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Surveying hard to reach groups in cross-country research

Prepared by the European Union Agency for Fundamental Rights (FRA)¹

Abstract

A core task of the European Union Agency for Fundamental Rights (FRA) is to collect and analyse objective, reliable and comparable data through surveys to provide the relevant institutions, bodies, offices and agencies of the European Union and its Member States with assistance and expertise relating to fundamental rights. The quantitative data collection programme of the Agency tries to fill outstanding data gaps, such as thematic areas or population groups not covered in the standard surveys of the European statistical system.

There is an increasing demand from policy makers to extend the scope of existing social surveys in order to cover population groups which in many cases have been excluded from general population sample frames as being hard to reach. There have also been calls to design dedicated surveys to explore the opinions, attitudes and experiences of particular sub-groups of the population which are represented in too small numbers in the samples of general population surveys to carry out robust analysis. One of the main challenges survey researchers face is the absence of sampling frames (or their poor quality) for certain target groups.

The paper discusses the challenges and methodologies applied in surveying hard to reach groups based on the example of the Second European Union Minorities and Discrimination Survey (EU-MIDIS II), which FRA conducted in 2016. EU-MIDIS II surveyed persons with an ethnic or immigrant background (immigrants and descendants of immigrants), including Roma, in all 28 EU Member States.

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I. Why and how to survey “hard to reach” populations

Poverty statistics usually aim to include everyone in the total population. Frequently, data for poverty statistics come from surveys that aim to cover the total population defined as everyone who has their usual place of residence in the geographical region to be covered. However, there are many persons or groups in the population, which cannot be easily captured in general population surveys, either because their size is so small and the sample sizes would not be sufficient for statistical analysis or because targeted persons/groups are not easy to survey with traditional and established survey methodologies and are therefore defined as hard to reach. The term hard-to-reach, also refers to elusive populations, meaning *populations for which – by virtue of their characteristics, or of the lack of suitable sampling frames, or difficulties in obtaining the required information – adequate samples cannot be defined, drawn or implemented using the normal procedures of general population sampling* (Verma, 2013, p. 4).

It is however essential that all groups in the population are represented in the data collected for the purpose of social reporting on poverty, because when groups are left out and in turn become invisible in the statistics, they cannot use evidence to claim their rights. This is in line with the human rights-based approach to data, developed by the Office for the High Commissioner for Human Rights (OHCHR) with respect to data collection for monitoring the progress of Member States with the 2030 Agenda for Sustainable Development.² Principles of this approach such as participation, data disaggregation, self-identification, transparency, privacy and accountability are key in data collection, pointing also to the development and implementation of special sampling methods for hard-to-reach groups.

When it comes to measuring poverty, it is essential not to leave out those persons or groups who are particularly at risk of poverty. For example undocumented migrants, homeless people or members of ethnic minorities such as Roma are difficult to survey, and very often underrepresented in poverty statistics despite being at an increased risk of poverty. The UNECE guide on poverty measurement (2017) highlights the issue of non-coverage with particular concern for hard-to reach groups, such as homeless people (including street children), drug users, sex workers, people who reside in institutions, including elderly care homes, children’s homes, and mental health institutions. These groups are notoriously difficult to access in a systematic way and may thus require special sampling and/or survey approaches.³

Making inferences based on data collected from samples of target populations is one of the central concerns of survey statisticians. While the availability of methods and research on inferential statistics have increased enormously in the past decades, experiences on the reliability of strategies for obtaining probability samples for many elusive and hard-to-reach populations are still rare.

² OHCHR (2018), A human rights-based approach to data. Leaving no one behind in the 2030 agenda for sustainable development. Available at:

<https://www.ohchr.org/Documents/Issues/HRIndicators/GuidanceNoteonApproachtoData.pdf>.

³ UNECE Guide on Poverty Measurement (2017) <https://www.unece.org/index.php?id=47512&L=0>

There is an increasing demand from policy makers to extend the scope of existing social surveys in order to cover population groups which in many cases have been excluded from general population sample frames as being hard to reach. There have also been calls to design dedicated surveys to explore the opinions, attitudes and experiences of particular sub-groups of the population which are represented in too small numbers in the samples of general population surveys in order to carry out robust analysis. One of the main challenges survey researchers face is the absence of sampling frames (or their poor quality) for certain target groups, including ethnic minorities, homeless people or groups defined on the basis of their sexual orientation or gender identity. Thus alternative sampling methods need to be developed to survey these groups. Such methods – as suggested in research – include time-location sampling (e.g. Baio et al. 2011) or chain referral methods such as Respondent Driven Sampling (RDS, e.g. Heckathorn 1997). Some of these methods have been developed rather recently and experiences are still being collected concerning their applicability and reliability, in particular in cross-country research.

This contribution provides a general overview of sampling approaches for hard to survey groups based on examples and experiences from the EU-MIDIS II survey of the EU Agency for Fundamental Rights (FRA). A detailed description of the sampling and survey methods used in the survey and described below is available in the technical report (FRA, 2017).⁴

II. Sampling approaches for hard to reach populations

For surveying special, hard to reach groups in the population, traditional survey methods need to be adapted for obtaining high quality samples. In some cases completely different approaches need to be used or even developed in order to properly capture specific groups. The extent to which more traditional survey methods have to be adapted or if and which alternative methods should be employed depends on the target group.

Before starting to survey special target groups, detailed information on the group needs to be collected in order to make an informed decision on the sampling approaches. This is a crucial step in developing sampling procedures for hard-to-reach groups. Information needs to be collected from all available sources. This includes experts and members of the target groups, who can provide important insights into the groups and opportunities for sampling. If a detailed mapping of the target population is not done, sampling could become very inefficient or not work at all. Additionally, background information can be used for weighting and post-stratification, if reliable statistics exist.

Groups might be hard to reach for different reasons. A group might be small, but concentrated in certain geographical areas or dispersed more widely. Additionally, certain groups might be very mobile, such as travellers or temporary migrants, moving within or across countries frequently. This poses challenges not only to the sampling approaches, but also to the definitions used for target populations in line with international definitions, such as the place of

⁴ FRA (2017): Second European Union Minorities and Discrimination Survey (EU-MIDIS II): Technical Report, available at: <http://fra.europa.eu/en/publication/2017/eumidis-ii-technical-report>.

usual residence (this is discussed in section C). For mobile populations the timing of the fieldwork is relevant.

FRA surveyed in its EU-MIDIS II survey selected groups of immigrants and ethnic minorities in all 28 EU Member States. The groups included immigrants and descendants of immigrants from selection countries and regions of origin and ethnic minorities. Per country between one and three groups were selected. The results include information on discrimination experiences, experiences with violence and harassment, social and living conditions and integration (FRA, 2017b).

1. Including hard to reach groups in standard surveys

Hard to reach groups often are underrepresented or cannot be identified in standard surveys targeting the general population. If the population size is large enough to be covered within a general population survey, a standard survey should be adapted to reach out to elusive population. Firstly, the surveys need to include information for identifying special groups. For example, for ethnic groups, the survey needs to ask respondents about their ethnic group, respecting the principle for self-identification. If the numbers are not large enough in a survey, strategies to over-sample special groups and tools to improve response rates can be included. Sometimes, proxies such as country of birth for ethnicity can be used as well as additional and combined sampling approaches as described in the next section. However, using proxy information can be challenging for certain groups and needs to be handled with care. For example, nationality based data might be a very weak indicator for country of birth or ethnicity due to differences in naturalisation policies.

Field work materials and approaches can be adapted to better reach out to a certain sub-population, for example by recruiting peer interviewers, special (cultural) training and translation of fieldwork materials. Several national statistics institutes (NSIs) already have developed approaches to cover special groups in their standard surveys. For example, in 2018 and for the first time, the Slovakian statistical office extends its EU-SILC survey to marginalised Roam communities. There are efforts by several NSIs to better cover migrants in the Labour Force Survey, through translating survey materials, using multi-lingual or native interviewers and the use of language help lines. Moreover, several NSIs look into response rates of migrant groups and ways to improve the participation and applying weighting methods.⁵ In case the standard surveys cannot capture certain groups, the methods described in the next section can be considered. The following examples are based on experiences of the EU Agency for Fundamental Rights in surveying special vulnerable populations as well as based on other survey experiences.

2. Conventional sampling approaches with methods to increase the efficiency of screening

In the absence of a sampling frame of the target population, ways of screening the general population for members of the target group can be done relying on established methods. These include multi-stage sampling, where first predefined small geographical areas are sampled

⁵ Barnes 2008

(Primary Sampling Units, PSUs) and in a second step households are screened for member of the target population. This was the main approach of the EU-MIDIS II survey. For multistage sampling a list of PSUs with information on the density of the target population is needed for more efficient sampling. Such lists are not readily available for many groups and often have to be either taken from unofficial sources or through approximation via other variables. For example, associations representing certain groups sometimes have information on where their members live. Sometimes such lists need to be even created specifically for a survey with the support of experts. Such lists are important for increasing the efficiency of sampling but are often based on assumptions and external identification of the area. The data can be verified or updated after fieldwork (for example through comparing eligibility rates with estimates from the area sampling frame) but can only be confirmed through the principle of self-identification at the level of respondent. Due to the sensitivity of the information even in area sampling frames, the data need to be handled with care considering data protection aspects as well.

The multistage sampling approach often needs to be further adapted depending on the resources for the survey and characteristics of the target population – most notably the (estimated) densities of the target group in the PSUs. If screening is feasible in the second stage is primarily related to the size of the target population in the respective PSUs. In order to make screening of hard to reach groups feasible on the level of the PSU, several ways to increase the efficiency of screening have been employed in EU-MIDIS:

- **Coverage reduction**

One approach is to reduce the geographical coverage of the PSUs included based on the density of the target population in the PSUs. In EU-MIDIS II, depending on the feasibility related to situation in each of the countries and target group, PSUs, where the proportion of the target group falls below a certain threshold, were excluded to reduce the burden of the interviewer of screening. For example, in most countries where Roma have been surveyed, PSUs with less than 5 - 10 % of Roma living there, based on the estimated size of Roma, were excluded. This led to a limited coverage of 60 % to 80 % of the total Roma population in the nine countries that covered Roma in EU-MIDIS II.

With this approach, it needs to be assessed to what extent the coverage minimisation impacts on the validity of the sample. Additionally, further adjustments can be made to make sampling more efficient, such as oversampling or clustered sampling, as described below.

- **Oversampling of higher density strata**

In case of availability on the proportion of the target group in the PSUs, those with higher concentrations can be oversampled. This increases the design effect of the sample and hence reduces the effective sample size. However, it makes it more realistic to obtain a certain number of interviews.

- **Focused enumeration**

Focused enumeration is a strategy to further reduce the burden of having to screen many households before finding members of the target group. It involves proxy screening through other people. Given an interviewer has a certain number of core

households selected in a PSU; be it via address sampling or other systematic selection, such as random route. At any of the core households selected for screening, the respondent is asked if their neighbours (e.g. the two to the right and the two to the left) are members of the target population. If the respondent indicates that none of the neighbours belongs to the target group the interviewer continues to the next core household on the list. If the respondent at the core household indicates that at a neighbouring household is a member of the target population or is unsure, the interviewer visits this household and screens the respondents.

This approach has the advantage of reducing the screening burden and allowing to quicker find more respondents, without having to adjust the weights for the additional procedure. The main disadvantage is that it is not feasible and unethical for some population groups. For example, is it not acceptable to ask people to identify others based on their ethnicity or sexual orientation.⁶ Additionally, if feasible, it potentially introduces a bias due to respondents not knowing if others are members of the target population. This was consequently only used in some countries in EU-MIDIS II, but not with ethnic minorities. To avoid proxy screening, adaptive cluster sampling can be considered, as described next.

- **Adaptive cluster sampling**

Based on the assumption that the target group is clustered at small geographical areas (e.g. blocks, neighbourhoods), adaptive cluster sampling (ACS) can be used. The method involves normal screening in PSUs. Once a member of the target population is found, the interviewer also screens the neighbouring household to the left and to the right. If a member of the target population is found in the neighbouring household, the interviewer continues to the next neighbour until no member of the target population is found. This method allows for reducing the burden of the interviewer through having more efficient screening. It was successfully used in EU-MIDIS II in several countries. However, the method also has drawbacks, as it is complicated to be implemented for interviewers and potentially error prone, if not explained well. Additional measures need to be taken as well such as cutting the number of interviews in clusters of neighbouring households of core households. The weighting needs to adjust the selection probabilities based on the cluster size.

Still, for some target groups, multi-stage sampling with screening is not feasible, even if the methods above for boosting the efficiency have been considered. This is particularly the case for very rare and scattered target groups. Many alternative methods for reaching hard-to-reach groups exist depending very much on how the respective group is connected, organised and spread across regions. The next section describes such methods.

⁶ Self-identification is one of the principles and recommendations for human rights-based data collection. See OHCHR, 2018.

3. Alternative sampling approaches

As mentioned above, detailed ethno-graphic research is necessary before any alternative sampling method is used. This is because alternative methods rely on assumptions of certain characteristics of the group, which are essential for the success of the method to recruit respondents and weight the samples. Groups can be geographically clustered at specific locations or they can be well connected through personal linkages across members of the target group. The latter situation allows for referral methods, most notably so-called Respondent Driven Sampling (RDS). The former situation means that location sampling methods could be applied. Both methods – with a focus on location sampling – are described briefly.⁷

- Location sampling

If a target group is connected in terms of being frequently meeting or assembling at a known number of locations, location sampling can be considered. The method is known for longer in the literature and is also referred to as the method of centres of aggregation (Baio et al. 2011) or intercept method (McKenzie and Mistiaen, 2009). It is theoretically well developed, however, it has not been applied very often in practice. The method involves collecting information on all possible locations where the target group might congregate. For example in churches, Non-Government Organisations (NGOs), cultural or ethnic associations, service centres, open places and so forth. There is no restriction in terms of definition locations as long as they are clearly geographically defined and can be surveyed. After a list of location has been compiled, either all or a random sample of locations are visited and surveyed. Respondents are randomly (usually systematically) selected at each location. The crux of the method is to ask every respondents, which of all the locations they attend. This way the probability of selecting respondents can be calculated and weights provided (Baio et al. 2011).

The quality of the sample in terms of representativeness depends on how well the locations cover the entire target population. In practice, there are several topics to keep in mind when implementing the method. Before fieldwork is started clear guidelines on the how respondents are selected at the different locations need to be prepared to ensure simple random sampling at each location. The quantitative importance of each of the locations in relation to each other needs to be estimated as close as possible. This way a more efficient sample will be obtained, i.e. in locations, where not many people go to on average also fewer interviews take place. Otherwise the weights will increase impacting on the design effect. It is possible to some locations do not allow interviewers to select respondents and carry out fieldwork. This way of non-response influences the opportunities to obtain a representative sample of the target population. Eventually, the sample sizes per location should not be very low (e.g. below ten, ideally not below 30), because this limits the opportunities to obtain good estimates of the

⁷ For a more comprehensive overview of methods, see for instance Marpsat and Razafindratsima (2010), Kalton (2009) or Verma (2014).

overlap of locations and hence the calculation of weights. The method is limited to smaller geographical locations (e.g. cities).

- **Respondent Driven Sampling (RDS)**

RDS is a method that allows to calculate selection weights based on referral of respondents. It means that several initial respondents are selected non-randomly (so-called seeds) and each of them is asked to refer one or more other members of the target groups. Based on the assumption that the selection of other respondents is not influenced by previous selection of the respondent, weights can be calculated. This method is tested successfully in some cases, for example in the case of Ukrainian immigrants in Warsaw (Kaczmarczyk 2013). However, the method has failed to produce samples in other cases – such as in the case of recent immigrants to selected EU countries (cf. Frere-Smith et al. 2014). Therefore, one needs to be sure that there are enough connections in the target group and that respondents are willing and able to refer to other members of the target group.

FRA has tested this methodology in 2012 in an online survey with Jewish respondents in selected EU Member States. It has not produced the desired numbers of interviews, which led to a change in the sampling strategy (open opt in online survey, see FRA, 2013). Given these challenges, the method was not considered for EU-MIDIS II. It might, however, be well suited for other target groups and surveys.

- **Mixture of conventional with alternative sampling methods**

It is important to note that sampling methods can be combined, which can deliver very promising results. Most notably, if insufficient sampling frames are available, the sampling methods can be extended by combining them with alternative methods.

For example, in the FRA EU-MIDIS II the population register in Poland was considered to not capture well undocumented migrants and hence was combined with location sampling. The sample from the population register was considered one location. In Cyprus, location sampling was combined with two stage sampling and screening for immigrants and their descendants from Asian countries.

A survey among immigrants from outside the EU was conducted in 2011 in Budapest, where the population register was also considered one location and other locations were included as well. The results of the survey are very consistent with the results from the census 2011 on the respective target group (Reichel and Morales, 2017).

An exceptional case in EU-MIDIS II was the sampling method employed in Germany, where immigrants and their descendants from Sub-Saharan African countries and from Turkey were surveyed. A sampling frame of the target population was used that identified potential members of the target population based on their names (so-called onomastic sampling). This sampling frame was deemed not covering the all of the target population and was consequently extended through referral methods. Respondents were asked to provide contact information on other people of the target group living in the same PSU. Based on the total number of referrals the respondents provided (network size) the selection probabilities could be calculated.

4. Non-probability approaches to mention

In some cases, traditional and alternative sampling approaches are not possible. In this case, non-probability samples are the only option left. The application of quotas, systematic and widespread recruitment can support to obtain a heterogeneous sample. While no inference to the total target population can be made, the results still help to contextualise and measure the occurrence of certain events. For example, FRA carried out an open opt in online survey with over 90,000 Lesbian Gay Bisexual and Transsexual people in the EU. The results were weighted based on assumptions on the proportion within and across countries and provided information on the fundamental rights challenges this particular population faces in Europe (FRA, 2013b).

5. Weighting

The probability methods described under point 1 and 2 allow for the calculation of selection probabilities and design weights. The calculations of weights for RDS and location sampling require special procedures to adjust for the sampling approach. The latter was developed for the FRA EU-MIDIS II and is based on the information on which locations are attended by the respondents. A detailed description of the weighting approaches of the methods used in EU-MIDIS II can be found in the Technical Report (FRA, 2017).

EU-MIDIS II also used non-response weights based on respondent (if available) and neighbourhood characteristics. As a third approach, post-stratification weights were used, however, only in rare cases, because of the lack of reliable statistics on the target population in most countries.

When weighting is implemented following the sampling approaches outlined above, it needs to be closely assessed if weights can be applied for the non-coverage that is potentially introduced. Additionally, in some cases, the concentration of the target group in the PSUs was based on (rough) estimates. And sometimes these were based on the number of individuals in the PSU, sometimes the number of households, depending on the availability of estimates. Such estimates can be corrected after fieldwork through better assessments of the concentration of the target group, based on eligibility rates after screening, and of the household sizes to turn estimates of the individuals into household estimates or the other way round.

III. Fieldwork approaches for hard to reach populations

Tourangeau (2014), distinguish populations that are hard to sample, those whose members are hard to identify, those that are hard to find or contact, those whose members are hard to persuade to take part, and those whose members are willing to take part but nonetheless hard to interview. Surveys including hard to reach populations vulnerable to poverty face several measurement issues beyond but also related to its sampling and coverage. This concerns in particular the definition of a household, how to approach, how to identify these populations and how to minimise non-response. Fieldwork tools (e.g. respondents might be illiterate), the interview mode and the setting of the fieldwork (e.g. facilitators or recruitment of interviewers of the target population) have to be adjusted to better capture certain target groups. Standard survey tools and approaches might not cover such aspects sufficiently.

1. Household definition

The UNECE guide on poverty measurement recommends to use the definition of a private household as used in the Conference of European Statisticians (CES) Recommendations for the 2010 Censuses of Population and Housing (UNECE, 2006) and the UN Canberra Handbook on Household Income Statistics (p.33):

Either (a) a person living alone in a separate housing unit or who occupies, as a lodger, a separate room (or rooms) of a housing unit but does not join with any of the other occupants of the housing unit to form part of a multi-person household or (b) a group of two or more persons who combine to occupy the whole or part of a housing unit and to provide themselves with food and possibly other essentials for living. The group may be composed of related persons only or of unrelated persons or of a combination of both. The group may also pool their income.

The recommendation further defines household membership based on the place of usual residence and specifies rules for temporary absences.

It also recognises that such definition does not sufficiently cover all populations of interest and poses practical challenges when applied to some hard-to reach populations. For example grouped housing for refugees or seasonal worker's homes might neither meet the definition of a private nor institutional household. Roma and Travellers who are mobile and live in caravans.

Definitions of what establishes a household need to be adapted for specific groups: For example FRA used "shared expenses" as a criteria to define a household among persons in grouped and/or precarious housing. The survey included migrants or refugees with irregular or undocumented status. Respondents sometimes shared room a without having any relationship, paying rent per bed. In this case each person was treated as a separate household unit.

For mobile residents (e.g. Travellers) between countries FRA specified usual residence as being more than six months in a country in the last 12 months and the current residence can be a first or second home (e. g. a caravan in summer and a brick and mortar house in winter) at the time of the interview. Similar to location sampling, questions on other residential locations can be used to adjust for overlaps in the sampling frame.

2. Principles to facilitate surveying vulnerable groups

The preparation of the survey needs to take into account the particularities of the target population and ensure that ethical and cultural aspects for minorities, and specific needs or vulnerability of the target group are addressed. To reach out to all populations in line with the Agenda 2030 the UN-OHCHR has formulated a set of principles, recommendations and good practices to ensure respect of human rights-based principles in data collection: Participation, self-identification, transparency, privacy and accountability in the design, collection and use of data (OHCHR 2018).

Participation should be considered in all stages of a survey. For instance to consult with stakeholders and members of the target populations throughout the survey cycle to develop and test survey tools. Stakeholders can help to establish contact with the hard to reach populations, through mediators, by hiring interviewers from the community or identification of locations

where the target group congregates. It can also help to overcome prejudices and safety concerns among interviewers

Some groups are hard to identify or reluctant to self-identify. This might be due to historical persecution (Roma, Jewish) as well as mistrust in authorities or experiences of discrimination and exclusion due to ethnic, racial or religious origin. In some countries legal restrictions prevent data collection on ethnic or racial origin. E.g. French law prohibits the collection of data based on race, ethnicity or religion. The principle of self-identification can overcome these barriers, it should always be applied for populations with sensitive personal identity characteristics. It can also help to overcome mistrust and reluctance to participate. The concept suggests that ethnicity, race, religion, gender identity and sexual orientation are fluid concepts and that the size of the total population remains unknown. Target population should be consulted beforehand in which way they would like to be self-identified. FRA, in its Roma and Traveller surveys developed country show cards with relevant groups, and asks respondents to self-identify. There are several countries asking for ethnicity and ethnic origin in their surveys and in the census. Questions on ethnic identity can only reflect a person's self-perception on and should allow for multiple identity.

The concepts of privacy, transparency and data protection are inherent to the principles of statistical offices and are important to overcome mistrust and reluctance to participate.

The fifth principle is accountability. The UN OHCHR outlines that as *state institutions, national statistical offices are themselves human rights duty-bearers. They have obligations to respect, protect and fulfil human rights in their daily exercise of statistical activities. Independent statistics, free from political interference, are fundamental tools to inform and hold those in power accountable for their policy actions (or inactions).*

3. Interviewing hard to reach groups

Enhancing trust is key to overcome some of the difficulties in reaching poor populations. Schepers et al. (2017) identified five widely adopted survey strategies in the literature on poverty:

- doing (community-based) participatory research;
- recruiting peer researchers or interviewers;
- providing training, support and supervision for interviewers;
- elaborating culturally appropriate questionnaires;
- developing innovative data collection methods.

The field work should take into account the specificities and living conditions of the target population and avoid intrusive or humiliating questions. Questions should be amended for group specific categories, e.g. when asking for type of housing for Travellers to add the category "caravan". Interviewer need special training and fieldwork tools and interview mode should be fit for any hearing, reading or writing impairments. For instance FRA uses introductory videos in its Roma and Traveller survey in case of illiteracy instead of the introductory letter. The Australian Bureau of Statistics has developed cultural training for its interviewers to raise awareness on the impact that conscious or unconscious biases and stereotypical thinking may have when interviewing indigenous population. Pairing interviewers

with persons of the communities who facilitate access, gender matching and offering interviews in the main language of the respondent are some of the tools which can help to facilitate fieldwork. Incentives used in general population surveys might have a different effect on minority groups and should be tested beforehand.

Interviewers *may assist and help persons with disabilities* – long-term physical, mental, intellectual or sensory impairments – to participate in the survey.

The *mode of the survey* should be tailored to the needs of the specific population.

Experiences of poverty and discrimination may cause distress among respondents. Interviewers should be trained for such sensitivities but also be able to provide contact information of support organisations to the respondents if needed.

4. Proxy indicators

Elaborating culturally and target group specific questionnaires poses specific challenges to comparative and cross-country research. To meet requirements for comparison between different population groups, as well as across countries, proxy indicators could be applied. Collecting full annual disposable income to measure monetary poverty as recommended in the UN Guide on poverty measurement and the UN Canberra Group Handbook on Household Income Statistics might be not feasible. Administrative data do not cover hard to reach populations and income surveys do not recognise the different income situations. It might be humiliating to ask homeless persons on income from assets and too challenging to recall a full year of income. Other sources of income such as informal work, begging or donations are usually not covered in standard measures but should be included. A possible solution is to apply proxy measures of material living standard for comparative research. For example FRA uses current monthly household income in EU-MIDIS II to capture the current living standard and includes any paid work in the last four weeks as well as questions on child labour in the household. The inclusion of income in kind is particularly relevant for some of the hard to reach groups, sometimes the only form of income. Material deprivation indicators should address the specific living standard of the target population, such as lack of electricity or sewage system and segregation in housing. Other indicators such as arrears for payments of mortgage or credit cards showed high item non-response rates for Roma living in most deprived and segregated housing.

5. Training and field work materials

Interviewer training is key to access successfully some hard to reach populations and to reduce non-response. It is recommendable to include members of the community to be surveyed to the trainings. Interviewers, who are not from the target group, might be for the first time in contact with members of the target group and have no knowledge about the target groups apart from stereotypical descriptions. Experts, stakeholders and community members can reduce cultural bias, stereotype thinking and increase sensitivity of the interviewers for the data collection among the hard to reach group. The Australian Bureau of Statistics (ABS) has developed Cultural Protocols for ABS Staff engaging and working with Aboriginal and Torres Strait Islander People. ABS Interviewers have to undergo cultural awareness training to improve communication and understanding of indigenous populations. FRA EU-MIDIS II and Roma

and Traveller survey training materials address country and target specific context and interviewers get trained to respect human rights in data collections.

Field work materials should be easy to read and easy to access and interviewers prepared to explain verbally if reading competencies are not sufficient. Interviews should be provided in the language of the respondent when feasible. If the interview is conducted in the country's main language all field work materials should be offered in the language of the respondent for support.

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