



GGP PANEL MAINTENANCE

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1 Introduction

Every sample survey is faced with the inevitability of experiencing some form of non-compliance with the survey requests and thus resulting in the absent or missing information. Complete or partial absence of the requested information from the selected sample member is considered to be a nonresponse. A selected sample unit may fail to participate in the survey mainly due to the incomplete or false contact information and thus resulting in a non-contact or the sample person can refuse to participate. In the case of a longitudinal (panel) survey, nonresponse can occur at each wave of data collection. Its effects will tend to be cumulative, since more of the sample units are lost with each consecutive wave. Such repeating nonresponse has an effect of continually eroding the sample. The sample of respondents is getting smaller and smaller over time. For this reason, this process - unique to longitudinal surveys - is often referred to as sample attrition.

The attrition can either be non-selective or selective. The non-selective attrition resembles a completely random pattern according to the main characteristics of interest (in the literature this kind of missingness is referred to as MCAR - Missing Completely at Random). This kind of non-selective attrition is considered to be ignorable and will not cause biased estimates. Unfortunately, in practice the attrition tends to be selective, so that the nonresponding part of the sample is different from the responding one. This kind of selective or non-random attrition poses a problem for analysis, since the estimates are biased. The examples from the UK have shown that more commonly the elderly, young, men, respondents with higher incomes, those living in single households, households with higher mobility, and those living in urban areas have higher probability for attrition.

When talking about panel attrition we are mostly concerned with the possibility of not being able to re-establish the contact on the next visit to the selected respondent. The possibility of refusal is of lesser concern, since the respondents have already shown a tendency towards willingness to participate in the survey by responding to the initial or previous survey requests. Temporary absence and moving (changing

address) are the most common reasons for the failure to re-establish the contact on a consecutive visit to the selected respondent. The geographical mobility of the population under study is likely to have a considerable influence on the extent of non-contact (e.g. in the UK surveys of young people are likely to be more affected by non-contact than surveys of elderly people). Features of the survey design such as the length of the panel and the length of the gap between interviews can also affect the possibility of locating respondents.

In order to have the highest possible chance of locating the respondent, when the move occurred, the panel sample has to be maintained. The panel maintenance starts already at the initial interview when the necessary contact information has to be collected. Between the data collection waves the survey organization has to engage in maintaining the contact with the respondent and thus attempt to keep track of any potential moves the respondent could make. Finally if the maintenance activities turned out to be insufficient and the respondent cannot be located at the time of the next visit, the attempt has to be made to trace the individual's new address.

1.1 Collecting the contact information

First step to effective panel maintenance is the collection of all relevant contact details needed for re-establishing contact. The contact data are collected upon the successful completion of the initial interview.

The contact data should be as exhaustive as possible collecting home and work contact details. Best practices and experience from previous surveys suggest that collecting the contact information from only the respondent is not enough. Additional contact information should also be collected from various proxies that could provide information in the case respondent moved between the data collection times. Most commonly the proxies are chosen among family members, relatives and close friends.

Here are some examples used in the existing surveys asking the respondents to provide their contact details and those of their relatives or close friends.

-This survey is part of a longer term study to look at the health of Canadians. We will need to re-contact you two years from now.

Contact 1

-Could we have the name, address and phone number of a friend or relative that we could call in case there are difficulties in reaching you? This would only be used to help us contact you.

-How is this person related to you?

Work number

-Could I please have your telephone number at work? This will only be used to help contact you 2 years from now.

-What is the telephone number, starting with the area code?

(Source: **National Population Health Survey, Canada**)

Expect to Move

-Are you planning to move in the near future?

-What is the new address?

Contact 1

-This survey is part of a longer-term study to look at the experiences of new immigrants to Canada. We would like to follow up with you in a year and a half and find out how you are adjusting to Canada. At that time we will try and contact you at your current address and phone number. However, we would like the name, address and phone number of a friend or relative in Canada we could call ONLY if there are difficulties reaching you.

-What is the telephone number for "contact name"?

-What is the address for "contact name"?

Contact 2

-Is there another friend or relative we could call to help us contact you?

-What is the telephone number for "contact name"?

-What is the address for "contact name"?

(Source: **Longitudinal Survey of Immigrants to Canada, Canada**)

Contact 1

-In case you move or change telephone numbers, it would be helpful if you could provide the name, address and telephone number of someone, such as a friend or relative, who could help us to contact you. I want to emphasize that Statistics Canada will contact this person only if you move, and then only to obtain your new address or telephone number.

Contact 2

-In case we can't reach that person, we would like to ask for the name, address and telephone number of another person that we could contact.

(Source: **National Longitudinal Survey of Children and Youth, Canada**)

Recorded contact details from the respondent and these of her proxies are used in the main activities of the panel maintenance namely in maintaining the presence and in tracing.

1.2 Panel participant maintenance

Keeping the contact between the research organization and the respondent is one of the corner-stones of panel sample maintenance. The repeated contacts are on one hand meant to provide the research organization with any arising new information about the respondents whereabouts and for the updating her contact details. On the other hand the contacts are also serving a purpose of maintaining the memory of the interview as recent as possible and keep the motivation of the respondents to participate in the future waves at higher levels. Both goals play a vital role in any future waves of data collection by:

- securing that the contact attempt is successful by providing updated contact details (keeping contact rate to a desirable level) and
- securing that the interview solicitation is successful by keeping the respondents highly motivated and informed in the inter-wave period (keeping the refusal rate as low as possible).

Most often both main goals are achieved thru repetitious contacts with the respondents after the successfully completed interview. The frequency of contacts

should be kept to an optimal level to still maintain the presence and memory of the survey but not to be obtrusive and invasive into the respondent's private domain. The usual practices utilise the "important" days in a year where a contact could be welcome and not perceived as an extra burden. Such days may include important holidays such as Christmas and New Year, respondent's birthday or anniversary of the interview.

The contacts can either be made in person as a telephone call or even a visit, but more often the research organization sends the respondent a letter via regular mail. Various activities can also be performed on-line using either e-mail or web services. When making a personal contact it is highly recommended that the survey organization uses the same interviewer, which has also performed the interview. Most often the mail contact is preferred since it poses less intrusion in the respondent's private time.

The content of the sent material can be various, depending on the aim of the attempted contact. An update form for contact details is most commonly a regular part of any contact package in order to constantly remind the respondent to notify the survey organization of any moves she made, is making or planning to make. The contact form can be provided in the form of a postcard with a pre-paid postage fee in order to reduce the respondent burden in completing or sending the information. On a different note the form can also provide the respondent with a web address (URL) to an online form.

The form can be part of an additional way of providing and receiving information such as an interactive web page, presenting all the information about the survey, all the notices and requests. The page can be very dynamic and offer full potential of a computer generated content. Beside the form for updating the contact details it can also provide other features such as forums, FAQ-a (Frequently Asked Questions) and contact forms directing the respondent directly to one the organization staff to answer concrete questions and requests (e.g. used in Hungary - <http://www.dpa.demografia.hu>).

The contact with the respondent is mostly re-established relatively soon after completing the interview in order to thank the respondent for her time and willingness to participate in the survey. It is also important to stress the respondent's important contribution to the research endeavour. The "Thank You" letter can be accompanied with a symbolic gift that will remind the respondent of her participation in the survey such as a calendar with the survey and organization logo (e.g. effectively used in Hungary) or other small memorabilia or official symbols if the national survey developed any.

A small satisfaction questionnaire can also be included in the material for the initial re-contact to provide the respondent the ability to provide her own view of the interview and satisfaction regarding the interview and contacting procedure (e.g. used in Hungary). If any dissatisfaction with procedure is reported the respondent should be contacted by one of the supervisory personnel from the survey organization and assure her of that the actions would be taken to amend any unsatisfactory actions. Through swift and decisive action the respondent can be assured that her satisfaction and her participation are highly valued.

When first results of the survey are available the respondents can be re-contacted again and the results can be shared with them. A short letter including a brochure or booklet (e.g. used in Hungary, Japan) with the most interesting results can provide the respondent with the information what were the outcomes of the survey and how her participation contributed to the overall picture. Publication of results additionally demonstrates that the collected data are actually being used in research and other activities. In the context of presenting the results of the survey, the participants could also be notified of any public appearance of the research organization's representatives to present the results to a broader public such as TV talk-shows, newspaper articles, press-conferences or even workshops, seminars and conferences.

On special occasions such as major national or international holidays and personal anniversaries a card with best wishes can also be sent to the respondents (e.g. Happy New Year card was used in Japan). The small attentiveness reminds the respondent

that she is part of the panel group and that she participated in the survey. The additional attention shows thankfulness for the contributions made to the survey.

Sometimes the approaches used to maintain the active contact with the respondents are not successful and the respondents cannot be reached when the contact is attempted at the next data collection stage. In cases like this the interviewer or a specially trained professional attempt to locate the respondent's most recent contact details, so that the contact could be established and the data collected. Procedures used in such searches are called tracing.

1.3 Tracing

Tracing is the activity used to locate and contact respondents who cannot be reached at the telephone number or address provided for them at the beginning of a survey or, in the case of longitudinal surveys, the number or address that they had at the time of the previous cycle of the survey. Tracing consists of strategic and logical searches using all available resources to locate the respondent.

In applying various tracing procedures privacy and confidentiality concerns have to be upheld at all times. Only contact information provided by the respondent herself or publicly available information sources should be used to trace the respondent. A special body or committee can be established by the survey organization to monitor all the tracing procedures (e.g. used at Statistics Canada) in order to ensure that the privacy issues are upheld and no misuse is attempted.

1.3.1 Tracing procedures

“Easy” tracing (conducted by survey interviewer):

When a case is sent to Tracing, interviewers have the option of continuing to work on the case. This first “easy” tracing involves contacting easily accessible and readily available sources usually provided by survey organization itself such as

- special directories maintained by public or private domain (e.g. InfoDirect in Canada - <https://www.infodirect.ca/Welcome.aspx>),
- commercial telephone directories available either on the CR-ROM or other digital media or on-line (e.g. ProPhone CD-ROM in Canada).

“Difficult” tracing (conducted by experienced tracer):

If the interviewer is not successful in contacting the respondent using the “easy” tracing sources and tools, “difficult” tracing will be done using more complicated tracing tools. Usually, experienced tracers only will be involved in “difficult” tracing. Tools for “difficult” tracing include:

- other directories provided in the digital form, but which are not so readily available, easily accessible and easy to use,
- Internet directories, where the main concern is the reduction of the vast amount of available information,
- printed directories such telephone books (e.g. White pages, Yellow pages, local directories, criss-cross directories),
- operator assistance,
- registers with a more restricted access such as the Central Registry of Population.

Strengths and weaknesses of various tracing tools

TracingTool	Strengths	Weaknesses
"Easy" tracing (conducted by survey interviewer)		
specialized directories	<ul style="list-style-type: none"> • Quick • Easy to use • Updated frequently (e.g. monthly or more often) • Can search by respondent name, street name, phone number, city, postal code • the main tracing tool which should resolved the majority of cases 	<ul style="list-style-type: none"> • Can be expensive (e.g. even amounts of \$100,000 per year) • May need exact spelling • Addresses not always accurate • No apartment numbers • not as current as on-line services or information obtained directly from national phone companies • No indication if number/address is for a private residence, a seasonal dwelling or a business • if phone directory no unlisted or cell phone numbers are included
commercial phone directories on digital media	<ul style="list-style-type: none"> • Allows wild-card searches • Provides current and archive information for name, address, telephone number, postal code 	<ul style="list-style-type: none"> • Not always up-to-date
"Difficult" tracing (conducted by experienced tracer)		
other phone directories provided on digital media	<ul style="list-style-type: none"> • Allows complex searches • Provides current and archive information for name, address, telephone number, postal code 	<ul style="list-style-type: none"> • Not always up-to-date
Internet directories	<ul style="list-style-type: none"> • Used to locate people in the country and worldwide • Offers many search choices 	<ul style="list-style-type: none"> • access to the internet may not be always at hand
printed phone directories	<ul style="list-style-type: none"> • Easily accessible • Provide current and archive name, address, phone number 	<ul style="list-style-type: none"> • Quickly outdated • Time consuming • Can be expensive
Operator assistance	<ul style="list-style-type: none"> • Quick 	<ul style="list-style-type: none"> • Only one number at a time • Must provide exact spelling • Expensive (e.g. in Canada 50 cents to \$1.00 per address)
Municipal offices	<ul style="list-style-type: none"> • Good for finding landlords and home owners • Knowledgeable and current 	<ul style="list-style-type: none"> • Not all municipalities are willing to provide this service • Some municipalities could charge fees for inquiries
Respondent contacts (Family, relatives, neighbours, etc.)	<ul style="list-style-type: none"> • Very good source because based on contact information provided by the respondent in the previous cycle 	<ul style="list-style-type: none"> • Not always available
Maps	<ul style="list-style-type: none"> • Useful to find address 	<ul style="list-style-type: none"> • Slow
Field trace	<ul style="list-style-type: none"> • Easy to see if dwelling is occupied or vacant • Easy to talk to household 	<ul style="list-style-type: none"> • Expensive

Computer assistance

Software provided for Computer Assisted Interviewing (CAI) offers additional options for tracing purposes such as a special Tracing module (e.g. in Blaise¹) which uses a series of screens to guide interviewers through the tracing process. The Tracing module displays all current information on the selected person, household members and source(s), and contains the tools used to document tracing efforts when trying to locate the selected person.

Special tracing procedures

In special cases the survey organization may acquire the permission to use very accurate register information to tracing. The acquisition of such permissions is often very difficult since the data in registers are protected by ever more restrictive personal data privacy legislature. The use of registers for tracing is of course limited to the countries that have developed an effective registry system such as the Nordic countries or BeNeLux. The most accessible is usually the central registry in population that can be used for sampling purposes in scientific research (e.g. used in Slovenia). Beside the regular registers some other sources such as the income tax files can be used to trace address and telephone number changes (e.g. National Population Health Survey, the Survey of Labour and Income Dynamics and the National Longitudinal Survey of Children and Youth in Canada).

1.4 Resources on the web

One of the best resources on the web covering topics of longitudinal surveys is the ESRC United Kingdom Longitudinal Studies Centre, which hosts the British Household Panel Survey and an abundance of resources concerning longitudinal studies in the UK and elsewhere.

<http://www.iser.essex.ac.uk/ulsc/>

Among the resources at least two are worth mentioning explicitly:

¹ <http://www.cbs.nl/en-GB/menu/informatie/onderzoekers/blaise-software/default.htm>

- Keeping track is and up-to-date to major longitudinal sources of data.
<http://www.iser.essex.ac.uk/ulsc/keeptrack/index.php>
- Links of Longitudinal Survey Resources represent a very useful selection of most prominent longitudinal surveys conducted in the UK and around the world as well as various research and some other portal site pointing to more resources.
<http://www.iser.essex.ac.uk/ulsc/resources/links/long.php>

Some panel studies introduced on the web:

- Panel Study of Income Dynamics (PSID) is a panel of nearly 8000 US families followed for almost 40 years. Their website offers access to the data and various substantial and methodological articles.
<http://psidonline.isr.umich.edu/>
- The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a household panel survey that began in 2001 and had 6 waves since. The page offers various substantial and methodological papers among other also “Wave 2 Survey Methodology” technical paper, which talks about the tracing procedures used.
<http://www.melbourneinstitute.com/hilda/>
<http://www.melbourneinstitute.com/hilda/hdps/hdps-techn05.pdf>
- Netherlands Kinship Panel Survey is a multi-method multi-actor panel survey with 10,000 respondents. The page offers short descriptions of the survey with a reference list of mainly substantial papers.
<http://www.nkps.nl/NKPSen/nkps.htm>
- British Household Panel Survey (BHPS) began in 1991 and has so far recorded 13 waves of data collection. The page hosts all the methodological information as well as measurement instruments used.
<http://www.iser.essex.ac.uk/ulsc/bhps/>

- Survey of Labour and Income Dynamics (SLID) is conducted by Statistics Canada and aims towards the understanding of the economic well-being of Canadians. The web page provides the description of the panel, the methodology used and the access to standard tabulations.

<http://www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=3889&lang=en&db=IMDB&dbg=f&adm=8&dis=2>

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1.6 References

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