Immigrant respondents and quality in population surveys: sampling, non-response & questionnaire design

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**Abstract**

In countries where immigrants remain a minority group, statistics based on survey methodology (e.g. Labour Force Survey) face problems with reporting results separately for the immigrant population. Often, an additional sample would be needed, as the number of immigrants in the regular samples is too low to produce reliable figures. This paper reports experiences from Statistics Finland, where a new data collection model was tested. To reduce both the costs and response burden, we combined the most essential indicators from various population surveys into one questionnaire. This enabled us to draw a single sample that produces data simultaneously for several population surveys.

We also report our findings on the challenges faced when designing a questionnaire form for immigrant respondents. The draft questionnaire was tested by Statistics Finland's cognitive laboratory using the method of cognitive interviewing. Test results revealed severe problems with language comprehension as well as cultural differences in response style. Social desirability issues were clearly visible and several respondents expressed concern about the utilization of their answers to these sensitive questions. Finally, we share our solutions to these problems.

# 1 Introduction

One of the most important parts of quality in population surveys is how well the achieved sample represents the target population. As the response rates for the foreign-born population are often lower than for native-born (1; 2), the risk for non-response bias remains and the results may not reflect the total population (3). As reported in other countries (4), also in the Finnish Labour Force Survey (LFS) the achieved sample size of the immigrant population[[1]](#footnote-1) is clearly smaller than what should be expected based on the population register (see Figure 1).

Figure 1. Share of foreign born population of the total population and share of foreign born respondents of the achieved sample in the Finnish Labour Force Survey.

As the size of the immigrant population grows, the impact of lower response rate among this group will also have an effect on the overall response rate of general population surveys. For example, Finland’s immigrant population remains currently rather small (6,6 % of the population) and lowers the total response rate with only one percentage point (see Figure 2). However, as the share of the immigrant population grows, the effect will be larger and affect also the quality of estimates on the general population. Improving the response rates among the immigrant population is thus important to ensure the quality of general population social surveys, that is, the representativeness of the achieved samples as well as the accuracy of results.

Figure 2: Response rate in the Finnish LFS in 2013 and scenario for growth of immigrant population.

The international general populations surveys (LFS, SILC, PISA) are currently the most important data source for EU indicators of immigrant integration (5). LFS covers topics on labour market participation, SILC provides data on income and living conditions and PISA studies educational achievement. Although these surveys are considered of very high quality, in countries with a modest-sized immigrant population, statistics based on survey methodology face problems with reporting results separately for small sub-groups such as immigrants. Currently, in the Finnish LFS the monthly sample is 12 500 (150 000 / year, 2013) of which 6 % are foreign born. With a response rate of 50 % (72 % for native born) this means 388 monthly interviews and 4 650 yearly interviews. Consequently, only yearly estimates for the most basic indicators can be produced. For example, in 2013 there were only 456 unemployed foreign born respondents. The error margin for the unemployment rate is substantial and there is thus no possibility to analyse unemployment according to age or language group.

The LFS ad hoc module 2014 studies the labour market situation of migrants and their immediate descendants. While planning the module it was noted, that the collected data could not be properly analyzed and published because of the limited number of migrants in the Finnish LFS sample[[2]](#footnote-2). In order to produce reliable estimates for the LFS ad hoc module 2014, Statistics Finland chose to commission an additional sample to boost the regular LFS sample with 6 000 immigrants. In this paper we describe this study and its sampling frame (chapter 2.1), field work practices to combat non-response (chapter 2.2) and experiences from the testing and development of the questionnaire (chapter 2.3).

# 2 Results

To increase the quality of the LFS and its ad hoc module 2014, Statistics Finland[[3]](#footnote-3) decided to conduct an additional data collection targeting immigrants. The project was called UTH-study, standing for *Ulkomaista syntyperää olevien työ ja hyvinvointi -tutkimus* (Survey on work and well-being among persons of foreign origin). The aim was to reduce non-response bias and increase the representativeness of the results and the quality of estimates disaggregated for the immigrant population.

## 2.1 Sample size

The sample for the Finnish LFS and UTH-study is derived from the population register, which holds information on name, ID, address and country of birth of the target person and her parents. The register covers the target population for the LFS rather well, that is, the population over 15 years of age, who have lived in Finland for at least one year. Undocumented migration is still very small[[4]](#footnote-4), but there is some over-coverage due to people moving out of the country without informing the officials. Hence, unlike in other countries where the sampling frame itself constitutes a problem, the main challenge for Finnish general population surveys is the small number of immigrant respondents in the sample.

As a solution to increasing the number of migrants in the sample, either oversampling or pooling of data from multiple years is proposed (5). Pooling, i.e. combining data from two or more years, may provide cost-effective solutions to increasing sample size, but it also implies decrease in data quality and timeliness (5). Oversampling, on the other hand, is expensive. As the data for LFS ad hoc modules is collected within one year, pooling of data was not possible to increase the quality of the 2014 ad hoc module. Hence, we decided on oversampling but were challenged by how to cover the costs.

To reduce the costs (and respondent burden) we decided to create co-operation with various governmental agencies that produce statistics on living conditions and well-being of the population. Due to the modest size of the immigrant population in Finland, all general population social surveys suffer from the same problem of not being able to disaggregate the results according to immigrant background. Hence, we decided to combine the most essential indicators from three of these surveys into one questionnaire so that the data could be collected within one interview (see Figure 3). Any overlapping content (e.g. background information) was removed and similar items were prioritized.

The sampling frame was created so that after completing the field work, the data could be combined with other potential statistical data files (e.g. FI- LFS ad hoc modules)  by using appropriate weighting and adjusting the methods of the sample. The design enables us to produce data for three surveys with the cost of one survey[[5]](#footnote-5). The price of the data collection was shared between different surveys and authorities which made the costs of oversampling reasonable, although the quality standards were set high to ensure a satisfactory response rate. Reduction of costs is important since oversampling is often not implemented due to its high costs.

Furthermore, the design reduces respondent burden, as compared to the situation where all three surveys would draw their own samples and conduct their own interviews. Survey fatigue is a problem with some visible but still rather small immigrant communities which have been targeted for numerous studies within a short time.

Figure : Study design



## 2.2 Non-response

While planning the UTH-study, attention was paid to field work methods in order to achieve a sufficient response rate. As described in , the response rate in the LFS has been 50 % for the foreign born population as it is 72 % for the general population. Based on previous studies on immigrant population (6; 7; 8; 2) it was expected that non-response is mostly due to the same reasons as among the general population. However, there are additional problems with languages skills, unfamiliarity with regard to surveys and lack of trust on data secrecy and motives of authorities.

The target group of the LFS ad hoc module 2014 includes all foreign born residents in the country as well as the second generation (born in Finland to foreign born parents). Accordingly, selecting only a few language groups or geographical areas was not an option and we were faced with the challenge of how to reach the geographically dispersed immigrant population speaking over 200 different languages.

We responded to these challenges by translating the questionnaire into 9 most common immigrant languages[[6]](#footnote-6) (in addition to standard Finnish, Swedish and English) and by recruiting 9 new interviewers with the command of these languages. The multilingual interviewers were trained to conduct interviews independently and assist regular interview staff in the municipalities via phone or video translation. The translated languages were chosen according to the size of the population speaking that language (both as their mother tongue and as a second language) as well as according to the general social background of the group (educational background, command of Finnish and English). In order to provide as many respondents as possible with a questionnaire they could understand, we chose a less rigorous translation process where questionnaires were translated into target languages and proof-read by multilingual interviewers without back translation or committee translation (9; 10). We assessed, that the overall quality of data will be better if we have several language versions with potentially minor linguistic problems, in comparison to only a few thoroughly tested versions. With only a few language versions there would be more respondents using broken Finnish or English, which would probably result in even more misunderstandings. In the case of the respondent not mastering any of the 12 languages available, we allowed the using of adult household members as ad hoc translators. It was acknowledged that the quality of the data would be worse than with official translations but this was assessed as a smaller problem than the bias caused by increased non-response. Further analyses will show whether the quality of obtained data will be sufficient.

All 12 language versions were programmed for computer-assisted personal interviewing (CAPI, Blaise) which required considerable programming resources and co-operation of programmers with the multilingual interviewers. However, this enabled the permanent interviewers (who master only Finnish, English and/or Swedish) to use all 9 additional languages in case the respondent couldn’t understand some of the questions[[7]](#footnote-7). This was done by changing the language of the questionnaire and showing the question to the respondent from the computer screen.

Based on experiences from the first quarter of data collection (field work is scheduled between 1.1.2014-31.3.2015) , the need for new multilingual interviewers has not been immense and a large part of the interviews have been done by the permanent interviewers relying only on the help of CAPI translations (although the use of phone- or video translation was offered). However, the multilingual interviewers conduct a large part of the interviews themselves and it seems that they reach higher response rates than the regular interview staff. This may be explained either by exceptionally successful recruitment and higher motivation of the multilingual personnel or linguistic and cultural knowledge that helps to build trust and eases communication with the interviewees.

In addition to the questionnaires, we translated cover letters into 27 languages[[8]](#footnote-8) and designed information sheets on data secrecy. As most of the interview staff is not multilingual, translated cover letters proved to be useful tools and helped the interviewers explain the purpose of the survey for the interviewees. As the translation of a one-page letter is a very small investment, this practise is widely recommended for all general population surveys.

After the first quarter of data collection it seems that these procedures have been successful. The net response rates are around 70 % which is even slightly better than in most general population CAPI interviews. As reported also by other immigrant surveys (2), incorrect and missing contact information is the main challenge in surveying immigrants. For the moment it seems that the population register (from where the sample is derived) contains some 10 % of overcoverage, that is, the interviewers find out from family members, employers or from the target person herself (e.g. by e-mail), that she has already moved out of Finland and does not belong to the target population. In addition, the immigrant population moves inside the country more often than the general population and often has pre-paid phone numbers, which is why the interviewers need to invest more working time in locating the target person (through different registers, googling, asking household members, neighbours, former employers, etc.). Consequently, surveying immigrants is significantly more expensive than surveying the general population. This also supports our research design that is based on doing one high-quality data collection to serve multiple surveys, rather than doing multiple low budget surveys.

## 2.3 Questionnaire testing

The LFS ad hoc module 2014 was pretested in Statistics Finland’s cognitive laboratory in autumn 2013. The ad hoc module includes questions on obstacles met in the labour market, education and migration history, which were tested using cognitive interviewing (N=21). Also, a few questions on respondent’s physical health, use of health services and cultural identity were chosen from the UTH-study for pretesting with cognitive interviews. In addition to cognitive interviewing, researchers conducted 6 pilot interviews to test the entire questionnaire of the UTH-study (length, “flow”, spontaneous reactions to the questions). Also, 21 interviews were carried out to test different language versions, phone-/ video translation and ad hoc translation by a family member.

The test persons were recruited from several multicultural organizations and through the contacts of interviewers. They were all foreign born but had otherwise very diverse backgrounds. In the cognitive interviews the interviewee was encouraged to think aloud while answering a question. Also, specific probes were asked by the interviewer after each tested question (e.g. ”In your own words, how did you understand this question?”) The primary interest in this qualitative pretesting was how do respondents of foreign origin understand and interpret the questions and specific concepts in the questionnaire.

The most significant problems with questionnaire design were related to language. The participants’ skills in the Finnish language varied from basic to fluent, but on average, there were severe problems with language comprehension and respondents did not understand the survey questions as intended. These problems were partly explained by the use of formal language and complex sentence structures. Also statement structure combined with a Likert scale (e.g. “I feel myself Finnish.” “Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree”) confused many respondents and they were not sure whether the interviewer was talking about herself and what it meant to disagree with this statement. Due to the problems in comprehension, the interviewer often had to repeat questions and explain concepts, which in some cases lead to deviation from the interviewing standards and increased the length of the interview.

We responded to the comprehension problems by investing in translating the questionnaire into as many languages as possible. In addition, we drafted “easy Finnish” versions of some of the most problematic items. Because most questions were derived from standard social surveys, replacing the original wording was not possible in order to retain comparability to the general population sample. However, we decided that additional “easy Finnish” versions would increase the quality as they would reduce the need for ad hoc explaining of the questions.

The structured interview technique expects short answers like “Yes” or “No” to the questions asked from respondents. This sort of interaction was not natural to some of the respondents who wished to answer in a more thorough manner, resulting in lengthened interview time. Due to comprehension problems and differences in interaction style, the length of the UTH-interview was recorded as too long and the content was reduced by 40 %.

The UTH-study covers several sensitive topics which require interviewing skills to create trust between the respondent and the interviewer. In the cognitive interviews, the most sensitive questions related to cultural identity, reasons for moving to Finland and obstacles concerning job opportunities. These questions were commented as “serious” and “extremely personal”. The degree of sensitivity of a question depended on how socially desirable the answer was and to whom it was given. The respondents admitted, that the imagined opinion of the interpreter influenced option selection. In the cognitive interviews, respondents also commented on the effect the gender of the interviewer has on answering. For example, male respondents expressed discomfort in reporting on low physical activity to a female interviewer.

There was also some general concern about the utilization of answers provided by respondents to these sensitive questions. For example, some respondents considered whether the information they had provided could have an effect on administrative decisions regarding their residence permit or social benefits. It is likely that this mistrust affects response behaviour if the confidentiality of collected survey data is not properly communicated to respondents. We reacted to these results by producing and translating an info-sheet on data secrecy and training the interviewer staff on the importance of this matter.

The pilot interviews were introduced to the test-persons as a study on immigrants work and well-being. Some respondents perceived the questions on labour market problems, reasons of migration, language skills or female genital mutilation as irrelevant to them. Especially respondents born outside of Finland to Finnish parents (included in the foreign born population) didn’t perceive themselves as “immigrants” and therefore did not consider themselves as part of the target group. These results led to redefining the target group for the UTH-study into persons whose both *parents* are foreign born. In addition, we replaced the term “migrant” with “persons of foreign origin” in the survey’s name.

One of the cognitive interviews was done with a proxy respondent and one with a friend as an interpreter. In these interviews it was observed that the respondents experienced some of the questions as awkward and they didn’t feel comfortable evaluating another person’s language skills. Also, giving personal information on physical and psychological health, experiences of violence or pregnancies in the presence of the interpreter (friend) was experienced as uncomfortable. As a reaction to these results we defined these questions to be asked only when the target person responded to the question herself (no proxy) and when there were no family members or friends present in the interview. Show cards were also added to some of these questions, which allows the respondent to answer without saying the­ response aloud. In addition, the importance of interviewer behaviour, professionalism and sensitivity was emphasized in the interviewer training.

# 3 Conclusions

Oversampling is proposed as one solution to increase the quality of immigrant integration indicators that derive from general population social survey (LFS, SILC, PISA). However, the solution is often not feasible due to its high costs. The design of the UTH-study (in which the content of multiple surveys was combined into one questionnaire and data was collected within one interview and one sample) seems to work well and allows “oversampling” immigrant population for multiple surveys within the cost of one survey.

In general population social surveys non-response among the immigrant population is often significantly higher than among the general population. According to experience from the first quarter of the UTH-study data collection, translating questionnaires and the cover letter, recruiting multilingual interviewer staff and investing in working time to search for missing contact information has increased the response rate from 50 % to over 70 % thus closing the gap to the general population.

As with any survey, pretesting the questionnaire is important in order to be able to revise questions that are misinterpreted. With the respondents in the UTH-pilot study, the most important observation concerned linguistic problems (difficult words or sentence structures) that resulted in incorrect interpretation of the question (and incorrect data). As a consequence, difficult words were replaced by simpler ones, and many questions were reformulated or provided with an alternative “easy Finnish” version. In addition, the interviewer manual was updated and more instructions were added. The length of the questionnaire was cut since language problems and unfamiliarity with the structured interview interaction pattern increased the length of the interviews. Creating trust was found important as several respondents were concerned about data secrecy and the influence their responses might have on decisions made regarding their residence permits. Some questions were perceived as very personal and it was decided to omit these questions when other family members were present in the interview. Finding solutions to the problems of comprehension, trust and social desirability is essential as they affect response behaviour and produce bias in the results.

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1. In this paper, the term ”immigrant” is as a general term to refer to population with immigrant background. The specific definition (e.g. foreign born, foreign national) is provided when referring to particular sample or results. [↑](#footnote-ref-1)
2. The ad hoc targets only one of the five rotation panels, resulting in even more limited sample size than the yearly estimates. [↑](#footnote-ref-2)
3. In co-operation with the National Institute for Health and Welfare (THL), Finnish Institute for Occupational Health (TTL). The project was funded by EU-integration fund and Ministry of Education and Culture (OKM). [↑](#footnote-ref-3)
4. Estimates range from 1 700 to 6 900 undocumented persons in the whole country in 2013 (11) . This is around 1 % of the size of foreign-born population. A large part of this population is highly mobile and stays in Finland for less than one year and hence does not belong to the target population of the LFS. [↑](#footnote-ref-4)
5. Although the length of the interview would have been shorter with three separate surveys, the length of the interview actually has a smaller effect on the total costs than locating and contacting the surveyed persons. [↑](#footnote-ref-5)
6. Russian, Estonian, Somalian, Arabic, Persian, Kurdish (sorani), French, Thai, Chinese [↑](#footnote-ref-6)
7. Paper questionnaires would have been very difficult to use, as the Finnish LFS is heavily ”rooted” and determining the right target group of each question would be very difficult without computer. [↑](#footnote-ref-7)
8. Finnish, Swedish, English, Russian, Estonian, Somalian, Arabic, Persian, Kurdish (sorani), French, Thai, Chinese, Albanian, Bengali, Bulgarian, Spanish, Italian, Nepalese, Portuguese, Polish, Romanian, German, Tagalog/Pilipino, Turkish, Ukrainian, Urdu, Vietnam. [↑](#footnote-ref-8)