

Sampling in Times of High Immigration: The Survey Process of the IAB-BAMF-SOEP Survey of Refugees

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Abstract : Over the course of 2013 to 2016, over one million asylum seekers arrived in Germany, around 890,000 of them in 2015 alone. The growing refugee population posed a major challenge for Germany's policy makers, civic administrators, and society at large, in finding new approaches to registration procedures, housing, and social and economic integration. To design policies and programs that meet these needs, government administrators, politicians, and the public require robust analyses of the accompanying social and demographic changes based on timely, valid, and reliable empirical data. Yet despite the urgent need for quantitative data on this target group, survey organizations and data collection agencies had little experience gaining access to the target population and approaching and surveying them effectively.

In late 2015, when the influx reached its peak, the Institute for Employment Research (IAB), the Migration, Integration and Asylum Research Center at the Federal Office for Migration and Refugees (BAMF-FZ), and the Socio-Economic Panel (SOEP) joined together in a cooperative longitudinal project to survey a nationwide random sample of refugee households in Germany: the IAB-BAMF-SOEP Survey of Refugees. In this paper, we summarize the sampling and fieldwork design as well as the challenges faced in the IAB-BAMF-SOEP Survey of Refugees. We discuss the sequential strategy applied for sampling recent refugees and asylum seekers who arrived in Germany, particularly in 2015, in such large numbers that proper registration was delayed, and in many cases their initial accommodations were only temporary. Moreover, the paper discusses alternative survey instruments introduced for the difficult-to-interview population of the IAB-BAMF-SOEP Survey of Refugees, including translated questionnaires and audio files.

Introduction

Over the course of 2013 to 2016, over one million asylum seekers arrived in Germany, around 890,000 of them in 2015 alone (see the press release of the Federal Ministry of the Interior, BMI 2017). The growing refugee population posed a major challenge for Germany's policy makers, civic administrators, and society at large, in finding new approaches to registration procedures, housing, and social and economic integration. To design policies and programs that meet these needs, government administrators, politicians, and the public require robust analyses of the accompanying social and demographic changes based on timely, valid, and reliable empirical data. Yet despite the urgent need for quantitative data on

this target group, survey organizations and data collection agencies had little experience gaining access to the target population and approaching and surveying them effectively.

In late 2015, when the influx reached its peak, the Institute for Employment Research (IAB), the Integration and Asylum Research Center at the Federal Office for Migration and Refugees (BAMF-FZ), and the Socio-Economic Panel (SOEP) joined together in a cooperative longitudinal project to survey a nationwide random sample of refugee households in Germany: the IAB-BAMF-SOEP Survey of Refugees. Funding came primarily from the Federal Ministry of Labour and Social Affairs (BMAS) and the Federal Ministry of Education and Research (BMBF). In the first wave in 2016, a total of 3,336 households were interviewed, resulting in 4,527 face-to-face interviews with individual adult respondents. An enlargement sample in 2017 added an additional 1,519 households and 2,252 individuals. Together, the samples are representative of the population of refugees and asylum seekers who arrived in Germany between 2013 and 2016 and were registered in the Central Register of Foreigners by January 2017. The scientific use file of the data is made available by the SOEP Research Data Center to the scientific community (DOI: <https://doi.org/10.5684/soep.v33.1>) as well as the IAB Research Data Center (<https://fdz.iab.de/en.aspx>).

Refugees and asylum seekers living in Germany are entered into the Central Register of Foreigners ("Ausländerzentralregister", AZR, see Gostomski/Pupeter 2008), which is a national administrative list of individuals from foreign countries living in Germany. The register is maintained by a department of the Federal Office for Migration and Refugees (BAMF). Sampling the target population is relatively straightforward if one has access to this register, which is essentially only available to BAMF staff. Although our cooperation with BAMF guaranteed access to the register, two factors complicated the sampling process.

First, particularly in 2015, the responsible authorities were unable to cope with the high numbers of incoming refugees, both in terms of registration at the border as well as in processing their applications for asylum and refugee status. This latter administrative procedure is necessary, however, for individuals to be entered into the Central Register of Foreigners and identified as refugees for sampling. According to official statistics provided by the German Ministry of the Interior (BMI 2017) and the BAMF (2015:2, 2018), not all individuals who migrated to Germany as potential refugees were actually identified by the AZR at times of the highest influx numbers in 2015. As the data by the BAMF indicates around 480k people were registered as asylum seekers while actually around 890k were estimated to be in the country. Hence, the register was plagued at times by considerable undercoverage of the target population of incoming refugees. However, during the year 2016 this undercoverage was mostly resolved (BAMF 2018). Moreover, the delay affected all asylum seekers, not only some subgroups, thus, unlikely to introduce systematic effects on sample composition. Nonetheless, in order to account for this, a sequential sampling strategy was implemented to add individuals at later points who were otherwise not covered by the frame.

A second factor complicating sampling was the shortage of public housing and the high residential mobility of refugees, particularly shortly after their arrival in Germany. Incoming refugees typically first go to a refugee reception facility, where they stay for a short time, then move into publicly provided refugee housing, and eventually into private housing. These steps often took place within a matter of weeks, and refugees sometimes have to move large distances from one municipality or federal state to the next, according to the "EASY" (*Erstverteilung der Asylbegehrenden*) quota system designed to facilitate the distribution of refugees across the federal states. As a consequence, it is sometimes difficult to keep track of sample members' current addresses.

In addition, surveying refugees in Germany entails challenges in the actual fieldwork and interviewing procedures. These relate to the design of fieldwork instruments, the training of interviewers, and nonresponse of sampled households.

In this paper, we summarize the sampling and fieldwork design as well as the challenges faced in the IAB-BAMF-SOEP Survey of Refugees. Section 2 describes our sampling strategy: we sampled specific sample tranches at different time points in a step-by-step process, combined with timely sampling of selected clusters, in which the time between sampling and initial contact was reduced to a week. Section 3 describes the procedure used to interview the sampled refugee population, which is just beginning to learn German after arriving in Germany: Besides being difficult to reach, they are in some cases difficult to interview as well. The paper at hand discusses the insights and practical experiences gained so far in conducting the IAB-BAMF-SOEP Survey of Refugees in Germany.

Sampling

The IAB-BAMF-SOEP Survey of Refugees consists of multiple subsamples. All subsamples were drawn from the Central Register of Foreigners. For each subsample, we used the same sampling procedure: a two-stage clustered disproportional stratified sampling design (see Kroh et al. 2017 for details and Lohr 2010 for general survey sampling theory and applications). In a first step, we selected primary sampling units (PSUs) representing regional clusters of immigration offices. Here, we made use of the fact that each individual in the register is assigned to a local immigration office. These offices are located across Germany and maintain information on the individual administrative procedures and addresses of foreigners and refugees living in the area. PSUs were selected with replacement and in 16 strata representing federal states and differentiated by county type (rural vs. urban). In each cluster, secondary sampling units (SSUs) – the individuals – were selected based on a disproportional sampling scheme that ensured minimum sample sizes and thus allowed for meaningful comparisons between subgroups of refugees. We assigned varying sample probabilities depending upon an individual’s country of origin, current legal status, age, as well as gender.

Sampling in Tranches

As mentioned above, the Central Register of Foreigners was unable to keep up with the influx of refugees and asylum seekers (also referred to as the “EASY” gap), and thus, facing problems due to undercoverage. Moreover, asylum seekers and refugees are a highly mobile target population, especially shortly after arrival. We chose to sample a total of six different “tranches” to address these issues. These tranches were sampled at four consecutive points in time using updated versions of the register. Moreover, later tranches not only focused on more recent arrivals to Germany, but also on refugees who had arrived earlier but appeared in the register late.

The scientific use file of the IAB-BAMF-SOEP Survey of Refugees documents the six tranches as three subsamples with somewhat different target populations (M3, M4, and M5), which are designed to be used jointly. The names result from the SOEP’s standard procedure, where different subsamples are named in alphabetic order. Samples M1 and M2 are samples of migrants to Germany that existed prior to the IAB-BAMF-SOEP Survey of Refugees.

As with all other existing SOEP subsamples, M3, M4, and M5 are based on a household concept, according to which every (adult) household member is interviewed. Individuals selected from the register thus

represent what are known as “anchor respondents”: these are the household members with whom the field agency makes initial contact. They then add the rest of the household by interviewing each household member 18 years or older and collecting proxy information on children and adolescents. Design and household nonresponse weighting procedures allow for representative analyses at both household and individual level.

Table 1 displays characteristics of the six sample tranches. Asylum seekers and refugees who arrived in Germany between January 2013 and January 2016 were the target population for subsamples M3 and M4. Subsample M5 is both a refresher of the M3/M4 population as well as an enlargement sample of asylum seekers and refugees who arrived in Germany between February 2016 and the end of December 2016. A total of four versions of the Central Register of Foreigners were used to address potential gaps in coverage of the population due to the lag in registration. For instance, Sample M3-2 included only those anchor respondents who appeared in the register between February and April 2016 but who had arrived before January 2016. Finally, in order to have a sufficient number of minors and families in the sample, in tranche M4-2, only minors who appeared in the register by June 2016 were sampled as anchor respondents.

Table 1: Sample Tranches in the IAB-BAMF-SOEP Survey of Refugees

	Sample Tranches					
	M3-1	M3-2	M4-1	M4-2	M5-1	M5-2
Date of Arrival	Jan. 1, 2013- Jan. 31, 2016	Jan. 1, 2013- Jan. 31, 2016	Jan. 1, 2013- Jan. 31, 2016	Jan. 1, 2013- Jan. 31, 2016	Jan. 1, 2013- Jan. 31, 2016	Feb. 1, 2016- Dec. 31, 2016
Date of Register Entry	By Jan. 2016	Feb. 2016- Apr. 2016	By Apr. 2016	By Jun. 2016	May 2016- Jan. 2017	By Jan. 2017
Anchor Respondent	Adult	Adult	Adult	Minor	Adult	Adult

Sampling and Field Access to Initial Reception Facilities

Sampling asylum seekers and refugees based on their first address upon arrival in Germany typically means using the address of a centralized “initial reception facility” (*Erstaufnahmeeinrichtung*). Yet after just a few weeks, asylum seekers and refugees are often moved to other federal states, counties, and municipalities according to the EASY quota system and assigned housing until their application process is completed. Accommodations differ widely at the local level, ranging from public housing, refugee hostels (for which they receive vouchers), converted gymnasiums, to private apartments.

After crossing the German border, every person who seeks asylum in Germany is sent to a reception facility. Usually, the registration procedures as well as medical care and examinations are carried out there. However, procedures differ across federal states, meaning that the degree of organization and access to the individuals for the purpose of our interviews vary tremendously. What all these facilities have in common is that each person’s stay is a maximum of six months and generally a minimum of six weeks (see §47 AsylG). If a person immigrates from a country that is legally categorized as “safe”, their stay at the reception facility may be prolonged until deportation. During their stay in these accommodations, refugees are neither allowed to work (see §61 Abs. 1 AsylG) nor are they allowed to rent an apartment in the area (see §3 Abs. 1 AsylbLG).

The comparatively short period of time spent at the reception facility makes it even more challenging to contact and interview potential respondents. We expected that ignoring the high mobility of refugees in these initial housing conditions would lead to high non-contact rates during fieldwork. We therefore established a procedure to ensure that the time between sampling, transferring information to the fieldwork organization, and contacting the respondent was reduced to just one week. We randomly sampled 11 reception facilities across the county in tranches M3-1, M3-2, M4-1, and M4-2. Even though contact data in reception facilities were immediately passed to the fieldwork, mobility to subsequent housing was so high in many cases that contact in reception facilities often was unsuccessful resulting in a response rate in these specific cases of just 13 percent. As the average length of accommodation in the initial reception facilities dropped considerably with the decreasing numbers of incoming refugees in 2016 to often one or two weeks only, we refrained from implementing the procedure in the later M5-1 and M5-2 tranches.

Fieldwork

Interviewing migrants and refugees in particular poses numerous challenges and requires special fieldwork measures to ensure high survey data quality. In the following, we briefly summarize selected aspects of fieldwork design tailored to the population of asylum seekers and refugees.

Interviewers and Interviewer Training

Given the specifics of the target population as well as the rather unusual interview setting in public housing, the interviewers required special training. A number of measures were undertaken to meet the needs of both respondents and interviewers.

In advance of the fieldwork, a qualitative pretest was implemented (see Brücker et al. 2016), in which social scientists with training in psychology conducted interviews with recently arrived refugees, many of them likely traumatized, who were living in crowded rooms in public housing. The pretest also identified important topics of forced migration and displacement that made it possible to streamline and limit the overall length of the questionnaire. Additionally, sensitive topics were identified and, if appropriate, left out of the survey later.

Additionally, based on the results of the qualitative interviews, training routines and material were developed for the main fieldwork. Interviewers were provided with a comprehensive interviewer handbook. Incentives were also used differently in this population than with other SOEP survey populations. In the pretest, interviewers were informed that monetary incentives had to be deducted from respondents' social benefits. As a result, monetary incentives were not ultimately used. To respond to these findings, it was suggested that instead of giving money to the adult respondents, small presents could be given as a thank-you for the household's participation. The gifts were given prior to the interview in order to avoid the impression that the gift is payment or even bribery.

Finally, interviewers were recruited according to slightly different criteria to fit the target population. Around a quarter of the interviewers had a migration background themselves. This is a clear advantage, because they are presumably able to be more empathic, especially on sensitive questions dealing with the personal experience of migration.

Household Response

The household response rate is around 50 percent across all subsamples (see Table 2; for a detailed overview see Kroh et al. 2017). Locating respondents was a major challenge. The high share of respondents whose address changed is arguably due to the shared accommodations in which many lived. It is more difficult to make initial contact with residents of such accommodations and to contact them again later (e.g., letters sometimes get lost in crowded accommodations), or to find them at all when they have moved to another facility or into private housing. However, taking all these aspects into account, the overall response rate is even more striking and reflects a generally high motivation to take part in the interview once respondents have been contacted. Of all sampled persons who could be contacted by an interviewer, 71.5 percent participated in the survey.

Table 2: Household (Non-)Response in the IAB-BAMF-SOEP Survey of Refugees

	Subsamples		
	M3	M4	M5
Response	47.0 (1,698)	50.6 (1,638)	54.7 (1,519)
Nonresponse	53.0 (1,912)	49.4 (1,600)	45.3 (1,256)
Not locatable/accessible	33.2 (1197)	25.7 (832)	29.1 (808)
Illness or Nursing Care	1.0 (37)	0.7 (24)	1.0 (28)
Language Problems	4.1 (153)	4.9 (158)	3.7 (102)
No time/refusal	11.9 (429)	15.8 (512)	11.3 (313)
Other	2.7 (96)	2.3 (74)	0.2 (5)
Total	100 (3,610)	100 (3,238)	100 (2,775)

Percentages. Number of households in parentheses.

To counteract potential bias due to non-participation of households and individuals, non-response weighting adjustment was applied. The non-response models implemented to generating non-response weights build on a vast literature estimating patterns of household non-response in the general population (e.g., Coleman/Fararo 1992; Groves et al. 1992; Kroh et al. 2018), among migrants (Deding et al. 2008; Kroh et al. 2015) as well as refugees (Buber-Ennser et al. 2016; Cebulla et al. 2010; De Maio et al. 2014). The main data sources used to estimate response propensity scores stem from our sampling frame, the Central Register of Foreigners. We made use of the anchor respondent's: 1) asylum status at the time of sampling, 2) country of origin, 3) gender, 4) date of arrival in Germany, and 5) age. In addition to individual-level data, we relied on geographically aggregated data from external databases at the county ("INKAR", BBSR 2018) and municipality level (*Regionaldatenbank Deutschland*, Statistische Ämter des Bundes und der Länder 2018). These data sources contain information on regional socio-economic activity (e.g., property prices, GDP) and population characteristics (e.g., asylum seeker benefits). Finally, interviewers were asked to complete a questionnaire on each household they had attempted to contact. From this, we were able to gain a picture of the household's physical surroundings and the interviewer's feelings about these surroundings for all households of the gross sample.

Logistic regression analysis with cluster-robust standard errors was used to estimate response propensities. Comprehensive documentation on all the variables used is provided in Kroh et al. (2017). Fortunately, only a few variables systematically explained variance in response behavior, indicating only small differences between respondents and non-respondents. One factor that improved response rates was if the interviewers felt safe when arriving at the accommodations and if they rated the housing as being in "very good" or "superior" condition. Besides these interviewer-related factors, characteristics of

the respondents affected response behavior as well. Respondents whose asylum application was still pending had a higher chance of responding to an interview. Respondents living in shared accommodations had a higher rate of non-response.

The final non-response weights were combined (= multiplied) with sample design weights that balance unequal sampling probabilities due to the disproportional sampling design. This combined-weight was then post-stratified by applying the raking technique (also known as “iterative proportional fitting”, Deville et al. 1993) with respect to known marginal distributions derived from the sampling frame. In this regard, the raking process included distributional information on the country of origin (seven groups), gender (two groups), age (fourteen groups), date of arrival (twelve groups) and region (twelve groups). For more details on all steps in the weighting procedure see Kroh et al. (2017).

Translation of Survey Instruments and Provision of Audio Files

Besides the challenges of sampling a highly mobile population in a timely manner, it was also necessary to take into account that many respondents would probably not have sufficient language skills to take part in interviews in German. Therefore, all interview materials (letters, flyers, and questionnaires) were provided in seven different languages, including German (see Table 3). For the translation of the materials, two professional translators did the translations for each language. First, a German version of the questionnaire was developed. It was then translated into English. One of those versions (English or German) was then the basis for all further translations. Again, two translators each produced a translation, separately. One of the two created a harmonized version, and this was given to the other, who had the opportunity to comment and correct mistakes.

During the interview, German and the respondent’s language were displayed on the screen. Thanks to the CAPI mode (computer assisted personal interviewing), interviewer and respondent were able to look at the screen at the same time. Thus, language barriers were considerably minimized (for further details see Jacobsen 2018).

Table 3: Use of Visual Translations (left) and Audio-Files (right) in Net Sample

Visual Translation	Percent (absolute)	Audio-Files	Percent (absolute)
German/English	14.1 (956)	With every question	7.5 (506)
German/Arabic	65.8 (4,457)	With around 2/3	5.9 (399)
German/Farsi	14.2 (963)	With around half	4.1 (276)
German/Pashto	1.0 (64)	With fewer than half	8.8 (596)
German/Urdu	1.8 (123)	Not at all	73.8 (5,002)
German/Kurmanji	3.2 (216)		
Total	100 (6,779)	Total	100 (6,779)

Due to the fact that a significant level of illiteracy was anticipated in the population, additional audio files for each language were provided. These audio files were implemented into the CAPI system and were produced and recorded by the same translators who had produced the written translations. Next to each question, scale, or subsequent explanation, there was an icon to click on to listen to the audio file.

Finally, if anything in the interviewing process proved to be problematic, the fieldwork agency also

provided a hotline staffed by professional interpreters who could help with initial contact as well as interviews.

Table 3 displays the usage of the written translation in the respective languages. Arabic was used most frequently. This reflects the composition of the target population, of which a large share came from Syria. Farsi, which is spoken in Afghanistan and Iran, was used relatively often as well. It is striking that around 14 percent chose English although there are very few native English speakers in the net sample. Here, we assume that many respondents were relying on their second language. Our results show that most respondents (and interviewers) did not make use of the audio files (74 percent), and only 8 percent used them with every question. At the end of the interview, interviewers were asked to rate the support provided by the tools. The written translation was generally perceived by interviewers to be particularly helpful.

Conclusion: Hard-to but not Impossible-to Sample

The IAB-BAMF-SOEP Survey of Refugees aims at filling a gap in research data on the influx of refugees to Europe. The project draws on the Central Register of Foreigners as a sampling frame. Although, access to national register data ensures convenient and controlled means of sampling target population members, the sampling design also had to address a number of challenges. First, there was the issue of gaps in coverage, as the register had been unable to keep up with the migration influx. We addressed this by drawing multiple sub-samples from the register at consecutive points in time. Second, refugees in general, but especially those housed in initial reception facilities are a highly mobile population whose addresses change relatively frequently. A tailored sampling procedure was implemented in order to shorten the time between sampling and initial contact to about a week.

To sum up, for future projects dealing with moving target populations, we recommend sampling in “tranches” and “timely sampling”, that is, dramatically reducing the time between sampling and interviewing. However, it should be kept in mind that not only sampling, but sample design weighting is more complex in this case, because the different tranches overlap. In order to ensure representativeness, we had to account for this in our weighting and post-stratification procedures.

Turning to the fieldwork and interviewing of refugees, a number of challenges arose as well. Interviewing refugees in public, centralized housing units was generally more difficult. Interviewers needed to first gain access to the accommodations (often from security guards), find the sample members, and conduct an interview under unusual conditions (for instance, while sitting on a camp bed in a gymnasium). Fortunately, constant monitoring of the fieldwork and feedback from the interviewers themselves showed that the interviewers performed very well in contacting and interviewing respondents, even under harsh conditions.

Furthermore, using the interviewer questionnaire in the analysis of non-response revealed that the assessments given by the interviewers themselves can play a key role in understanding household non-response. Having this information is extremely valuable, especially when interviewing a target population about whom little is known. Using such tools provides useful insights that can help in assessing the quality of the data. The ongoing feedback given throughout the fieldwork phase also provided the research consortium with valuable information. This allowed, for instance, for the change in the incentive strategy mentioned above.

Besides interviewer characteristics, the translation of field instruments was key in surveying a recently

immigrated target population. However, during fieldwork, we also learned that an insufficient number of languages had been provided (over 30 percent of respondents had no match for their mother tongue) and that some languages were more useful than others. Therefore, in upcoming projects, a focus of effort should be on the selection of languages to translate in order to avoid wasting resources.

Although our sampling strategy breaks new ground, several limitations should be noted. First, respondents who were supposed to leave the country but went into hiding, who sought sanctuary in churches, or who lived in other forms of informal “protection” were not included. Furthermore, even though unaccompanied minors are a part of the target population and a particular focus of public and policy interest, they could not be surveyed due to ethical considerations and are therefore not part of the net sample.

The IAB-BAMF-SOEP Survey of Refugees represents an innovative project for surveying a hard-to-reach and hard-to-interview population. It is our hope that this project and the findings discussed in this paper will function as a practical framework and contribute to the survey design of future studies investigating similar populations.