Data collection strategy

Response-enchancing measures for social statistics

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Explanation of symbols

.	= data not available
*	= provisional figure
**	= revised provisional figure
x	= publication prohibited (confidential figure)
–	= nil or less than half of unit concerned
–	= (between two figures) inclusive
0 (0,0)	= less than half of unit concerned
blank	= not applicable
2010–2011	= 2010 to 2011 inclusive
2010/2011	= average of 2010 up to and including 2011
2010/’11	= crop year, financial year, school year etc. beginning in 2010 and ending in 2011
2008/’09–2010/’11	= crop year, financial year, etc. 2008/’09 to 2010/’11 inclusive

Due to rounding, some totals may not correspond with the sum of the separate figures.

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Table of contents

1. Introduction

The term ‘nonresponse’ is used to describe the situation in which no data are collected from a survey unit (either a person or a household). In some cases no data are collected at all, for instance when a survey unit refuses to cooperate with a survey. This type of nonresponse is called unit nonresponse. Another possibility is that a survey unit does take part in a survey, but is unwilling or unable to answer all the questions. This is called item nonresponse. Nonresponse may have an impact on the quality of the statistics if nonrespondents would systematically have given different answers than respondents. If so, bias will arise because of nonresponse, which is accordingly referred to as nonresponse bias. The extent of the bias is a function of the difference between the mean score of respondents and nonrespondents, and the magnitude of the (non)response. The difference between respondents and nonrespondents will generally be unknown, and may be different for each substantive variable. This is why survey methodologies aim to keep the probability of bias as small as possible by pursuing a high response rate. This subtheme describes the measures available to a survey organization to optimise the probability of response. The description is restricted to optimising unit response, and response in social statistics. See the ‘Imputation’ theme for a description of item nonresponse. Response-enhancing measures for business statistics are covered in a separate subtheme in the ‘Data collection strategy’ theme.

It may prove impossible to collect data from a survey unit for a variety of reasons, the three most common of which are:

- not reaching persons or households because the survey-organization failed to contact the survey unit (*noncontact)*;
- *refusal* of survey units to cooperate in the survey;
- *inability* of the survey unit to take part, for example because of illness or absence.

These three types of nonresponse have various causes, and for many surveys also differ in their influence on the quality of the statistics.

For Statistics Netherlands surveys, the proportion of survey units that cooperate is around 65%. The refusal rate is about 25% and the noncontact rate about 5%, which is the same as the proportion of units that are unable to respond. The precise proportion varies with the survey subject, the survey mode, and numerous other factors that are covered in this report.

Surveys differ not only in nonresponse rates, but also in the underlying causes of nonresponse. For instance, the reasons for noncontact are not the same in all modes[1]. In face-to-face surveys noncontact may arise when an interviewer’s access to an address is obstructed by doorkeepers or gates. In telephone surveys, some survey units may have blocked calls from unknown or anonymous numbers, and will therefore be unaware of attempts to contact them. The use of multiple modes may mitigate mode-specific adverse effects on accessibility. Bias may be anticipated if the actual subject of the survey is related to the chance of noncontact. People who are difficult to contact because they are

[1] Modes are the ways in which data are collected, e.g. Computer Assisted Personal Interviewing (CAPI), Computer Assisted Telephone Interviewing (CATI), or self-administration by respondents, such as with web surveys and written questionnaires. The ‘unimodes’ subtheme discusses details of this subject.

almost never at home may cause serious bias in surveys of travel behaviour. Likewise, people who cannot be reached because they are at work will bias a labour force survey. Chapter 2 of this report describes measures that may be taken to maximize the probability of contact in surveys that involve an interviewer. Chapter 3 describes methods appropriate to web surveys. This report does not address postal surveys explicitly, because Statistics Netherlands does not use this mode for social statistics (although responses to part of a survey may be delivered in writing, e.g. when questionnaires are left behind following a CAPI basic questionnaire).

Many factors determine the willingness of a survey unit to participate in a survey (their cooperativeness). Groves et al. (2004) categorize these factors in the following four dimensions:

1. the social environment (e.g.: there are more refusals in cities than in rural areas; there are more refusals in single person households than in multi-person households);
2. the person (e.g.: men are more likely to refuse than women);
3. the interviewer (e.g.: experienced interviewers are better at persuading people than their less-experienced colleagues);
4. the design of the survey (e.g. incentives reduce the number of refusals).

The last two of the above dimensions are under the control of the survey organization. Chapter 4 discusses the associated methods.

The third major nonresponse category comprises people who are unable to participate in the survey, either because of illness, persistent absence throughout the survey period, or having no command of the language in which the survey is administered. Sometimes a person's inability is related to the survey subject, e.g. where people are too ill to take part in a health survey. Groves et al. (2004) find that in surveys of the entire population the bias introduced by this nonresponse category is slight. However, inability to participate may be a significant source of bias in surveys of specific populations (e.g. elderly people, or ethnic minorities). There are various measures available to a survey organization to reduce the probability of nonresponse because of inability to participate, including the use of foreign-language interviewers or questionnaires, or extending the fieldwork period. A longer fieldwork period may also reduce noncontact, and is described in Chapter 2. The use of foreign-language interviewers also helps prevent refusals, and is therefore discussed in Chapter 4.

This report concludes with a chapter about interviewer training, with a view to optimizing the response, and a chapter about monitoring the response process and the interviewers.

The entire report is concerned with optimizing the response in random sampling. However, nonresponse is not necessarily detrimental to the quality of a statistic. A recent meta-analysis by Groves and Peytcheva (2008) showed that some surveys have a low nonresponse and large bias, while others have a high nonresponse and little bias. However, it is hard to predict when nonresponse will lead to bias. Although there has been research into other measures of survey quality (e.g. the Representativeness Index of Schouten, Bethlehem and Cobben, 2008), it would currently be advisable in the absence of sound information about the probability of bias to aim for the highest possible response.

The diagram below summarizes the response-enhancing measures covered in this subtheme, and gives an indication of the increase in response achievable with each measure. The more '+'es, the higher the gain in response. The number of '+'es was determined by a (sometimes rather subjective) weighting of survey results. For instance, 'contact attempt planning' was given one +, because, while a good spread is very important in making contact rapidly, it is not absolutely necessary for making contact at some point in the future.

	CAPI / CATI	Web
The number of contact attempts (Section 2)	+++	+/-
A lengthy fieldwork period (Section 2.2)	++	++
Contact attempt planning (Section 2.3)	+	+
(Limited) interviewer workload. (Section 2.4)	++	N/A
Contact attempts in a different mode (Section 2.5)	+/-[2]	++
Reminders/demands (Section 2.6, 3.4)	+[3]	+++
Employment of a different survey mode (Section 2.7)	+/-	+++
Use of background information about an address or person (Section 2.8)	+/-	Unknown
Personalization of the invitation (Section 3.1)	+/-[4]	+/-
Stating the length of time involved in the questionnaire (Sections 3.2 and 4.1.6)	+/-	+/-
Tailoring the questionnaire to the respondent (Section 3.3)	Unknown	+/-
Advance letters (Section 4.1.1)	+	+++[5]
Incentives (Sections 4.1.4 and 4.3)	++	+
Image of the research institute (Section 4.1.3)	+	+[3]
Folders (Section 4.1.2)	+/-	+/-
Good survey material (Section 4.1.5)	+	++
A short questionnaire (Section 4.1.6)	+/-	+++
The use of interviewers (Section 4.1.7)	+++	N/A
Respondent rules (Section 4.1.8)	++	++[3]
Allowing the respondent to choose the mode (Section 4.1.9)	-	+/-

[2] +/- means that variable results were found, with no clear trend in either direction, or no effect

[3] Probable. No empirical research at Statistics Netherlands, no other known empirical research.

[4] This works well for some groups but not for some others, and for the rest it makes no difference.

[5] This is the only way to make a web respondent aware of a request to take part in a survey. In other words: no notification letter, no respondent. An invitation to join a panel may be sent by e-mail if the address was disclosed in a previous contact. However, notification letters achieve a considerably higher response than e-mail invitations (Wetzels, Janssen and Cuppen, 2008).

Foreign-language interviewers and/or questionnaires (Section 4.1.10)	+/-	+/-
Interviewer characteristics (Section 4.2.1)	+/-	N/A
Interviewer behaviour (Section 4.2.2)	++	N/A
Answer format (drop-down menu) (Section 4.3)	N/A	-
Progress indicators (Section 4.3)	N/A	+/-
Prompts when skipping a question (Section 4.3)	N/A	+/-
Background colour (blue) (Section 4.3)	N/A	+
Screen resolution (1024 x 768) (Section 4.3)	N/A	+
Back and Next button placement (Section 4.3)	N/A	+
Refusal conversion (Section 4.4)	++	+++
Interviewer training (Section 5)	++	N/A
Interviewer monitoring (Section 6)	++	N/A

2. Methods of reducing noncontact in CAPI/CATI surveys

The success of a survey organization in contacting survey units is determined by the number and the timing of the contact attempts, the length of the fieldwork period and the number of addresses to be approached by an interviewer in the course of the fieldwork period (the workload). Other factors that may affect the probability of success include the option to make contact in a different mode, and the availability of background information. These measures are described in this chapter.

Despite their influence on contact, the success of these measures is limited by practical aspects, such as the number of evening hours that interviewers are willing and able to work. The best method in terms of response sometimes runs up against practical limits of what can be demanded of interviewers.

2.1 Increase the number of contact attempts

One of the most obvious measures for reducing noncontact is to increase the number of permitted contact attempts. There is a clear relationship between the number of contact attempts and the contact rate. Fieldwork organizations generally prescribe a minimum number of contact attempts before writing off a survey unit as a noncontact. This number will be lower for CAPI than for CATI surveys, because of differences in the costs of contact attempts in the various modes. Before 2003, Statistics Netherlands CAPI interviewers could declare noncontact after three unsuccessful visits. However, social changes engendered rising noncontact rates, and three visits were no longer adequate to secure an adequate level of contact. The trend has been reversed by increasing the number of compulsory visits to six. Fieldwork organizations will however not permit unlimited contact attempts, because at some point the costs of additional approaches will no longer outweigh the benefits in terms of bias reduction of marginal improvement in response.

The number of visits allowed determines not only the contact rate, but also the quality of the data: there are differences between the people you reach immediately and those you find only after several visits. For instance, the response rate for some ethnic minority groups went up by ten percentage points after Statistics Netherlands introduced the six-visits rule, thereby reducing the response gap between this group and the native Dutch (Schmeets, 2005). The extent to which these differences also lead to different average scores on the target variables is related to how these differences vary with the target variables, as well as to the type of survey. For instance, the people who are difficult to find for the labour force survey (EBB) and the national traffic survey (OVG) are workers and travellers (see also Lynn, 2002 for comparable results). Abandoning contact attempts prematurely, or allowing a relatively high noncontact rate, will introduce bias.

2.2 Extend the fieldwork period

Obviously, the number of possible contact attempts is related to the length of the fieldwork period. On the other hand, the length of the fieldwork period also has an independent influence: the longer the fieldwork period, the greater the probability that all concerned will be aware of the request to participate. Even people who spend all winter in Spain will return if you wait long enough.

2.3 Plan the contact attempts so as to optimize the probability of response

The strategy of making contact attempts at times when respondents[6] are most likely to be at home, in order to maximize contact in the minimum of time, is known as call scheduling. There has been a considerable amount of research into optimum call schedules for both CATI and CAPI. The areas investigated include the best times for the initial contact, and what should be done if the first contact fails: spreading the subsequent contact attempts over times, days and weeks of the fieldwork period.

Evening visits

The most likely time to reach people is in the evening, and then in particular an evening before a working day (i.e. Sunday to Thursday evenings). This has been found in a variety of research in the (Western) world (e.g., Campanelli, Sturgiss and Purdon, 1997; Groves and Couper, 1998; Luiten, 2006b; Luiten, 2008a). Only a small proportion of people cannot be reached in the evening (Groves and Couper, 1998). However, the first visit is frequently not in the evening, while most interviewers prefer to find out about the nature and location of an address during day time.

Spread visits over times, days and weeks of the fieldwork period

If the first visit was in vain, a second visit must be planned. The most promising time for a second attempt after an unsuccessful daytime visit is the evening of the same day (Purdon et al., 1999; Stoop; Luiten, 2006b). Opinions differ about what to do after an unsuccessful evening visit. Purdon et al. (1997) suggest that not making the subsequent visit in the evening holds the most promise. Groves and Couper (1998), Luiten (2007) and Luiten (2008a) find conversely that an evening visit is more likely to succeed regardless of the time of the previous visit.

Contact attempts must be spread well over the available time, in terms of the time of day, day of the week and the weeks of the fieldwork period. A good spread in time contributes most to a high contact ratio at the minimum expense (Luiten, 2006b). In call centre-based CATI surveys, as in Statistics Netherlands, the CATI management system takes care of an optimum spread of contact attempts. In CAPI surveys, interviewers must currently perform this task themselves. However, the evidence from research (Luiten, 2008a) is that interviewers are not good at arranging an optimal spread over time for all their survey units. Further research is needed into tools to support interviewers in this regard.

Weekend visits

Much research recommends weekend visits: both Saturday and Sunday are promising days in many countries for making contact with a survey unit. However, this has not been confirmed in Statistics Netherlands surveys (Luiten, 2006a). Saturday visits are no more and no less successful than daytime visits on a working day, and become even less successful as the fieldwork period progresses. Statistics Netherlands does not make visits on Sundays. Groves and Couper (1998) duly observe that there are cultural differences in the acceptance of weekend visits.

2.4 Adjust workload to available interviewer capacity

The time needed must be planned well to give interviewers sufficient opportunity to approach their allotted addresses with due care. If too many cases are allotted for a given fieldwork period, both the

[6] I use the term 'respondents' also to refer to 'envisaged respondents' / survey persons / addresses / households.

noncontact and refusal rates will deteriorate. Even if refusal conversion is not attempted (in which people who have refused are visited again by different and more experienced interviewers: see Section 4.3), a fieldwork period that is too tight will have an impact on the refusal rate. Interviewers who sense that a refusal is imminent are instructed to withdraw and make a second attempt later in the fieldwork period.

The exact calculation of the workload that interviewers can cope with is therefore a vital part of achieving acceptable response rates. Among the factors that are involved in this calculation are the predicted response rate and the rate and kind of nonresponse to be expected in a given area, the travel distance to be expected, the expected speed at which this distance can be travelled, the expected number of visits, the time needed to gain entry, and the time to be allowed for the interview. See Van Berkel and Vosmer (2006) for the method of calculating the workload of Statistics Netherlands interviewers.

It is important that interviewers have as much productive working time and as little travel time as possible. To secure the optimal allocation of interviewers to sample addresses, a computer programme is used.

2.5 Allow contact attempts in a different mode

After several unsuccessful visits, with a view to travel and other expenses in CAPI surveys in particular, it is expedient to attempt contact in a different mode. For instance, after three unsuccessful face-to-face visits, a Statistics Netherlands interviewer will leave a card in the letterbox with a proposal for an appointment and her cell phone number. If the respondent does not respond to the request, the interviewer may attempt to contact the respondent by phone. An advantage of using the telephone is that more frequent contact attempts can be made at limited expense, and that it is also easier to make the contact attempts in the evening. However, a disadvantage of the telephone is that people find it easier to refuse than in a face-to-face situation. On balance the higher number of refusals counteracts the lower number of noncontacts, so that the net response is hardly any different (Blom & Blohm, 2007; Luiten, 2008c;).

Written or telephone contact attempts therefore already occur in CAPI surveys in practice, but other combinations are also conceivable, such as a telephone reminder with a web questionnaire, written approaches to obtain a telephone number, or a written request to phone the survey institute for an inbound CATI interview. Fouwels, Wetzels and Jansen (2006b) show that with a web questionnaire, a telephone (third) reminder does not generate a higher response than a written third reminder.

2.6 Send reminders

It is crucial with written questionnaires and web surveys to send reminders in due course. Without these reminders the response may be 20 to 40 percentage points lower than with them (Dillman, 2000). Section 3.4 describes how to organize these reminders. But also for CAPI en CATI surveys reminders can be valuable. Statistics Netherlands uses a form of reminder that aims to inform survey target persons that interviewers are having trouble contacting them. These notifications are intended to persuade the respondents that contacting them is so important to Statistics Netherlands that we are prepared to go to great lengths. Social exchange theory predicts that respondents will then be more likely to take part in the survey. CATI interviewers leave a voicemail message in the event of noncontact. CAPI interviewers post a card in the letterbox after each of the first three unsuccessful visits. There are three different cards, with successively lower barriers for the survey target person to contact Statistics Netherlands. The first card states only that an interviewer called, and will try again later. The second card adds the help desk telephone number. The third card adds the interviewer’s mobile number and suggests a date for an appointment.

2.7 Use a different survey mode

Mode switching can be an effective way of enhancing response, although its actual effect depends on the initial unimode. For instance, Statistics Netherlands has been unsuccessful to date in enhancing the response of CAPI and CATI surveys by adding the web as a mode (Wetzels, Janssen and Schooten, 2007). Conversely, including a more intensive mode, such as CATI or CAPI in a web or written survey, will raise the response substantially compared with the web or written response alone. Statistics Netherlands does not use web surveys in unimode, because the quality of both the response and its composition are unsatisfactory. The ‘Mixed Mode’ subtheme discusses this subject in depth.

2.8 Use background information of an address or person

Providing interviewers with information about the envisaged respondent may be relevant in planning the contact phase as efficiently as possible and raising the probability of contact. For instance, retired people can be successfully approached in the daytime, while the same would not be a good idea for a young double-income household. Groves and Couper (1998) identify the relevant aspects:

- the number of adults in a household (the probability of contact is greater where there is more than one);
- people over the age of 70 in the household (greater probability of contact);
- children younger than 6 in the household (greater probability of contact);
- single person household (lower probability of contact);
- all members of the household younger than 30 (lower probability of contact).

Schouten (2007), Cobben and Schouten (2007) and Luiten, Schouten, Gevers and Cobben (2007) also identify ethnic background, an urban setting, property value, and the employment status of members of the household core as correlates of accessibility.

The main influence of an interviewer’s use of this knowledge will be on the efficiency of the contact phase. Depending on background characteristics, influence can be brought to bear on the level and composition of the response through a differential fieldwork strategy, in which groups that were underrepresented in the response are approached differently or more intensively. These principles were part of the European RISQ project (Schouten, 2007), which Statistics Netherlands coordinated. Experiments with the use of background variables for this project were performed and described in Luiten en Schouten, 2011.

3. Methods of reducing noncontact in web surveys

Many of the measures described in the sections above are also applicable to web surveys. These surveys must also be preceded by an advance letter, and are helped by reminders, a long fieldwork period, etc.. Nonetheless, web surveys have several specific aspects, which are discussed in this chapter.

Even an invitation to participate in a web survey should preferably be in the form of a letter[7]. The letter must specify how to access the questionnaire, which must be protected with a personal password (Heerwegh, 2005). One or more reminders to complete the questionnaire are sent to sample elements who do not respond within a given time, or even those who explicitly refuse. The number of reminders depends on the survey design. If no follow up will be attempted in another mode, more reminders are sent than if a follow up is envisaged. Two reminders are sent for the current Statistics Netherlands mixed-mode surveys. There is evidence that sending more than two reminders may cause irritation, and actually lead to a *lower* response in the follow-up modes (Wetzels, Janssen and Schooten, 2007). Dillman (2000) advises to repeat the information about how to open the questionnaire after two reminders.

More than in CAPI and CATI surveys, web response is determined by two aspects: the proportion of people who start the survey (the login ratio) and the partial nonresponse, which is the proportion of people who start but do not finish the survey (Heerwegh, 2005). Response-enhancing measures in web surveys are therefore oriented to methods of improving these two aspects. Heerwegh's thesis (2005) presents an entire series of experiments concerned with these aspects. This chapter discusses his experiments concerning increasing the login ratio. Section 4.3, which is concerned with enhancing cooperation in web surveys, describes how to persuade people to finish answering the questions.

3.1 The effect of personalizing the invitation

Three different studies have shown that personalizing the invitation has a marked positive effect on the login ratio, but not on the completion ratio (the proportion of people who finish and return the questionnaire). On the other hand it has also been shown that a personalized invitation more often leads to socially desirable or dishonest answers to sensitive questions.

3.2 Stating in the advance letter the length of time involved in the questionnaire

An experiment compared the effect of the statement 'the survey has been kept as brief as possible' with 'the survey will take between 20 and 25 minutes'. The vague statement led to a higher login ratio, but also to a higher partial response, so that the ultimate effect was no different for the two conditions.

3.3 Tailoring the questionnaire to the respondent

A series of experiments investigated whether the kind of tailoring successfully applied by interviewers in CATI and CAPI surveys could be translated to a web environment. Tailoring was operationalized as adaptation of invitations to respondent characteristics. The following aspects were investigated in turn.

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[7] Even if a satisfactory framework of e-mail addresses is available, it is not advisable to send an invitation by e-mail only. The current generation of spam filters would be likely to intercept a message of this kind.

- The inclusion of a FAQ section. The reasoning was that by being able to ask their own specific questions, respondents would create their own survey environment. However, it appeared that only very few respondents read the FAQs, and the effect on the response was correspondingly small.
- Mentioning that ‘no special knowledge of the subject is needed to take part in this survey’ to panel members where the level of knowledge was known to be low. Whether or not this phrase was included had no effect on either the login or completion ratios.
- Manipulating the login procedure, such that either one or two access codes have to be entered. The results showed that the login ratio was higher with a semi-automatic login procedure, but the completion ratio was higher if respondents were required to enter more access codes. There was also evidence that sensitive questions were then answered more accurately.

3.4 Reminders

It is vital in web surveys to send reminders in due course. The response without these reminders will be 20 to 40 percentage points lower than otherwise (Dillman, 2000). A reminder gives the researcher a new opportunity to emphasize the importance of completing the questionnaire, and therefore has to convey more than simply ‘we have not yet received your questionnaire’. According to Dillman, each successive reminder must make a stronger appeal to the respondent than its predecessor. Dillman proposes the following sequence. A card to all survey units after two weeks that serves as either a reminder or ‘thank you’. This card is meant as a friendly reminder to nonrespondents. It intentionally takes the form of a card, since it is more likely to receive attention than a letter, which might end up unopened on the ‘to be read’ pile. The card starts by mentioning that a questionnaire was sent some weeks ago. The second paragraph expresses thanks or a reminder, as appropriate, about completing the questionnaire. The third paragraph gives a free telephone number to call for a new questionnaire or login code.

A letter is sent to nonrespondents after four weeks, enclosing a new questionnaire (or a new login code for web surveys). The letter resembles the original advance letter, but with stronger arguments. The effect of omitting the new questionnaire (or reminder with the login code) is to halve the increase in response compared with a reminder accompanied by a questionnaire (Dillman, 1974, in Dillman 2000).

Contact is made again after eight weeks, carefully emphasizing the particular importance, through an approach in a different mode, or by delivering the letter in some special way, such as by courier.

4. Methods of increasing cooperation

4.1 Before the first contact: survey design

Even before the first time the interviewer heads off to an address, or calls a number, it is possible to prepare the respondent for the contact. There are various techniques to ensure that respondents will be pleased to see the interviewer. The probability of response can be optimized by writing an effective letter, enclosing an information folder, and including an incentive. Subsequent survey design aspects also have a great influence on the probability of response. The use, or not, of interviewers, the way of selecting respondents in a household, the length of the questionnaire, possible attempts to persuade refusers to change their minds, and the kind of training given to interviewers, are all design aspects with an influence on the ultimate response. The actual contact phase comes only at the very end, where the outcome is determined by characteristics of the respondent, and the interaction with the interviewer. Section 4.1 describes the aspects that can influence the fieldwork organization in the precontact phase. Section 4.2 discusses the contact phase.

4.1.1. *Advance letters*

A letter to announce a forthcoming survey is called an advance letter. In general, but in particular for statistics bureaus, an advance letter leads to a higher response. The letter is an opportunity to explain clearly what the survey is about, why it is important for the respondent to participate, and how and why the respondent was selected. The letter gives interviewers a point of reference, and is a source of confidence. Referring to the letter is an important element of the initial contact (Becks, 2008). Statistics Netherlands surveys are preceded by this kind of advance letter.

Both the sending of the letter as such and its content are relevant for the response process. Experiments with advance letters (e.g. Luiten, Campanelli, Klaassen and Beukenhorst, 2008; White et al., 1997) have shown that minor adjustments to the content of the letter can have an effect on the response. Advance letters are a vehicle for applying sociopsychological theories in order to be as persuasive as possible towards respondents. The ‘Advance Letters’ subtheme gives details of how Cialdini’s (2001) principles of persuasion and Dillman’s (2000) social exchange theory can be used in creating survey material. The ‘Response-Enhancing Measures for Business Statistics’ subtheme also dwells extensively on how to use Cialdini’s principles in a variety of response-enhancing measures.

There is a specimen Statistics Netherlands advance letter (in Dutch) on the website: www.cbs.nl[8]. Besides the normal content of the letter (what the survey is about, why this particular respondent, how to contact Statistics Netherlands), all Statistics Netherlands letters also have a section about informed consent. This section explains how and why the collected data are combined with other information and data from registers to produce statistics, and about the privacy guarantees for respondents.

The advance letters for face-to-face surveys are sent by the interviewers three or four days before the first planned visit. The letters for telephone surveys are sent from a central location, and observe the same timing.

[8] navigate: veelgestelde vragen, personen en huishoudens, ‘hoe weet ik zeker dat het om een CBS onderzoek gaat’

4.1.2. *Folders*

An advance letter must be brief, which implies a very concise statement of much relevant information about the survey objective, the sampling method, the interview procedure, and what will be done with the data. Many survey bureaus solve this problem by enclosing a folder with a more detailed explanation. Furthermore it is possible to make the message more appealing in a folder by using appropriate material. It is unclear how effective the sending of a folder is as a response-enhancing measure. Statistics Netherlands also encloses folders with the advance letter for social surveys, but no experimental research has been performed to test the effect. Whereas the Statistics Netherlands folder briefly touches on questions that people may have (who uses this information, what is the survey about, how was I selected), it is mainly oriented to what happens with data that respondents provide. Figure 1 shows an example. The folder is updated every three months to include reports from the media about how the collected data are used.

4.1.3. *Corporate Image*

People are generally more inclined to take part in surveys run by a central statistics bureau than by an academic or commercial organization. Groves and Couper (1998) speculate that this predisposition stems from a general awareness that a democratic administration cannot function without information from the public. The question is whether every envisaged respondent will necessarily know who you are. Despite frequent reports about Statistics Netherlands in newspapers, magazines, radio and TV, far from everyone knows what Statistics Netherlands is. The satisfaction survey of respondents and nonrespondents of the Labour Force Survey found that 12% of respondents and 14% of nonrespondents had never heard of Statistics Netherlands before receiving an advance letter (Arends-Tóth, et al., 2008). Statistics Netherlands has embarked on a charm offensive to improve its image with respect to business statistics. A broadly similar approach has often been considered, but never implemented, with respect to social statistics, but then with name awareness in mind. In view of the almost equal proportion of respondents and nonrespondents who had never heard of Statistics Netherlands before being approached, name awareness would not immediately appear to be an overriding factor in response. A clear statement of Statistics Netherlands' authority is therefore a primary aim of the advance letter and folder. The statement involves sending a serious, attractive, and well drafted letter, using professional folder material, giving a free number for the respondent to call with any questions, and explaining clearly what will happen with the results of the survey (Dillman, 1978, 2000).

Figure 1. Media information in Statistics Netherlands folder

Het CBS in de krant

Bijna iedereen zit op fitness

(De Telegraaf, 12 augustus)

Fitness is volkssport nummer één in Nederland. Het aantal fitnesscentra in Nederland is in twintig jaar maar liefst vervijfvoudigd en die ontwikkeling is nog lang niet ten einde. Dat blijkt uit cijfers van het Centraal Bureau voor de Statistiek en het Mulier Instituut, het centrum voor sociaalwetenschappelijk sportonderzoek. Vorig jaar telde ons land 2 050 fitnesscentra waar ruim twee miljoen volwassenen zich regelmatig in het zweet werken, duidelijk meer dan de ruim één miljoen voetballers die ons land telt. Twintig jaar eerder waren er nog maar 400 centra.

Meer vakanties in eigen land

(NRC Handelsblad, 4 augustus)

Veel meer Nederlanders brachten vorig jaar de vakantie in eigen land door. Het aantal steeg in 2007 met 8,4 procent. Het aantal nachten dat in eigen land in accommodaties werd doorgebracht steeg met 5,7 procent. Dat bleek vandaag uit cijfers van het Centraal Bureau voor de Statistiek (CBS). Het CBS vermoedt dat meer mensen voor een vakantie in eigen land kozen door de hogere brandstofprijzen.

Kiezers willen geen veranderingen in financiële kwesties

(Trouw, 14 augustus)

Over financiële kwesties is er nauwelijks verschil van mening tussen linkse en rechtse kiezers. Ook PvdA'ers en SP'ers willen de hypotheekrente niet afschaffen en ook VVD'ers willen de belastingen niet verlagen, blijkt uit het Nationaal Kiezersonderzoek van het Centraal Bureau voor de Statistiek (CBS). Zowel CDA'ers als SP'ers en VVD'ers zijn dus massaal tegen de afschaffing van de hypotheekrenteaftrek.

Limburgers voelen zich ongezondst

(De Telegraaf, 5 augustus)

Limburgers voelen zich het vaakst slapjes. Ze beoordelen hun gezondheid als 'minder goed' en bezoeken ook vaker een huisarts. Dat blijkt uit de Gezondheidsenquête van het Centraal Bureau voor de Statistiek (CBS). Meer dan 80 procent van de Nederlandse bevolking beoordeelt de eigen gezondheid als goed tot zeer goed. Bijna één op de vijf personen echter vindt de eigen gesteldheid minder goed. Vooral Limburgers (23 procent) en Flevolanders (21 procent) voelen zich minder gezond. Van de Drenten voelt slechts 18 procent zich minder gezond.

Veel nieuwe fietsen verkocht

(Algemeen Dagblad, 19 augustus)

Het gaat goed met de verkoop van fietsen in Nederland. Bij ongeveer gelijk gebleven prijzen is de omzet de afgelopen twee jaar en het eerste kwartaal van dit jaar flink toegenomen. Dat blijkt uit cijfers van het Centraal Bureau voor de Statistiek (CBS). In 2006 steeg de omzet ten opzichte van het jaar ervoor met maar liefst 15 procent. In 2007 werd nog eens een omzetgroei gerealiseerd, ditmaal met 9 procent. In totaal werden volgens de RAI vorig jaar 1,4 miljoen nieuwe fietsen verkocht, bijna 80 000 stuks meer dan een jaar eerder.

4.1.4. *Incentives*

An incentive in this context is a token of the survey organization's gratitude to the respondent. Incentives are usually given to the respondent, although it is also possible to reward interviewers for achieving a target. Incentives may take a wide variety of forms, such as gifts, money, lottery tickets, or postage stamps. Incentives may be used at various times in the process. When given in advance to everyone in the sample, they are known as unconditional incentives. Incentives may otherwise be promised to people subject to participation, or given after the survey as a gesture of thanks. A third form is to give incentives to specific groups, e.g. those who are likely to refuse, or people who initially refused.

Incentives lead to higher response rates, and higher incentives lead to even higher response rates, albeit that the relationship is not linear, but declines as the incentive increases, and can even become negative if respondents feel that the incentive is excessive for what they are being asked (Singer, 2002). The size of the increase in response rate depends on various factors: cash incentives are more effective than gifts. Incentives given in advance (unconditional) are more effective than conditional incentives. As an exception to the last rule above, if what is requested is so demanding that the incentive may be viewed as payment, it may also be paid after the survey. An example is the incentive given to respondents of the Statistics Netherlands Household expenditure Survey. Incentives are not equally effective with everyone. Groves and Couper (1998) state that incentives work best with people who have a relatively low educational level and a low income. However, Wetzels, Schmeets, Feskens and van de Brakel (2008) show that unconditional incentives in the form of a book of postage stamps do not work with members of nonwestern ethnic minorities, despite this group's relatively low educational and income level.

Ethical objections may be raised to giving incentives only to people who might not otherwise participate, or giving larger incentives to people who initially refused. However, it is unclear to what extent these objections are also shared by the public. Groves and Couper (1998) see no problem whatsoever with different incentives, since people also differ in their aversion to surveys. It is enough incentive for some people to be able to express their opinion, or chat with an interviewer for half an hour. Other people need considerably more resources to be brought into play to make the survey attractive enough for them to take part.

Survey costs may decrease with a sufficiently powerful incentive, because interviewer and follow-up expenses will be lower, and the sample can be smaller (Berlin et al., 1992).

Little is known about the effects of incentives for *interviewers*. Stoop (2005) and Schouten (2007; 2008) used this technique in a survey of nonrespondents, but not in an experimental form able to explain the effect of the measure.

It has not been Statistics Netherlands practice to date to use incentives as a matter of course. An exception is made where a high burden on the respondent is involved, such as in the Household Expenditure Survey. However, there have been recent studies of the use of prepaid incentives (NKO 2007 and AVO 2007). Neither of these studies performed experimental research into the effect, but the response was uncharacteristically high. The incentive that Statistics Netherlands uses, depending on the envisaged increase in response, is a book of five or ten postage stamps. Postage stamps were opted for because they come closest to a cash incentive, while the relatively small incentive also has a worthwhile use, unlike a €2 gift coupon.

4.1.5. *Survey material*

Interviewers must have confidence in the material. If they feel the material makes them look foolish, because of questions that do not flow, illogical sequences, unnecessary repetition in the questionnaire, and so on, they will be unable to convey the response message with conviction. Interviewer confidence has a substantial influence on the ultimate response.

Statistics Netherlands questionnaires are produced by a specialist design department, which aims to make their products respondent-friendly, relevant and unambiguous (Vosmer & Engelen, 2008). After the design and construction phase, the questionnaires are tested for internal logic (does the routing flow properly, are there any questions that make no sense after a previous answer, have any routes been missed, etc.). See Cuppen and Te Riele (2008) for an example of this test phase.

New and revised questionnaires should also be tested by a 'question lab', with the aim of ascertaining whether respondents understand the questions as intended. This is a Eurostat recommendation, and is described extensively in the 'Questionnaire Development' subtheme. Upon satisfactory completion of the test phase the questionnaire is submitted to the Data collection department. Only if this department gives its approval will the questionnaire go into production. Approval in this final phase depends on ease of use of the questionnaire for the interviewer, and the probability that respondents will protest against the questionnaire or other material. Other survey materials, such as advance letters and show material, undergo the same approval procedure. This procedure gives interviewers confidence in the high quality of the questionnaire and other survey material.

4.1.6. The length of the questionnaire

The confidence that interviewers have when they ring the bell, or call on the phone, is also related to the length of the questionnaire they have to administer. It is easier to persuade someone to answer a mere five-minute questionnaire than one that will take 45 minutes. However, in a summary of the role of interview length, Bogen (1996) concludes that the relationship between interview length and nonresponse is more frequently positive than otherwise, but is surprisingly low and variable.

Interview length is related to burden, of both respondents and interviewers. Interviewers in focus groups express more reluctance to ask for cooperation for long interviews than short ones. This resistance stems partly from a sense that it is not good etiquette, and from an expectation that a request for a long interview is more likely to meet with refusal. Interviewers feel the same way if they do not state in advance how long an interview will take. Some of the high refusal rate with long surveys is therefore caused by, possibly unconscious, interviewer behaviour.

Surprisingly enough, there is no strong evidence that knowledge of the length of an interview plays any role for *respondents*. The output of research gives a mixed picture, in particular for surveys that involved an interviewer. Experimental research has revealed that relatively large differences in length (25 minutes versus 75 minutes, Frankel and Sharp ,1981, and 20 minutes versus 40 minutes, Collins et al., 1988) produce a small and insignificant difference in cooperation..Relatively few respondents ask how long the interview is (27% in a study of Groves and Couper, 1998; 19% for Becks, 2008). Many decisions about participation are evidently taken without knowing the length.

In *written* surveys the length of the questionnaire has a modest effect, but more important than that is the page layout. Champion and Sear (1969, in Groves and Couper, 1998) find that questionnaires with more pages, but more ‘white’ on the page, have a higher response than questionnaires with fewer pages and less white. A meta-analysis of the effect of various aspects of advance letters (de Leeuw et al., 2007) likewise showed no relationship between stating the length of the survey in the advance letter (between 10 and 20 minutes), and the response rate. To what extent these results can be generalized to online surveys is unclear, because of a lack of research. Galešić (2005) shows significant differences in both login and completion rates for opt-in web interviews of 10, 20 and 30 minutes. 76% opened a questionnaire that was stated to take 10 minutes, against 64% for one of 30 minutes. 44% finished the screening questions for the 10-minute questionnaire, compared with 39% for the 30-minute counterpart. Another 28% dropped out before the end of the 10-minute questionnaire, while the corresponding figure for the 30-minute questionnaire was 50%.

4.1.7. The use of interviewers

Needless to say, there are also other considerations involved in selecting the mode for a survey, but the use of interviewers is the most effective in terms of response optimization. The more personal influence can be asserted, the higher the response. CATI surveys have a higher response than web or e-mail surveys, and CAPI surveys have a higher response than CATI surveys.[9] Collins et al. (1988) found response rates in telephone surveys in Great Britain to be 15 percentage points lower than for CAPI surveys. Nicolaas and Lynn (2002) even found a difference of 30 per cent, also in Great Britain. A 30% response is usual in web surveys, albeit that large differences are found (Wetzels, Janssen and Schouten, 2007).

The higher response for CAPI surveys has to do both with social norms, which makes it harder for respondents to give a rejection face-to-face than on the phone, and with the opportunity available to a face-to-face interviewer to use features of the house and neighbourhood to gain contact. This may sometimes involve observation (e.g. toys in the garden mean that children live in the house), and sometimes also information obtained from neighbours. Together with the tailoring skills (see Subsection 4.2.2) that a well trained interviewer possesses, these are persuasive instruments for obtaining a response.

4.1.8. Rules for selecting respondents

Rules that determine who in the household is to answer the questions can have a major influence on the response rate. For instance, surveys that allow proxy answering (i.e. where respondents also answer for other people) have a higher response than those where this is forbidden[10]. The same applies to surveys that allow any household member to answer, rather than a randomly selected specific survey target person (such as whoever's birthday is next).

4.1.9. Allowing the respondent to choose the mode

It would seem obvious that response would be higher if the respondent were allowed to choose the mode in which to perform a survey. However, Griffin, Fisher and Morgan (2001) found that a choice of modes *lowered* the response. They suspect that this effect has to do with the disturbance to the response process. Dillman, Clark and West (1995) showed that the effect of allowing a choice between telephone and e-mail was that five per cent of the respondents opted for a more expensive mode (telephone), but that this had no response-enhancing effect. The five per cent concerned would have simply answered by e-mail anyway. Janssen, Wetzels and Cuppen (2008) show that a previously stated preference for a mode has no influence on the subsequent inclination to respond in a nonpreferred mode. De Leeuw (2005) found no firm empirical evidence that allowing a choice improves response, but more evidence that it makes no difference.

4.1.10. The use of foreign-language interviewers and questionnaires

Between two and three per cent of survey units approached by Statistics Netherlands are written off as nonresponse because of language problems. This means that interviewers are unable to administer the questionnaire in Dutch. This proportion is of relatively little concern in a general population survey, but can be a serious problem when surveying specific population groups. However, response rates will

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[9] In unimode. CAPI surveys in a mixed-mode design, in which people with a listed telephone number are approached through CATI, will have a lower response than CATI surveys. Survey target persons with unknown telephone numbers form a selective subpopulation with a lower response.

[10] Under otherwise equal conditions. The Statistics Netherlands Labour Force Survey has a lower response than e.g. the Health Survey, although the first allows proxy answering, but the second does not. However, the Labour Force Survey has a completely different design and survey subject than the Health Survey.

certainly not rise in proportion to the increased use of foreign-language interviewers. Beukenhorst (2008) reports that language is only a small part of the response problem with ethnic minorities. The response rate of members of ethnic minorities is lower than for native Dutch in initial polls, and moreover the rate of attrition of ethnic minority panel members (such as for the Labour Force Survey) is considerably higher than for native Dutch. Language problems are not an issue in panel attrition, since the panel members have participated in Dutch in the first wave.

The use of foreign-language interviewers can also affect response and data quality adversely. For instance, there may be concerns within a local community, and in particular with CAPI surveys, that any information disclosed could be become public knowledge. Questions about sensitive subjects such as church or mosque attendance and sexual behaviour may yield considerably more socially desirable answers if the interviewer is of the same origin as the respondent (e.g. Reese et al., 1986).

Anyone deciding to use foreign-language interviewers will need deep pockets, certainly for CAPI surveys. A relatively large number of foreign-language interviewers will be needed, certainly in view of the small ethnic minority numbers involved, or extremely long travel distances must be expected. Beukenhorst (2008) suggests various ways of containing the expenses involved.

4.2 The contact phase of CAPI and CATI surveys

The sections above explained how the response rate is influenced by characteristics of the respondent and characteristics of the survey design. A third important source of influence is the interviewer. There are considerable differences in the responses achieved by individual interviewers, in both face-to-face and telephone situations. It is therefore not surprising that much research has focused on the correlates between interviewer effectiveness and interviewer characteristics. The research has examined demographic characteristics of interviewers, and their experience, training, attitudes, personality and behaviour in the interview situation.

Constant differences are seldom found in research of this kind. Interviewer performance is influenced by characteristics of households, the neighbourhood, the survey, and so on. An interviewer may be good at some particular survey, but not another, or may perform excellent work in rural areas, but be lost in a city. Therefore, it is difficult to obtain univariate results. Nevertheless, a summary is given below of the findings of research into correlates of interviewer effectiveness.

4.2.1 Interviewer characteristics

This subsection presents the output of research into the influence of sociodemographic interviewer characteristics on their achieved response. The influence of interviewer personality, voice and use of language, experience and behaviour in the interaction with respondents is then described.

4.2.1.1 Sociodemographic characteristics

Carton (1999) studied the following characteristics in her analysis of the relationship between sociodemographic interviewer characteristics and interviewer performance: age, gender, education (lower than senior general secondary (HAVO), HAVO, higher vocational, or university), and work situation (home-based, on a career break, freelance, employed full time, employed part time, student, or unemployed). The analysis showed no relationship whatsoever between these characteristics and the degree of interviewer success in making contact with and persuading respondents. The only exception was the finding that men were significantly overrepresented in a (relatively small) group of less well performing interviewers. Groves and Couper (1998) conclude that it is pointless to investigate interviewer characteristics such as race, gender and age, firstly because they yield few interpretable main effects, but mainly because of the interactions with household characteristics and survey subjects. They also consider that these kinds of interviewer characteristics are largely mediated by interviewer experience, attitudes and behaviour. Campanelli et al. (1997) find no effect whatsoever of sociodemographic interviewer characteristics after including controls for other sources of influence.

4.2.1.2 Personality

Various studies have demonstrated relationships between certain interviewer personality traits and their response. However, the relationships are weak, which could be because the social skills that a good interviewer needs can be acquired (Morton Williams, 1993). The weak relationships found were emotional stability and *introversion*[11] (McFarlane Smith, 1972), social skills (defined as being good at negotiating) and personal organization skills (defined as making effective use of time and not being easily distracted) (Johnson & Price, 1988) and self-monitoring (Snyder, 1980). People with a high level of self-monitoring are flexible and adaptable individuals who are adept at modifying their social behaviour to suit situational and interpersonal changes. Self-monitoring is related to what Groves and Couper call 'tailoring'. De Leeuw and Hox (1996) found that interviewers with high scores on the personality items 'conscientious' and 'formal' could more readily persuade respondents: their cooperation rate was higher than interviewers with lower scores. However, no difference was found in the response rates.

4.2.1.3 Voice and use of language

In telephone surveys in particular, the first few seconds often determine whether or not the interaction will lead to a response. Oksenberg and Cannell (1988) showed substantial differences in interviewers' refusal rates, even if they used a standard introduction. Based on this finding they investigated paralinguistic characteristics, such as pitch, tempo, volume, variation and accent. Some, but not all, studies showed that some groups with a high, or conversely a low, refusal rate had distinctive speech characteristics such as pitch, volume, intonation, tempo, and degree of adherence to standard pronunciation. Successful (female) interviewers spoke quickly, loudly and with a standard (American) accent. They were also assessed as sounding competent and self-assured. Interviewers who exhibited a falling intonation on key words in the introduction also had higher cooperation ratios than those with a rising intonation.

Becks (2008) demonstrated enormous differences between interviewers in the degree to which respondents were immediately willing to participate, as opposed to needing persuasion (between 11% and 68% immediate response). Van de Vaart, Ongena, Hoogendoorn and Dijkstra (2006) found comparable rates when replicating Oksenberg's and Cannell's study in a Dutch situation (between 14% and 51%). Van de Vaart et al. found that fluent speech and volume correlated positively with cooperation. Pitch and tempo, contrary to the studies of Oksenberg and Cannell (1988), were found to

[11] This term is in italics because it appeares to be counterintuitive. However, the relationship has been confirmed in at least three studies.

make no difference[12]. Where interviewer voice was assessed as ‘pleasant’, ‘authoritative’ or ‘reliable’, only the authoritative voices appeared to correlate with (immediate) cooperation.

While these findings may provide input for interviewer recruitment and training, some qualification is called for. The analyses were based on immediate consent. However Becks’ (2008) study showed no relationship between the immediate consent rate achieved by an interviewer and the ultimate result. Interviewers whose voice characteristics brought about rapid cooperation will have an easier time than colleagues who lack this natural interview voice. However, these colleagues are able to achieve equally satisfactory results through effective persuasion. An investigation of the voice characteristics that lead to immediate and resolute refusal may be more helpful in identifying people who should *not* be recruited as interviewers.

4.2.1.4 Experience

Various studies have addressed the role of interviewer experience. Couper and Groves (1992) point out that it is hard to separate the effect of experience from the possible process of interviewer selection and self-selection. Interviewers who perform relatively poorly may leave of their own accord, or be passed over for later surveys. Whatever the actual underlying mechanism, interviewers who have been employed for longer generally achieve a higher response. Mindful of the role of experience in the response rate, it is important to retain interviewers for as long as possible. The effective HR management of interviewers is therefore another integral component of the package of measures for optimizing response.

4.2.2 Interviewer behaviour during the introduction

The original objective of the study presented by Groves and Couper (1998) in their book ‘Nonresponse in Household Interview Surveys’ was to identify ‘fixed’ interviewer characteristics that are linked with successful achievement of cooperation. However, as the study progressed they became ever more convinced that what was of overriding importance was less the fixed interviewer characteristics than the interviewer’s behaviour in the contact with the respondent. Groves and Couper base their findings on the work of Morton-Williams (1993). Analyses of audio recordings of interactions between interviewers and respondents in the ‘doorstep’ phase revealed that interviewers who did not adhere strictly to prescribed scripts achieved a higher response (59% versus 76%). These interviewers appeared better able to adapt to the specific situation, and took advantage of certain characteristics that presented themselves for maintaining an optimum interaction. Morton-Williams used these insights in developing a training course based around acquiring social skills, and oriented to obtaining cooperation. Groves and Couper labelled the skills taught by Morton-Williams ‘tailoring’ and ‘maintaining interaction’. Tailoring is defined as interviewers using clues from the neighbourhood, the home, or the respondent’s appearance and use of language to adapt their introduction. Maintaining interaction is defined as interviewers attempting to sustain the interaction, sometimes across multiple contacts.

Although several studies have demonstrated the favourable influence of tailoring and maintaining interaction on the respondent’s decision to participate in a survey, it would appear to be hard to pin down exactly which actions are responsible for a favourable outcome of the contact phase. Research

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[12] Van de Vaart et al. state that the variance between interviewers in this respect was slight.

shows fairly accurately what an interviewer should *not* do (Heerwegh, 2000; Pondman, 1998; Dijstra and Smit, 1999; Becks, 2008). An interviewer should not ask ‘why’ following a refusal, and avoid repeating the respondent’s refusal, or giving the respondent an opportunity to do so. On the other hand, positive actions are hard to find. Identifying actions that the interviewer *should* carry out was the subject of studies by Heerwegh (2000) and Becks (2008). Heerwegh concludes that interviewers should recognize that there is ‘strength in numbers’. A pitch with more arguments will win from one with fewer. The respondent will be more likely to cooperate if the interviewer comes up with several arguments in response to an objection. Here too, however, it is important to avoid certain behaviours, such as commenting on refusal. Heerwegh hereby replicates Pondman’s (1998) results. Heerwegh reports that giving unsolicited information can be used in the battle for the most arguments.

Campanelli and Sturgis (1997) also attempted to find empirical evidence for the two concepts in interviewer behaviour. However, their work revealed that most interactions at the door led either to immediate acceptance of cooperation, or outright refusal. Respondents hesitate in only relatively few interactions, thereby giving interviewers an opportunity to practice their arts of persuasion. Becks (2008) has replicated this observation in research in a different mode (telephone interactions). Luiten et al. (2008) compared the rates of respondents and nonrespondents in the two studies, which turned out to be surprisingly similar.

Heerwegh (2000) also concludes that very many interviewers never get around to tailoring or maintaining interaction. He suggests that this aspect should be addressed in interview training courses. Interviewers need to be motivated to be persuasive in these kinds of situations too. It is then important to provide positive working strategies, and not to suffice with vague advice (‘turn the situation to your advantage’) or admonitions of what not to do (‘don’t repeat the objection’). Details of how the recommendations are presented in Statistics Netherlands interviewer training are given in the ‘Interviewer Training’ subtheme.

4.3 Cooperation in web surveys

Many of the design aspects described in the sections above apply to CAPI, CATI and web surveys. A point on which web surveys clearly differ is the unfortunate absence of an interviewer’s skills in persuading respondents. Respondents then have to derive the motivation to participate from the advance letter, the folder and, last but not least, the pleasing design and convenience of the questionnaire itself.

Heerwegh (2005) performed a series of studies into aspects that may relate to abandoning the survey prematurely or skipping questions. He investigated the ease of the task, and the respondent’s motivation and skill. The ease of the task was manipulated by varying the answer formats. Motivation was manipulated by varying the progress indicators. A third experiment attempted to reduce the item nonresponse by drawing respondents’ attention to skipped questions.

- Two different answer formats were tested: drop-down menu and radio button. A drop-down menu displays answers only when a respondent clicks the drop-down button. A radio button resembles the traditional way of answering written questions: a respondent can click on one of a set of circles situated next to each answer. With students, the choice of format makes no difference to the response, but surveys with drop-down menus took longer to complete. With the general public, the buttons made no difference to the time needed for the survey, but respondents more frequently abandoned surveys with drop-down menus.

- Displaying a progress indicator had no influence on finishing the questionnaire. This result contradicts studies by Couper et al. (2001) and Crawford et al. (2001), who found that displaying a progress indicator had an adverse effect.

The third experiment varied the prompt presented to a respondent when attempting to skip a question: no prompt, a soft prompt (i.e. giving a warning, but allowing the respondent to continue away) and a hard prompt (i.e. not allowing the respondent to continue the questionnaire before answering the question). The results showed that the soft prompt produced a lower item nonresponse than no prompt. There was no difference between the soft and hard prompts. There were signs that the hard prompt led to more abandoned questionnaires, although the effect was insignificant. Heerwegh cautions against premature generalization of these data in view of the extremely low number of prompts needed in his study.

Heerwegh concludes his account with a warning: the experiments described above were generally performed on a student population. As yet the extent to which these findings can be generalized to a general population is unclear.

Baker and Couper (2007) investigated the extent to which screen background colour, screen resolution, and the positioning of ‘next’ and ‘back’ buttons for navigating the questionnaire influenced people’s decision to answer the questionnaire, and the length of time they take. The results showed that a blue background produced a significantly lower abandonment rate than yellow. The abandonment rate compared with a white screen was also three percentage points less, but this difference was insignificant. The investigation of screen resolution showed that the optimum design is 1024x768 pixels, with word wrapping so that questions fit on the screen without the need for horizontal scrolling. The investigation of the positioning of the ‘next’ and ‘back’ buttons was ambiguous. What was clear was that omitting the ‘back’ button to return to an earlier point in the questionnaire increased the number of abandoned questionnaires significantly .

As with CAPI and CATI surveys, the inclusion of an incentive can enhance the response. Most studies into incentives with web surveys concern *promised* incentives. As was mentioned in Subsection 4.1.4, promised incentives have far less impact than unconditional incentives. A meta-analysis by Göritz (2006) showed a correspondingly modest effect: the response increased by 2.8% on average as an effect of the promised incentive. Incentives had a small effect both on starting a web survey and on finishing once the first page had been loaded. The effect of a promised incentive in web surveys is therefore greater than for CAPI and CATI surveys.

4.4 Refusal conversion

If a survey target person has refused, the fieldwork organization may decide to approach this person again, either in the same or a different mode. Various studies have shown that even if the repeated approach is in the same mode as the one that was refused, between 25% and 40% of the initial refusers change their minds in a subsequent approach. The process of persuading refusers is known as refusal conversion. Depending on the initial refusal rate, refusal conversion can lead to a substantial increase in response. Refusal conversion is also applied in the European Social Survey (ESS), which is conducted concurrently in European countries. Stoop and Koch (2005) report that the initial response in the Netherlands in the first ESS round was one of the lowest in Europe, but following successful refusal conversion the eventual response rate in the Netherlands was among the highest. Refusal conversion is generally performed by a different, often more experienced, interviewer. If practical to do so, attempts may be made to improve the match between the interviewer's and respondent's characteristics (e.g. if an older woman appears to be afraid of a male interviewer, a female interviewer could be sent instead). Often, but not always, a new letter may be sent before the new contact, specifically mentioning the objections raised by the respondent in the first round. However, De Groot and Luiten (2001) found no difference in response with or without a new letter.

In mixed-mode surveys, the transition from web to CATI or CAPI is not referred to as refusal conversion, because the nonrespondent will not have explicitly stated an unwillingness to participate. Approaches in a different mode following a web approach also leads to a large increase in response. Statistics Netherlands web mode surveys achieve 25% to 30% response. In the subsequent rounds with CATI or CAPI, the rate rises to the usual 65%. Although the second approach is not referred to as refusal conversion, the demands on the interviewer will often be higher than if CATI or CAPI had been used in the first place. Some respondents are annoyed at receiving two reminders following the first approach for the web questionnaire, only to be approached yet again by an interviewer. The fact that the Statistics Netherlands advance letters do mention the follow-up approach by an interviewer does little to mitigate the irritation for some respondents. Interviewers must be trained to anticipate a more difficult task because of the mixed-mode approach.

A special form of refusal conversion involves approaching a nonrespondent with an extremely short questionnaire containing the key questions of the survey (the central question method, Kersten and Bethlehem, 1984). However, the aim of this repeated approach is not to raise the response rate, but to estimate the differences between respondents and nonrespondents, and therefore the extent of bias attributable to nonresponse. See Schouten and Cobben (2007) and Cobben and Schouten (2007) for an application of this method in the repeated approach of labour force survey nonrespondents.

Despite the extremely large-scale application of refusal conversion, there has been little research if the additional data lead to less biased results. Keeter et al. (2000) and Curtin, Presser & Singer (2000) showed that the increase in response through refusal conversion had no effect on the estimate of the target parameter. This finding is in line with that of Groves et al.(2007), that there is not necessarily any relationship between the response rate and the degree of bias. Schouten (2007) found demographic differences between nonrespondents and respondents in the labour force survey, but no difference in employment status. However, Stoop (2005) did find relevant improvements in the estimates as an effect of refusal conversion. Lynn et al. (2002) also observe less bias as an effect of refusal conversion. In view of the expense of refusal conversion, which has a variety of causes (e.g. interviewers have to travel further to find an address, the best interviewers are less or not at all available to do 'mainstream' work, and although refusal conversion does increase the response rate, the number of responses is lower, because of the greater fieldwork effort needed), its possible use must be considered carefully. At any rate, it makes no sense to apply refusal conversion to every refuser. The costs involved make it advisable to reserve this technique for special groups that must not be omitted in the response.

5. Interviewer training

When interviewers are used in data collection, it is very important for them to be trained to perform their work as effectively as possible. Thorough interviewer training has a response-enhancing effect, and is crucial for survey quality. Thorough interviewer training has the following elements.

- Administrative aspects

  The recording of hours worked, the receipt and return of survey materials, communication with supervisors, etc.

- Identification of survey units

  Interviewers must be trained in identifying survey units (persons or households) that are allocated to them. Attention must also be given to correcting errors in the data from a survey unit and noting the results of contact attempts for a survey unit.

- Approaching survey units

  Interviewers must be given information about the best way to approach survey units in order to maximize the probability of contact. The items to be covered include the best times to attempt the approach. Strict rules may be prescribed in some cases for how to approach potential respondents.

- Administering the questionnaire – general

  Finally, the training must cover the actual interview. The aspects include guidelines for reading out the questions, recording the answers, and – without leading – asking probing questions if necessary.

- Administering the questionnaire – survey-specific

  In this part interviewers are given training in the meaning of key concepts, the reasons for asking questions, the requirements set on certain answers, the questionnaire structure and handling difficult situations.

- Obtaining cooperation

  Obtaining cooperation also has a general and a survey-specific part. The general part explains to interviewers the principles of ‘tailoring’ and ‘maintaining interaction’, and the survey-specific part tells them about the general research objective and provides answers to frequently asked questions about the survey. It is also possible to cover matters such as the confidentiality of the information obtained. Some organizations use role play to allow interviewers to practice dealing with unwilling respondents.

The ‘Interviewer Training’ subtheme of the ‘Fieldwork Organization’ theme gives details of this subject, and the form that Statistics Netherlands training courses take.

6. Monitoring

Even the best training would be tantamount to casting pearls before swine without monitoring interviewer behaviour for compliance after the course (Fowler & Mangione, 1991). There is no mention in the literature of the effect of monitoring and feedback on response. These instruments are described only in the context of preventing and detecting interviewer falsification, which is when interviewers invent data. There is nonetheless a conviction that these instruments are also vital for achieving a target response. A very probable factor in the increase in response that has been observed in Statistics Netherlands social statistics after 2003 is that it coincides with the regular provision of figures to regional managers and interviewers, not only about the actual response rates, but also about a variety of interviewer behaviours associated with achieving a high response rate (de Vree, de Bie & Luiten, 2006). Statistics Netherlands practice has repeatedly demonstrated that when greater demands are placed on a new aspect of fieldwork performance, with targets imposed on both regions and interviewers, the performance on the aspect concerned improves substantially. Examples include the reduction of partial nonresponse in the labour force survey, and the reduction of panel attrition in the labour force survey. These examples illustrate how attending to the interviewer and the feedback of performance are significant conditions for maintaining interviewer motivation.

Monitoring response requires information to be available about:

- the progress of the fieldwork (weekly, or even more frequently if necessary);
- the nature of the final result (response, nonresponse, and what kind of nonresponse);
- the follow-up of the fieldwork strategy:
    - the number of visits;
    - time and date of each visit;
    - the use of available resources (use telephone, if known; leave visiting cards in the letterbox);
    - the result of each visit.

This information allows an assessment of whether interviewers adhere to the agreed fieldwork strategy.

The ‘Monitoring’ subtheme of the ‘Fieldwork Organization’ theme provides details of this subject.

7. Conclusion

The above sections described the measures available to a survey organization to minimize the nonresponse that is within its control. The measures described are 'state-of-the-art', but the art concerned reached maturity in the final decades of the 20th century. Currently, at the start of the 21st century, two significant trends are visible in nonresponse research. The first is an understanding that the bias attributable to nonresponse is a far more important research target than nonresponse as such. The growing insight has been apparent in the annual workshop that is devoted to nonresponse, the 'International Workshop on Household Survey Nonresponse', although it was also stated expressly in 2008 that the response rate is equally relevant. As was mentioned in the introduction, bias is a function of both the differences between respondents and nonrespondents and the level of the response. The website of the workshop, www.nonresponse.org has the presentations from every year from the first in 1990.

The achievement of a high response and a low bias is related directly to the survey costs. Throughout the western world, the effort needed to maintain response rates at an acceptable level is increasing. Not only is more effort needed to make contact, but people are also less willing to cooperate. In order to limit the attendant costs, an increasing number of organizations are resorting to the use of a mixed-mode design, where some of the data is collected in a less expensive mode. See also the 'Mixed Mode' subtheme. Much of the research described in this chapter for CAPI and CATI is currently being repeated with CAWI in the main role, including into the effect of advance letters in CAWI surveys, the effect of personalization of invitations, and the effect of incentives. The best way to optimize response in mixed-mode surveys remains far from clear. This area of research is still in its infancy, and will reach maturity in the next few years.

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Version history

Version	Date	Description	Authors	Reviewers
Dutch version: Benaderingsstrategieën / Responsverhogende maatregelen bij sociale statistieken				
1.0	29-09-2009	First Dutch version	Annemieke Luiten	Judit Arends-Tóth Ger Snijkers
English version: Data collection strategy / Response-enhancing measures for social statistics				
1.0E	18-11-2011	First English version	Annemieke Luiten	