family links with the private dwellings (national servicemen or students)” (Eurostat 2015b: 44). In Romania, pupils, students, prisoners, and persons temporarily in hospitals were also covered indirectly via proxy interviews in private households, if they preserved family ties with those households (ibid.). Hence, the large group of users of LFS data should be aware that the target population varies between the different countries.

Only SHARE advances a centralized definition of the institutionalized population. SHARE aims to cover respondents aged 50 years or older living either in a private household, a nursing home, or another institution for the elderly (De Luca et al. 2015). Other institutionalized residents, like prisoners or hospitalized patients, are excluded from the target population if they are absent from their private household through the entire fieldwork period (ibid.).

5.3 Types of institutions covered and research designs

The following section describes the types of institutions that have been covered by the various surveys included in the SERISS survey inventory. As the coverage of certain institutions is closely tied to the research designs of the surveys, those two topics are treated within the same section. The majority of surveys cover a specific topic like health, quality of life, aging, or immigration. As a consequence, most surveys do not cover the entire institutionalized population, but select certain subgroups, such as respondents in nursing and retirement homes, refugees, people with intellectual disabilities living in care homes, people in homeless shelters, or prisoners. *Figure 4* shows how often the different types of institutions have been covered by the registered surveys.³²

Residents in retirement and nursing homes are most often part of the various target populations. This observation is in line with the relative size of this group within their respective age cohorts (see chapter 3). Most surveys do not distinguish between nursing homes and retirement homes, which could be also justified with the large number of hybrid institutions. For interviewers, it is difficult to assess whether an institution offers custodial services to their clients or not.

³¹ Bulgaria, Spain, France, Macedonia, Portugal, Romania, and Slovakia

³² Note that one survey can cover more than one type of institution (for instance hospitals and retirement homes).

The blurred lines between different types of institutions might also motivate surveys to simply include all kinds of institutions. Such a catch-all definition is used by 19 survey programs.³³ The cross-national EHIS and LFS do not make any distinctions within the institutionalized population in their supranational guidelines. Most probably those surveys want to leave the decision about the concrete target population to their national teams, which are aware of country-specific particularities regarding the institutional sector and related sampling and fieldwork issues. As a consequence, member states can decide for themselves which parts of the institutionalized population they want to include. Panel surveys constitute a second case of catch-all surveys. The American Panel Study of Income Dynamics (PSID), the British Household Panel Survey (BHPS), and its successor, the UK Household Longitudinal Study, operate with large samples and do not want to lose respondents due to institutionalization. Every respondent remains eligible by definition and the surveys try to conduct another interview wherever the original respondent has moved to. It should be noted, however, that, even though panel surveys want to minimize panel attrition this way, it could very well be the case that institutionalized respondents have a higher likelihood to drop out of a panel.

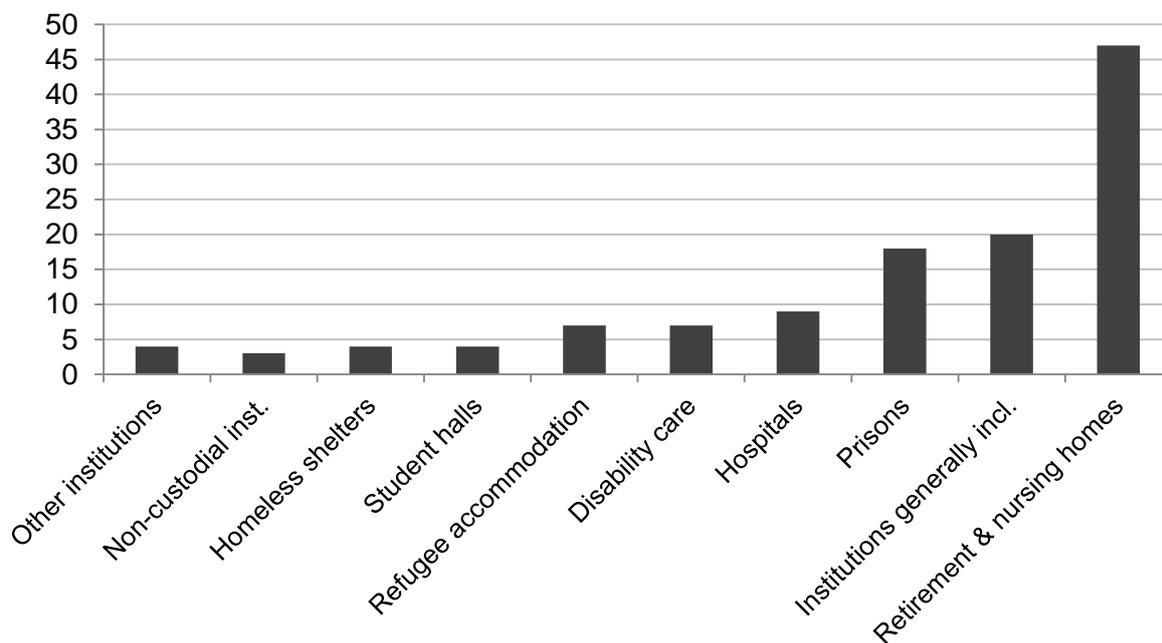


Figure 4: Types of institutions covered by the registered surveys (SERISS survey inventory 2016)

Other surveys, like the first Berlin Aging Study (BASE I), the Finnish Health 2000, or the Danish Health and Morbidity Survey (SUSY), deal with a very specific topic, but do not

³³ Only prisoners are explicitly excluded by the UKHLS, PSID, FinHealth, and FINRISK.

specify their target population in institutions. As far as surveys about aging are concerned, it might be sufficient to define all institutionalized residents as eligible and add a certain age threshold. The various types of institutions are very age-specific and the proportion of old-aged residents in educational institutions or prisons is quite low. In Israel, it seems to be common to include the group of non-custodial institutions³⁴, probably linked to the assumption that those residents are not as hard-to-interview as other institutionalized residents. The British Communal Establishment Pilot Survey (CES) constitutes a special case of catch-all surveys. The CES was a pilot survey of the British ONS and compared the data collection in different types of institutions in the United Kingdom. It tested the sampling and interview procedures in institutions and collected data concerning the demographic background, economic situation, and activities of daily living among others (ONS 2002: 25).

The USA is among the countries with the highest shares of prisoners (Walmsley 2015). More than 40 percent of all surveys in prisons identified within the SERISS project (N=18) have been conducted in the USA (N=8). Those surveys usually use large samples, while the European counterparts are rather small-scale surveys in single prisons. In the USA, surveys like AddHealth (National Longitudinal Study of Adolescent to Adult Health), NAAL and NALS (National Assessment of Adult Literacy), or PIAAC (Programme for International Assessment of Adult Competencies) added a sample of prisoners to their samples of the general population. In Europe, the SERISS research team identified small-N prison surveys in Norway, Greece, and Ireland. In the United Kingdom, a couple of larger surveys have been conducted only in prisons, such as the Arrestee Survey (interviews in 72 custody suites in England and Wales), the SPCR (Surveying Prisoner Crime Reduction), and the RSRA (Resettlement Surveys Reoffending Analysis). The RSRA followed-up on its respondents with a data linkage method.³⁵ Finally, the APMS (Adult Psychiatric Morbidity Survey), which generally only interviewed respondents in private households, interviewed nearly 3,140 prisoners in 1997. APMS also targeted more than 1,000 homeless people sleeping rough or living in hostels, night shelters or other collective accommodations.

The homeless population and refugees living in collective living quarters are populations with very specific requirements for survey programs.³⁶ We identified four surveys covering the homeless population and seven surveys conducting interviews in refugee

³⁴ Residents living in non-custodial institutions (e.g. student halls, immigrant absorption centers and independent living projects for the elderly) have a higher degree of independency and own housekeeping.

³⁵ The same method is applied by the Finnish Wattu panel survey.

³⁶ According to the definition of the institutionalized population and the criterion of usual residency (see chapter 2), homeless people can either be part of the institutionalized population (if they live in the shelters for a longer period and have their usual place of residence within those institutions), or they belong neither to the institutionalized population nor to the population living in private households (if they visit several shelters for only a short period or sleep rough).

accommodations. Germany witnessed a strong increase in the number of refugees throughout the last few years, and this development has also increased the demand for survey research covering this population (see SVR für Integration und Migration 2016). The German Federal Office for Migration and Refugees has started its own research projects (BAMF-RES) and is currently collaborating with the German SOEP and the Institute for Employment Research (Refugee Panel). In Germany, researchers have to cooperate with the Federal Office if they want to draw a probability sample as they do not have access to the central register of foreigners otherwise. The British SNR (Survey of New Refugees) also relied on such an official database³⁷ and sent postal questionnaires to all people who were granted asylum in the UK between December 2005 and March 2007 (Cebulla et al. 2010).

Figure 5 illustrates the classification of survey designs examined as part of the SERISS survey inventory so far. The figure differentiates between cross-sectional surveys and panel surveys and will also serve as a structuring scheme for the next chapter.

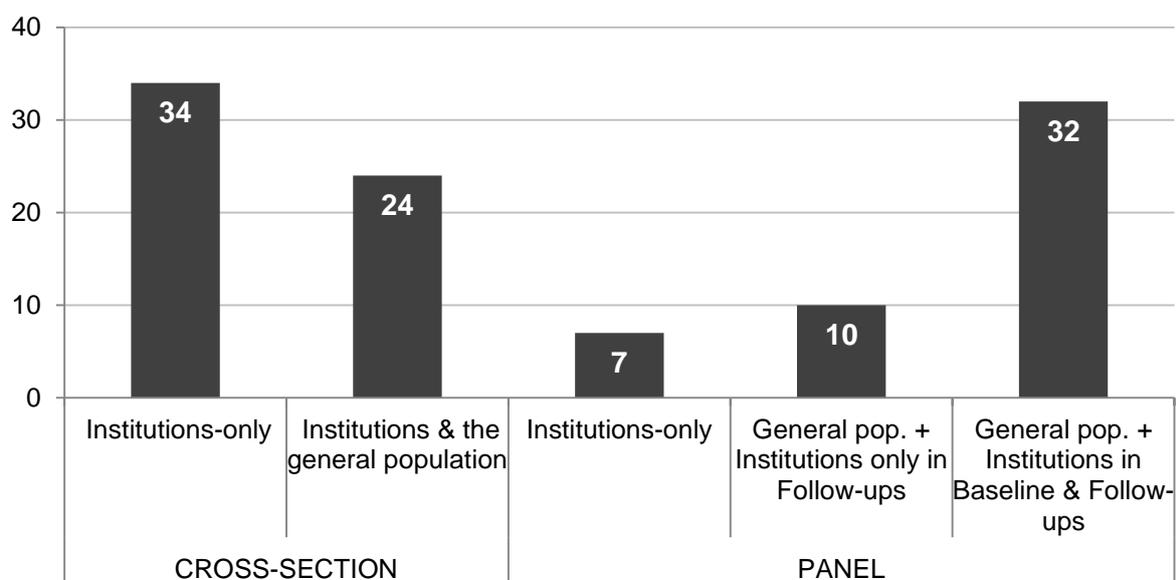


Figure 5: Research designs of the registered surveys including the institutionalized population (N=110; SERISS survey inventory 2016)

Several cross-sectional surveys only covered the institutionalized population. More than half of those surveys took place in prisons (N=12), homeless shelters (N=3), or refugee accommodations (N=4). Within the group of seven panels that only covered institutions, the same observation can be made: Three surveys interviewed prisoners at least twice (SPCR, and the Health Survey of Finnish Prisoners); another survey included refugees in Germany (BAMF-RES). Those panels are also interested in the transition of their respondents into

³⁷ The UK Border Agency Caseworker Information Database

private households, contrary to panel surveys with residents of retirement and nursing homes (the French HID survey, and the British Survey of Admissions to Residential and Nursing Homes).

The second group of cross-sectional surveys comprises surveys that integrated the institutionalized population into a sample of the general population. A lot of those surveys deal with health or aging and enable researchers to compare the institutionalized population with the population living in private households. Some national surveys within the EHIS and LFS fall into this category, just as more specific surveys like the Swiss VLV survey (Vivre/Leben/Vivere), the FinHealth Study in Finland, or the Israeli Crime Victimization Survey (IL-CVS). The English APMS and the U.S. PIAAC Prison Study draw two distinct samples, one from private households and one from institutions, and can compare the results of those two samples afterwards.

The majority of registered panel surveys (N=32) sampled institutionalized residents in the baseline wave. At later waves, those panels followed up on all sample members, no matter whether they lived in a private household or an institution. Respondents who moved to an institution between two waves of the panel were included as well. Most of those panel surveys deal with health and aging and focus on residents in retirement homes and nursing homes (N=18). SHARE is the only *cross-national* panel survey that follows this approach. The German Refugee panel and the British SNR sampled refugees in private households and collective households in the baseline wave. The SNR sent three follow-up questionnaires to the respondents and could track how many refugees left the collective living quarters and moved into private households. The Refugee panel is about to finish the baseline data collection and will integrate those respondents into German SOEP from 2017 on (Brücker et al. 2016).

Another group of 10 panel surveys sampled their original sample members (OSM) only in private households. If an OSM moved to an institution between two waves, those respondents remained part of the target population and were re-interviewed. Users of data from surveys like the American PSID, the BHPS (British Household Panel), and its successor, the UKHLS, have to be aware that the selection of respondents in this way does not allow general statements about the entire institutionalized population. The exclusion of institutionalized residents in the baseline wave could be especially critical for panel surveys dealing with aging or health. The CLSA (Canadian Longitudinal Study on Aging), the German DEAS (German Ageing Survey), the American HRS (Health and Retirement Survey), and the English Longitudinal Study of Ageing (ELSA) fall into the category of panels which include sample members living in institutions only during their follow-up waves. For the first wave in 2002, ELSA selected its respondents from three cross-sectional samples

from the Health Survey for England (Bridges et al. 2015). As the HSE only covers the non-institutionalized population in England³⁸, ELSA could not cover institutionalized residents.

The U.S. AddHealth study (National Longitudinal Study of Adolescent to Adult Health) and the British Cohort Study (BCS) started their panel with young respondents during their childhood or youth. The share of the institutionalized population is quite small within those age cohorts (see *Figure 2*), but it gets larger as respondents might move to student halls or are sent to prison. Despite the small share of institutionalized residents in the respective target populations, BCS and AddHealth do not suffer from the reporting bias, referred to in section 4.3, and mentioned those small groups in their guidelines on the target population.

6. Sampling practices for the institutionalized population

The way a probability sample is drawn in institutions will depend upon two main factors: First, the general research design of the survey; and secondly, the structure of country-specific sampling frames. Kalton suggests several core questions to choose the best sampling design for a hard-to-sample population (Kalton 2014: 403 et seq.): “How rare is the population? [...] How readily can the members of the target population be identified? [...] Is there a large-scale survey that can serve as a screener sample? [...] Is the target population more concentrated in some parts of the sampling frame? [...] Are there one or more partial sampling frames [...] of the hard-to-sample population that are available for use of sampling?”

This chapter on sampling tries to answer those questions for the institutionalized population. It follows the structure given in *Figure 6* and distinguishes between surveys that want to produce estimates for a single domain (for instance, the population living in institutions only) and surveys that want to cover at least two domains (private households and institutional households, see Kalton 2009). In the first section, the chapter describes different approaches of cross-national and panel surveys covering institutions and institutionalized residents exclusively (single domain). The second section moves on to cross-national and panel surveys that integrated institutionalized residents into a sample of the general population (two domains). The chapter utilizes sampling insights from surveys registered in the SERISS survey inventory and will refer to some country-specific sampling frames. SERISS Deliverable 2.1 contains a more detailed and comprehensive overview of European sampling frames used in the cross-national surveys ESS, EVS, SHARE, and GGP (Scherpenzeel et al. 2016).

³⁸ With one exception in the 2000 wave

From a sampling perspective, the institutionalized population entails certain features that influence the sampling of this subgroup. The institutionalized population is hard-to-sample because it is a rare population (see Kalton 2009; Tourangeau 2014). On the basis of census data, the third chapter of this paper presented the institutionalized population as a minor (one to ten percent of the population), or even a mini domain (less than one percent) in European countries. If, however, a survey is interested in a more specific part of the population, for instance the elderly population or refugees, the institutionalized population can be a major domain with a proportion higher than ten percent in some countries (see Kish 1987; Eurostat 2015a).

Institutionalized residents are not hidden or hard-to-identify. The character of the institutionalized population is shaped by the special housing situation compared to the population living in private households. Institutionalized residents live in centers of aggregation and can be sampled with a modified center sampling technique proposed by Blangiardo and colleagues (2004) or location sampling (see Kalton 2009).³⁹ Other ways of sampling hard-to-sample populations, like snowball sampling, or respondent-driven sampling (Kalton 2014), are not required for the institutionalized population and have not been applied by the European and international surveys in the SERISS survey inventory.

6.1 Institutions-only

If a survey aims to cover institutionalized residents without any respondents in private households, it can either draw a gross sample and screen it for institutionalized residents, or use a sampling frame of institutions and apply a center sampling approach (see Blangiardo et al. 2004). The latter approach should be more efficient for most surveys, considering the small size of the institutionalized domain.

Location sampling is often used to sample mobile populations without a constant usual place of residence (Kalton 2009). Surveys can either sample *visits* or *visitors* to certain centers or institutions (ibid.). Those centers are situated at a specific location; surveys sample those locations in a first step and draw a sample among the residents of or visitors to the centers at the second stage. The ISTAT Survey of Homeless Population (PSD) and the French ENFAMS survey both sampled the homeless population. In contrast to most other surveys in institutions, surveys in homeless shelters face the danger of duplications if they sample visitors, because respondents could attend more than one center during the fieldwork period (De Vitiis et al. 2014). ISTAT researchers asked the respondents which other centers they usually attend and corrected the multiple routes of selection with survey weights (ibid.). Like the Italian PSD survey, ENFAMS conducted a census of eligible

³⁹ Blangiardo and colleagues apply the center sampling technique to draw a nonprobability sample of legal and illegal immigrants.

institutions and compiled a list of nearly 800 centers for homeless people. ENFAMS stratified those centers and drew 250 centers with a disproportional sampling fraction (Guyavarch et al. 2014). Hotels for homeless people were underrepresented in the gross sample, while centers more than 1,000 meters away from a train station were oversampled (ibid.). Within the selected institutions ENFAMS enumerators listed all eligible residents (families with at least one child younger than 13) for the third sampling stage, which consisted of the selection of children for the interviews. A third example of traditional location sampling is the Arrestee Survey (AS), which sampled three times approximately 8,000 prisoners with a stratified probability sample. Interviewers visited custody suits in England and Wales during certain points in time and tried to interview as many prisoners as possible during their shifts.

Most of the surveys included in the SERISS inventory do not sample visits or visitors to institutions but are interested in the permanent institutionalized residents. Surveys require a list of all institutionalized residents or at least a list of all institutions in a given territory. As a list of institutionalized residents does not exist at the national level in most countries⁴⁰, researchers must compile lists of institutions comparable to the lists required for the center sampling or location sampling approach. A comprehensive list of all institutions within a given territory allows the surveys to draw a sample of institutionalized residents in a multi-stage sample design. In order to keep the travel expenses of interviewers and organizational costs at a reasonable level, surveys can draw regional primary sampling units (PSU) first (see Feskens 2009).⁴¹ To account for the regional distribution of the institutionalized population, surveys ideally apply a systematic or stratified random selection of PSUs on the basis of the underlying distribution of institutionalized residents. If the PSUs are drawn with a probability proportional to the size (PPS) design, the residents can be drawn at the next stage with equal probabilities, resulting in equal selection probabilities of those residents. The German Retirement Home Survey (AHS) used the German address register of retirement homes to build up a list of 8,630 German retirement homes (Klein and Gabler 1996).⁴² For a PPS selection the size of the retirement homes was used; 2,000 values of the number of beds were missing in the address register and had to be imputed.⁴³ On the basis of the PPS principle and under consideration of the financial resources, the German researchers selected 25 German districts (ibid.).

⁴⁰ Or is not accessible for independent researchers

⁴¹ Some surveys are restricted to one region by design (e.g, CC75C, ENFAMS, Kungsholmen Project, LEILA75+, Rheinland-Studie, SHIP, etc.)

⁴² The homepage www.heimverzeichnis.de is a current online version of such an address register in Germany. The homepage www.caredata.co.uk is a fee-based example in the UK. Before using those websites as a sampling frame users should carefully assess the quality and the coverage of the registers.

⁴³ By subtracting the actual number of beds, given by the address register, from the total number of beds in institutions within each federal state and distributing those beds uniformly across all institutions with missing information (Klein/Gabler 1996)

The effort required for this kind of sampling depends upon the specific institutional subgroup and the country-specific availability of registers of institutions. If no register of institutions is available, researchers must compile one. It is generally easier to compile a comprehensive list of prisons than producing an exhaustive list of retirement and nursing homes, because the number of prisons is far below the number of retirement and nursing homes.⁴⁴ In Germany, even the Federal Statistical Office needs to build up a list of institutions for every decennial census.⁴⁵ The Statistical Office searches online for relevant addresses and takes stakeholders like student unions, drug-counseling centers, or hospitals as starting points. Researchers working on the British Communal Establishments Survey (CES) described their efforts to compile a list of institutions in a detailed way. The CES screened a sample of addresses from the Postcode Address File (PAF) for institutions, using relevant classification codes from the Inter-Departmental Business Register (Manners 1999; ONS 2002).

After drawing a sample of institutions as cluster units, surveys need a list of all (eligible) residents. In most cases, surveys in institutions select more than one respondent in each institution to lower the financial costs of data collection. The CES interviewed four residents in institutions with a size of up to nine residents, and selected 20 residents in institutions with more than hundred residents (ONS 2002: 11). The size of the institutions matters for the selection of sampling units. Residents living in larger institutions have a lower selection probability, unless the survey employs a PPS selection of institutions, that is larger institutions are sampled with a higher probability compared to smaller institutions at the first stage whilst at the second sampling stage, the residents living in larger institutions are sampled at lower rates than the residents living in smaller institutions (see Pickering et al. 2008). This also reduces the variability of the inclusion probabilities of institutional residents thus resulting in a lower variation of the design weights.

If a survey has sufficient resources and the target population is small enough, it might want to conduct a census of all eligible units within an institution. The Greek Korydallos Prison Survey and the Norwegian National Survey of Women Prisoners were interested in female prisoners and tried to interview all eligible prisoners. The Irish AITHS was interested in detained travellers, but could only afford interviews with 26 out of 100 eligible persons.⁴⁶ And the English Survey of New Refugees sent postal questionnaires to all eligible immigrants. Some surveys that used center sampling techniques and sampled *visits* also

⁴⁴ Additionally, most of the prisons are run by the state in European countries.

⁴⁵ By law the Statistical Office can only use sources that are publicly available; after each census the register of institutions has to be deleted.

⁴⁶ The AITHS defines travellers as “a small indigenous minority group that has been part of Irish society for centuries. They have a value system, language, customs and traditions, which make them an identifiable group both to themselves and to others.” (UCD 2010: 9).

tried to interview all residents who were present in a certain institution during a certain point in time (e.g., PSD, Arrestee Survey).

Another approach to sampling rare domains is to use a larger survey as a screener (Kalton 2014). If secondary researchers get access to the gross samples or contact data from other surveys, they could filter large surveys that included institutions. Apart from the sampling of institutions with the British Postcode Address File (PAF), the CES also included 146 institutions identified in five waves of the British Labour Force Survey (ONS 2002).⁴⁷ In 2006, the Irish National Disability Survey (NDS) followed-up on a sample of those respondents, who declared to have a disability in the 2006 Irish census. A little less than five percent of those respondents lived in an institution. A major limitation of the screening approach is the exclusion of the institutionalized population in many large social surveys. The ELSA could not include residents living in institutions in the baseline wave because the screening survey (Health Survey for England) excluded this subgroup.

6.2 Institutions within a sample of the general population

Contrary to institutions-only sampling, surveys that aim to integrate the institutionalized population into a sample of the general population do not target the institutionalized population with specific sampling methods. Most often those surveys follow the conventional sampling approaches but do not exclude institutionalized sampling units. The following section briefly describes the general types of sampling frames and their implications for the sampling of institutionalized residents. Contact form data from the cross-national ESS indicates under-coverage of institutionalized sampling units. Hence, the last part of this section elaborates on further means to increase the number of institutionalized respondents, like multi-frame sampling, or disproportionate sampling. Other factors that may negatively influence the number of institutionalized respondents in a net sample, for instance, a higher non-response of institutionalized residents (as they might also be hard-to-interview), are beyond the scope of this report.

Generally, country-specific population registers can be classified into three categories with different implications for the inclusion of the institutionalized population: The first group of countries provides surveys with a sampling frame which lists individuals. The second group of countries possesses a sampling frame that lists addresses of households or dwelling units with multiple households. The third group of countries does not have any frame of individuals or a directory service, or they do not allow researchers to access it for sampling purposes. In Greece, Portugal, and the Russian Federation, for example, surveys

⁴⁷ The LFS excluded those sampling points as ineligible.

might have to apply a random route procedure or enumerate households prior to the sampling (see Scherpenzeel et al. 2016; Poulain and Herm 2013).

In countries with registers of individuals the selection probabilities are the same for the population living in institutions and the population living in private households, at least if the frame covers all citizens equally. The selection probabilities can differ within the second group of countries with sampling frames of addresses or dwelling units. If an institution is counted as one unit in the register on the basis of its address, the institutionalized residents have a lower probability to be included in a sample. Surveys could apply a PPS design and draw institutions with a higher probability, but this approach would require auxiliary information about the household sizes or the types of households (e.g., private household, institution) in the sampling frame. Deliverable 2.5 of the SERISS project indicates that such an identifier is available in the population registers of Austria, Belgium, Denmark, Finland, Luxembourg, the Netherlands, Norway, and Sweden (Bristle et al. 2016).⁴⁸ The registers in those countries list individuals and their addresses. If a population register lists the citizens on the basis of their family names, each institutionalized resident or household has an own entry and the respective institution contains multiple households in the register. In this case the selection probabilities for the institutionalized residents and the population living in private households can become very similar.

Generally, in a random route procedure the selection probabilities are unknown. Under the assumption that a random route results in the same probabilities as the sampling of addresses, institutionalized residents would have a lower probability to be selected than residents of private households. A relatively large group of institutionalized residents only has one chance to be selected, when an enumerator or interviewer arrives at the specific address of an institution. In 2012, a pilot survey of the WHO Quality of Life module in Germany (WHOQOL-OLD) used a random route procedure in 129 primary sampling units. The survey recruited very few institutionalized respondents in a net sample of more than 1,100 respondents, although the target population consisted of the population aged 60 or older, and an oversampling of the population aged 80 or older was applied.

Figure 6 compares the percentage of institutionalized residents in the national gross samples of Round 6 of the European Social Survey. ESS interviewers are not allowed to interview people living in institutions, but they record those cases as ineligible units in the contact data. The contact form data of the cross-national ESS is based on interviewer observations and does not suffer from significant non-response.⁴⁹ *Figure 6* only serves as a

⁴⁸ The results presented in deliverable 2.5 are based on an expert survey of the country teams of four cross-national surveys (ESS/EVS/GGP/SHARE). For a detailed description of the auxiliary variables available in various national sampling frames, see Bristle et al. 2016.

⁴⁹ Cases are only missing whenever interviewers do not complete the observation.

rough evaluation of the various national sampling frames and is far away from being a perfect indicator for the coverage of institutionalized residents. For instance, some of the national institutes responsible for drawing a sample for the ESS could have excluded institutions beforehand from the sampling frame, as they are not defined as parts of the ESS target population.

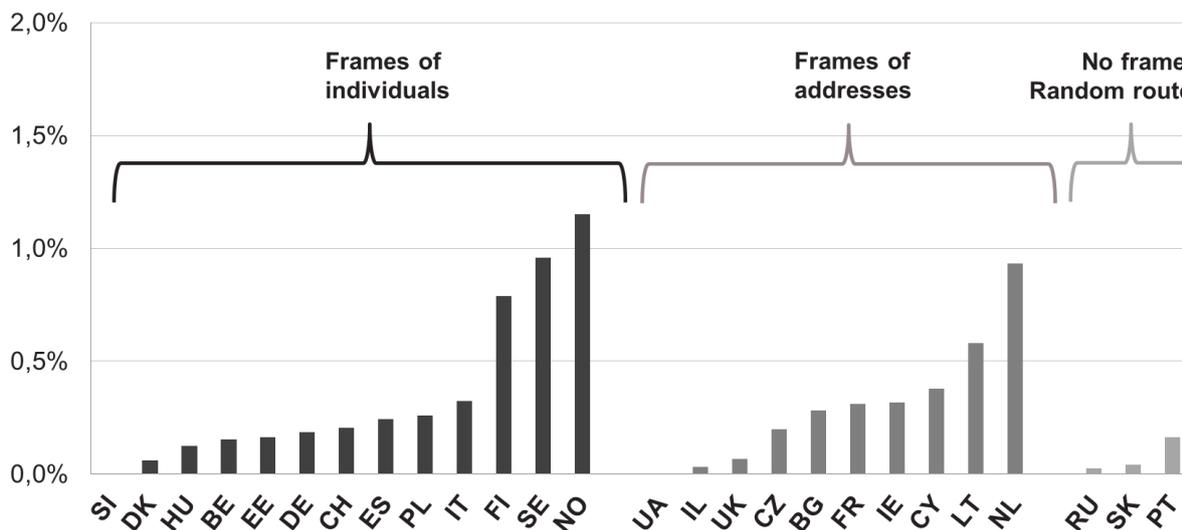


Figure 6: Ineligible institutionalized residents in the sixth round of the European Social Survey (ESS 2012)

In total, 256 sampling units were recorded as institutionalized residents in Round 6 of the ESS (0.28 percent of the entire gross sample). Compared to the census results presented in *Figure 1*, the aggregated number, as well as country-specific proportions implies under-coverage of the institutionalized population in most European countries. Only in Scandinavia, the Netherlands, and Lithuania was a significant number of institutionalized residents recorded in the ESS contact data. The random route sampling results in lower proportions of institutionalized residents.⁵⁰ The same observation holds true for the sample drawn with the address register PAF in the UK. This seems to confirm the assumption that people living in large institutions have a significantly lower selection probability in address-based sampling compared to the sampling with sampling frames of individuals.⁵¹ Nevertheless, the share of institutional sampling units should be higher in countries like Germany, France, Belgium, or Switzerland.

The SHARE documentation mentions the same under-coverage. According to De Luca and colleagues, the statistical institutes in Belgium, the Czech Republic, and Italy informed

⁵⁰ The lower number could be also caused by the fact that enumerators do not include institutions into the gross sample because those cases are clearly defined as ineligible.

⁵¹ At least if they are drawn with equal probabilities.

SHARE that their sampling frames exclude people living in retirement and nursing homes (De Luca et al. 2015). However, institutionalized residents living in those countries were included in the final data set, raising questions about the quality of representation of those groups, and presumable sources of error in the sampling frames and during the interviews (ibid.). The methodological report of the German Financial Security in Retirement Survey (ASID) also mentions a particularity of the decentralized German population registers. According to the report, some of the local registration offices block addresses that can be identified as institutions (TNS Infratest Sozialforschung 2012). The amount of those confidential addresses cannot be quantified (ibid.), which poses a threat to the German population register as an adequate sampling frame for the general population, including the population living in private households and the institutionalized population.

Considering the results shown in *Figure 6*, the number of respondents in the minor domain of institutions would be rather small in most national net samples. If surveys of the general population want to allow separate estimations for the institutionalized domain, they need to think about larger sample sizes or special techniques for this mini domain, such as oversampling of institutions or applying a multi-frame sampling. A disproportional stratification and oversampling of certain strata with a higher prevalence of institutionalized residents could be one way to increase the number of respondents living in institutions (see Tourangeau 2014; Kalton 2009). Of course, surveys need to have information about the prevalence of institutionalized residents in different strata. An identifier of institutional addresses, as it has been described in the previous paragraph, could be a valuable auxiliary variable to identify institutionalized sampling units and draw them with a higher probability. If no such identifier is available in the sampling frame, the age of sampling units can be another promising variable to increase the number of respondents living in institutions.⁵² The Finnish Health 2000 survey oversampled the strata with people aged 80 years or older with a doubled sampling fraction. However, it should be noted that the oversampling of the oldest age cohort did not have a positive influence on the number of institutionalized respondents in the WHOQOL-OLD sample, maybe also due to the random route procedure used in this pilot survey.

Dual or multi-frame sampling can be a second way to reach a higher proportion of institutionalized sampling units. A second frame with a high prevalence of the rare population complements the first frame with a good coverage of the entire population (Kalton 2009). Maybe researchers could compile their own frame of institutions (see section 6.1) or rely on country-specific frames of institutions (like the French FINESS or the Swiss SOMED frames). In some countries it could be possible to match the two frames and drop all

⁵² As the share of institutionalized residents increases with age (see *Figure 2*).

duplicates with an identifier variable (record-linkage). If this is not possible, researchers might have to manually check the two frames for duplicates or take into account the doubled selection probabilities for the computation of weights.

The SERISS survey inventory presents a wide range of research designs and sampling approaches for various subgroups of the institutionalized population. Researchers interested in the institutionalized population might have to compile a list of institutions, think about ways to combine two sampling frames, or oversample certain strata of the population. Matters are even more complicated in cross-national survey research because of country-specific sampling frames. According to Graham Kalton, “the art of constructing an effective probability sample design for a rare population is to apply some combination of methods in a creative fashion” (Kalton 2009: 138). This characterization can definitely be confirmed in the case of the institutionalized population.

7. Conclusion

This deliverable presents first results of task 2.5 of the SERISS project. The task deals with the small subgroup of the population that are institutionalized residents. Until 2019, the SERISS project will investigate the feasibility of including institutionalized residents into surveys of the general population in Europe. The present report introduces an inventory of surveys that included the institutionalized population and discusses sampling techniques for this subgroup. Even though the institutionalized population is commonly perceived as understudied and not covered in most social surveys, a significant number of surveys within and outside of Europe included institutionalized residents.

The report first advances a top-down definition of institutions and the institutionalized population. Institutions are defined as premises intended for the habitation of large groups. Institutions employ staff and offer managed residential accommodation to a group of mostly unrelated residents. Institutionalized residents have their usual place of residence within those institutions for various reasons. Generally, they cannot run their own household independently and rely on the services provided to them by the operators of the institutions. The report continues with a quantitative description of the institutionalized population in European countries and describes the statistical distinctiveness of this subgroup compared to private households. These differences between private households and institutionalized households provide a rationale why European surveys might want to extend the coverage to the institutionalized population, especially if the survey examines topics like health or aging.

After a detailed description of the survey inventory conducted for this task, and its limitations, the fifth and the sixth chapter provide descriptive analyses of the surveys

included in the inventory. The inventory includes national and cross-national surveys from more than 21 countries, covering the institutionalized population in whole or in part. The inventory contains surveys in prisons, hospitals, student halls, homeless shelters, refugee accommodations, or retirement and nursing homes. Cross-sectional surveys are included as well as panel surveys.

The chapter on sampling practices distinguishes between institutions-only sampling and sampling of the institutionalized population as part of a sample of the general population. The former group requires a complete and up-to-date list of institutions and/or institutionalized residents in order to draw a probability based sample. The latter group needs to consider sampling frames and the quality of coverage of the institutionalized population. Because of the small size of the institutionalized subgroups, surveys of the general population might want to apply a multi-frame sampling approach or utilize an oversampling of respondents living in institutions. An expert survey conducted for the SERISS deliverable 2.5 revealed that population registers in the Scandinavian countries, the Benelux countries⁵³, and Austria would allow an identification of institutionalized respondents for a PPS selection (see Bristle et al. 2016). Potentially, other countries also offer sampling frames with an equivalent identifier. If this is not the case, researchers will have to compile their own list of institutions if they want to enable users to compare institutionalized residents to the population living in private households.

The inventory comprises a very small number of cross-national surveys that included institutionalized respondents. Cross-national surveys need to adapt their guidelines to national circumstances and sampling frames within each member state. This could be one reason why cross-national surveys are less explicit regarding the concrete definition of the institutionalized population than some national surveys. By contrast, SHARE applies a concrete definition of the target population and includes institutions for the elderly exclusively. With its cross-European expansion, SHARE also faces the challenge of sampling institutionalized respondents in a standardized way across nations. Some of the country-specific sampling frames allow SHARE to include institutionalized residents, while other countries (seem to) exclude them from their population registers for sampling purposes. Moreover, like many other surveys that integrate institutionalized residents into a sample of the general population, SHARE does not address institutions with specific sampling techniques. Future research within task 2.5 will elaborate on potential ways to examine the institutionalized population with cross-national survey methods.

Having first provided a general overview of the state of the discipline and some of the issues to be considered, the next stage in our work exploring sampling of the institutionalized

⁵³ Belgium, the Netherlands, and Luxembourg

population will be to conduct a more detailed feasibility study dealing with the statistical distinctiveness of the institutionalized population, different sampling approaches, and conducting fieldwork in institutions. We will also continue to work on the survey inventory, which allows us to extrapolate sampling and fieldwork techniques that surveys have used to examine the institutionalized population. In the future, analyses of secondary data gathered by those surveys will shed further light on differences between the institutional and non-institutionalized population.

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Appendix

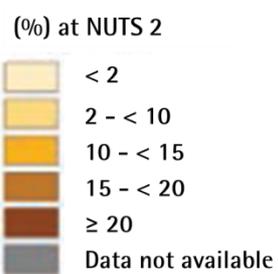
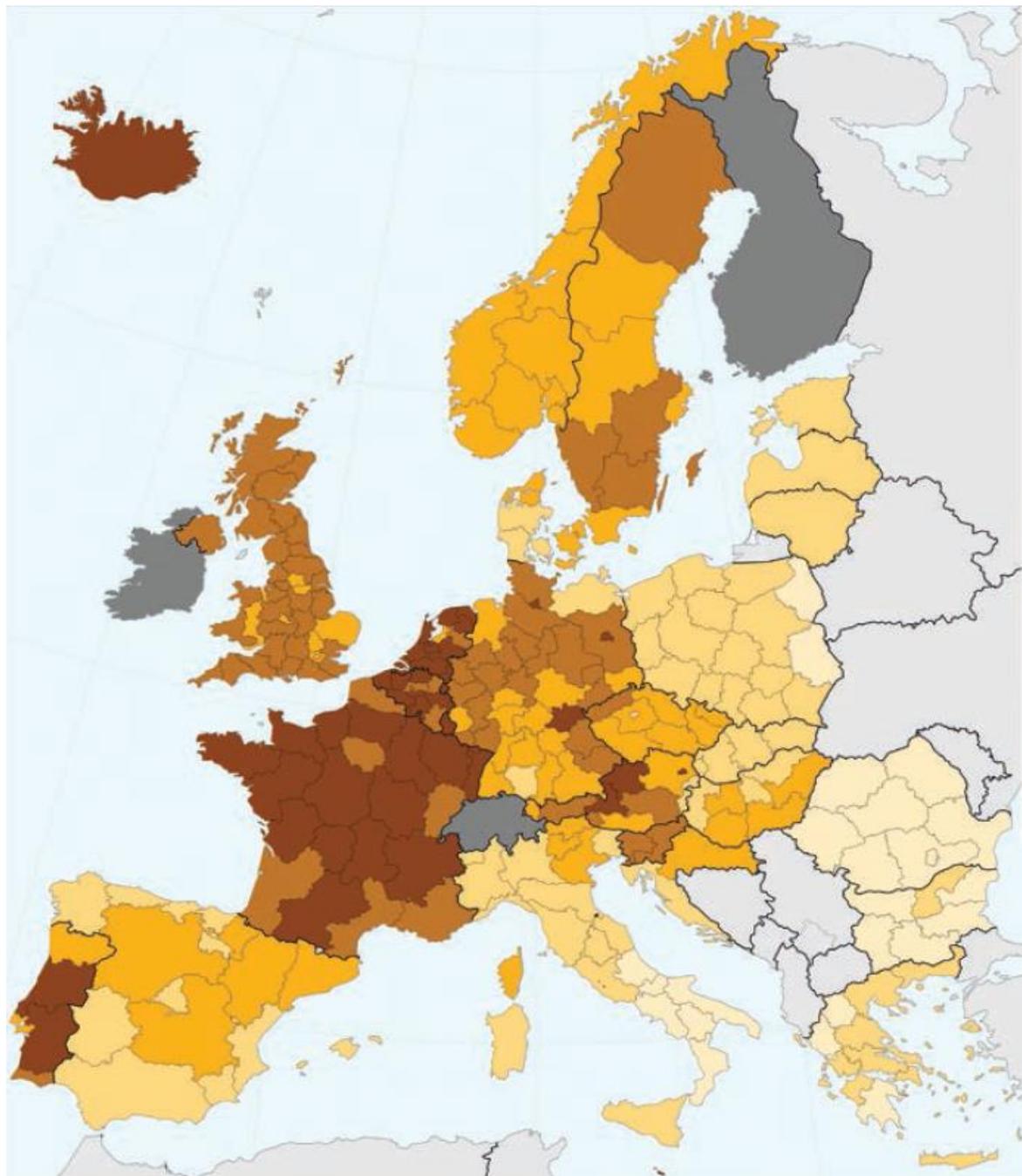


Figure 7: Share of population aged 85 years and over living in an institutional household, by NUTS level 2 region (Eurostat 2015a: 148)