

Chapter 3

Good Practices in Survey Design Step-by-Step

Good practice methodologies considerably improve the quality of results and help avoid pitfalls. This chapter explains good practice through sequential, step-by-step guidance that can be used to design a perception survey. It provides advice on how to define survey objectives and the target group, draft survey questions, pilot and re-adjust a questionnaire, select respondents and data collection methods, run the survey, and analyse the results.

Good practice methodologies considerably improve the quality of results and help avoid pitfalls. This chapter explains good practice through sequential, step-by-step guidance that can be used to design a perception survey. The sequential order is important: a step skipped at the outset cannot be returned to later in the process. For example, if survey questions are not carefully designed, even the best methods to collect, analyse and display the data at later stages cannot make up for the bad design. The consequence is that the results can be useless for policy makers.

Six steps to better survey design

Step 1. Define survey objectives, use of results and target population

First, when developing a survey it is important that objectives be clearly defined, *i.e.* what insights should be gained from the survey and what should be learned. Policy makers also need to decide whether they want to compare survey results over time. In this case, the survey should be repeated over time and the questions have to be very carefully drafted to allow for comparisons over time. Furthermore, as changing the questions at the next round compromises the comparability over time, it is advisable to invest in extremely good question design and testing for the baseline survey.

Second, it is timely to consider the question as to whether a perception survey is the right tool to use to achieve the objective and what its limitations are in achieving the objective. For example, to evaluate the success of administrative burden reduction programmes, it is misleading to rely solely on perception surveys, as perceptions and hence survey results are shaped by many factors and the actual quality of regulations is only one of them (see next chapter).

It is therefore advisable to collect other available data that will contribute to achieving the objective and will complement the information obtained from the perception surveys. For example, data based on the Standard Cost Model and on perception surveys provide information on reductions in administrative burdens from different angles.

Checklist to commission, design and run a perception survey

Step 1. Define survey objectives and target group

- Define the objectives
- Define the final use of the results
- Ensure a perception survey is the adequate tool
- Define target group(s)

Step 2. Draft survey questions

- Set up discussions with members of a target group to identify key issues
- Translate those into questions and answer categories
- Draft simple and clear questions
- Keep the questionnaire short to maximise response rate and concentration
- Ensure respondents have the opportunity to report problems

Step 3. Pilot and re-adjusting the questionnaire

- Test the survey on a smaller-scale target group to identify weaknesses in the survey design
- Possibly ask volunteers to think aloud while answering questions and analyse what motivated their answers
- Adjust questionnaire if needed

Step 4. Select respondents and the data collection method

- Select a sample either by random sampling or other methods
- Ensure that the sample size allows to draw valid conclusions from the results
- Choose the data collection method: personal interviews, telephone interviews, Internet surveys, email surveys, etc.
- Maximise response rate through appropriate data collection method

Step 5. Run the survey

- Ensure high response-rate through follow-up emails otherwise conclusions to the survey could be biased
- Use trained interviewers to avoid unintentional influence on responses

Step 6. Analyse the results

- Interpret results as perceptions rather than facts
- Take into account the response rate. A low rate means that no general conclusions can be drawn
- Take into consideration the number and the way respondents have been selected in the result analysis
- Understand how results were reached is essential to draw policy conclusions
- Attach documentation regarding Steps 1-6 to results and interpret results in combination with other data sources

Third, this is the right moment to think about how the final results will be used. The reason for doing this early in the process is that the desired use of the results determines the questions and the target population. For example, the objective of one survey might be to measure the level of awareness of businesses of recent regulatory reforms. If the results of the survey should then be used to adjust the communication strategy, questions that help understand how respondents inform themselves about reforms and how to best reach them could be added.

Fourth, the target population to be surveyed (also referred to as the target group) needs to be identified, including sub-groups. For example, if the target population is businesses, a comparison of the answers of SMEs to those of larger companies could be useful. This decision will have implications for steps later in the process, such as deciding on the number of respondents and the way they are selected. At this stage, deciding to target only those with direct experience with the survey topic could be a possibility, for example those directly affected by administrative burden reduction programmes or those with regular contact with a regulatory agency. Targeting groups with direct contact may lead to more meaningful and informed responses. At the same time, such targeted surveys are not informative about the perceptions and the awareness level of citizens and businesses in general. It is also possible to measure and to distinguish between uninformed and informed respondents. For example, the practice of introducing screening questions to determine if the respondent is qualified to answer questions of interest is used in Canada (Turcotte, 2010).

Step 2. Draft survey questions

Much of what can go wrong in survey design happens at the drafting stage of the questionnaire (see previous section on pitfalls). A number of good practices can help produce a sound questionnaire.

Respondents can get easily frustrated when a survey does not include any questions on the most bothersome problems. This can occur because the person who designed the survey was not aware of these problems or did not realise their importance to respondents. Thus, before beginning the process of drafting questions, it is advisable to conduct focused discussions with individuals of the target population about the issues to be tackled. For example, if the objective of the survey is to identify what irritates business the most when dealing with regulation, a focus group

with business representatives can help identify key issues that can then be transformed into questions, and answer choices. This ensures that survey respondents identify with the questions and answer choices.

Box 3.1. Checklist for drafting good questions

1. Do the answers to the questions help meet the objectives of the survey?
2. Do the questions address the most bothering issues of the target population?
3. Is the language simple and devoid of technical jargon?
4. Are key terms such as “regulation” clearly defined?
5. Do you avoid asking two questions in one, i.e. do all questions only ask one question at a time?
6. Are questions clear and precise enough that they will be consistently understood in the same way by all respondents?
7. Are the formulation of questions and answer choices and their order as neutral as possible, i.e. do they avoid suggesting answers?
8. Are the answer choices and scales clearly defined and consistently understood across respondents? Have both been chosen carefully?
9. Does the target population have the capacity and knowledge to answer all questions?
10. Have screening questions been included, that is, has the same question been asked in different ways to identify consistent respondents and meaningful responses?
11. Have tricky questions been included towards the end of the survey when respondents feel more comfortable answering them?
12. Is the questionnaire short enough to ensure that respondents will concentrate until the end?

For a more detailed checklist, see also Fowler, Floyd J., Jr. and Carol Cosenza (2008), “Writing effective survey questions”, in: De Leeuw, Edith D., Joop J. Hox and Don A. Dillman (eds.), *The international handbook of survey methodology*, Mahwah, NJ: Lawrence Erlbaum, p. 159.

Once key issues have been identified, simple and clear questions can be drafted. Ensuring that respondents have a shared understanding of the meaning of the question and that they know the answer to the question is important. If not, the answers given by respondents are not comparable and policy makers cannot draw any meaningful conclusions from the results. Box 3.1 above highlights key recommendations for drafting good questions in a checklist format. Once drafted, using the online tool “Question Understanding Aid” from the University of Memphis for further checking may be helpful (see <http://mnemosyne.csl.psysc.memphis.edu/QUAID/quaidindex.html>). It analyses questions and points to problems with the questions such as unfamiliar technical terms, vague or imprecise terms or complicated syntax.

At this stage, a letter of invitation to participate in the survey can be drafted. It should indicate the purpose of the survey, clearly define the participants’ role and explain how anonymity will be guaranteed. The survey’s cover letter is extremely important, as a good letter helps maximise the response rate. Low response rates present the risk that no statistically valid conclusions can be drawn from the survey results.

Step 3. Pilot and re-adjust questionnaire

It is essential to test surveys to identify weaknesses in the survey design. This involves running the survey on a smaller-scale group of people beforehand to learn how respondents are likely to interpret and react to the questionnaire. Piloting surveys allows researchers to discover problems in the survey design such as poorly-phrased questions and to adjust the survey design accordingly. This relatively small investment before running the actual survey can significantly improve the quality of results. In addition, the analysis of responses to the pilot survey enables policy makers to subsequently better interpret answers to the survey questions. It can enable policy makers to identify the key drivers of perceptions, as well as test respondents’ associations with and understanding of regulation (Russo, 2010; UK Department for Business Innovation and Skills, 2009).

Pilots usually draw on qualitative research methods such as “cognitive laboratory interviews” where interviewers work with volunteers to find out whether:

- Questions are consistently understood across respondents;
- Answers accurately describe what respondents have to say;

- Answers provide valid measures of what the question is designed to measure;
- Respondents have the information needed to answer the questions (Fowler, 2009).

Typically, volunteers from the target population respond to the questionnaire and are asked by interviewers to “think aloud” while they are preparing their answers. They may also be asked some follow-up questions to understand the way in which they interpreted and answered each question. Standard follow-up questions ask respondents to *i*) say in their own words what they think the question is asking and *ii*) to explain how they chose a particular answer over others. Interviewers need to be knowledgeable about the objectives of each question, so that they can detect issues arising from the way that respondents understand questions (Fowler, 2009). They also need to be trained not to influence respondents in their answers. Detailed information on how to conduct such interviews can be found in DeMaio & Rothgeb, 1996 (see Box 3.2). Following the interview results, phrasing and question order can be adjusted.

Lessons learned in Canada show that pilot surveys should include open-ended questions. This allows policy makers to subsequently build well thought-out and clearly-stated choices to closed-ended quantitative questions (Turcotte, 2010). The UK Better Regulation Executive (BRE) piloted questions with qualitative research methods to “better understand how individuals intuitively think about regulation” (FreshMinds, 2009, p. 108) and to adjust the wording of questions in the quantitative survey. In response to concerns in the pilot survey over question complexity, the final quantitative survey used simple language, avoiding the word “proportionate” in particular. The BRE further used its insights from the qualitative phase to design questions in the quantitative survey so that “they [the respondents] were not forced into answers that limited the range of their responses” (FreshMinds, 2009, p. 114). Whereas open-ended questions are very valuable for pilot surveys, experience from Belgium suggests that using them in the final surveys risks diminishing the response rate.

It can be useful to not only test the questions, but also the cover letter: Is the purpose of the survey clear to respondents and do they feel the letter motivates them to participate?

Step 4. Select respondents and the data collection method

This stage confirms the number of respondents and the way they are selected. If done correctly, general conclusions can be drawn about the views of the target population based on a small number of respondents. For example, when properly selected, a survey of 1 000 citizens can allow a researcher to draw conclusions about the views of all citizens in a country. If, on the contrary, there are mistakes in the selection of respondents, the results of the survey can be biased to the point of being useless.

The method used to select the people who receive the survey (*i.e.* the sample) is called *sampling methodology* in statistics. One common method used is random sampling. Random sampling is a process that randomly selects respondents from the target population. For example, if the target population is “companies in a country”, all companies should have the same chance of being selected, and only once. This is easy if all companies in the country are listed. In this case, a random number generator can simply be used to select respondents. Additional sophisticated methods exist that help reduce survey costs or ensure that there is a sufficient sample size for each sub-group of interest (*e.g.* SMEs versus large companies). For example, stratified sampling is a process that generates random samples for a number of sub-groups. For further detailed advice on choosing survey respondents, see for example Lohr, 2010.

Selecting the right sample size is quite complex. Contrary to common belief, it does not depend on the size of the target population. For example, whether a country has 300 000 or 80 million inhabitants, the sample size is constant. The right sample size depends on other factors such as the method used to select respondents, the number of sub-groups compared and measurement and sampling error. Relying on a statistician to choose the right sample size and methodology is advisable (see Box 3.2). Note that tables that indicate the right sample size often assume a 100% response rate. If a response rate is suspected to be lower, the sample size needs to be adjusted upwards.

A high response rate is important for drawing valid result conclusions. This is particularly the case if those who ignored the survey would have answered differently than respondents. For example, in customer satisfaction surveys, those who are unhappy with the service may answer the survey to channel their anger and to ask for change, while those who liked the service may not bother responding. In this case, survey results are biased and the bias will be more important if the

response rate is low. It is often difficult to find out whether non-respondents would have answered differently (see Step 6). Ideally a data collection method therefore maximises the response rate, while ensuring the anonymity of respondents and making them feel comfortable to respond honestly. Table 1 lists advantages and disadvantages of common data collection methods. One can choose between self-administered data collection methods (e.g., Internet surveys) versus interviewer-administered data collections (e.g., personal interviews). Self-administered surveys are usually less expensive than interviewer-administered data collections and respondents are more likely to honestly respond to sensitive questions if no one sees how they answer. However, interviewer-administered data collections are often most effective for getting a high response rate and for exercising quality control with respect to answering all questions, meeting question objectives, or the quality of answers provided (Fowler, 2009). At this stage, it is timely to design ways to follow-up with non-respondents to maximise response rates.

Table 3.1. Advantages and disadvantages of data collection methods

Data collection method	Advantages	Disadvantages
Interviewer-administered		
Personal interviewing	<ul style="list-style-type: none"> • Effective way of getting people to participate • Rapport and confidence building possible • More time-consuming surveys are possible than by any other method • Best for some sample designs (e.g. area probability samples) 	<ul style="list-style-type: none"> • Likely to be costly (trained interviewers needed on site) • Data collection period likely to be longer than telephone procedures • It might be difficult to reach every person in your sample
Telephone interviewing	<ul style="list-style-type: none"> • Costs are usually lower than for personal interviews • Response rate is likely to be higher than from a mail sample • Provides better access to certain populations, especially compared to personal interviews • Data collection periods are usually short 	<ul style="list-style-type: none"> • Possibly sampling limitations (omits those without a landline or whose phone number cannot be found) • Possibly less appropriate for personal or sensitive questions

Table 3.1. Advantages and disadvantages of data collection methods (cont.)

Data collection method	Advantages	Disadvantages
Self-administered		
Group administration	<ul style="list-style-type: none"> • Costs are generally low • Participation rates are generally high • Possible to explain the study and answer questions upfront 	<ul style="list-style-type: none"> • It is often not feasible to bring all people selected for the survey together into one physical location
Mail procedures	<ul style="list-style-type: none"> • Costs are relatively low • Minimal staff and facilities required • Provides access to widely dispersed samples and for samples that are difficult to reach via other means • Respondents have time to give thoughtful answers 	<ul style="list-style-type: none"> • May not be an effective way of getting people to reply (depending on sample and topic) • Good mailing addresses for people selected for your survey needed
Dropping off questionnaires at households	<ul style="list-style-type: none"> • Interviewer can explain the study, designate a household respondent and answer questions • Trained interviewing staff not required • Respondents have time to give thoughtful answers 	<ul style="list-style-type: none"> • Costs about as much as personal interviews • Field staff is required
Internet surveys	<ul style="list-style-type: none"> • Costs are low • Potential for high speed returns • Respondents have time to give thoughtful answers 	<ul style="list-style-type: none"> • Challenge of getting people to reply (depending on people surveyed and topic) • Respondents are limited to Internet users • Correct set of email addresses is needed

Source: Based on Fowler (2009).

Step 5. Running the survey

Running the actual survey is only one of the many steps in the process. Surveys that evaluate or measure awareness of regulatory reform should be timed to take into account the lag between reform implementation and diffusion. To maximise response rates in e-mail surveys, at least three follow-up emails to non-respondents are appropriate, and sometimes more. Non-respondents should understand the importance of their answer. In interview-administered surveys, interviewers should be trained so that they do not unintentionally influence respondents in their answers.

Step 6. Analysing the results

In this step, all survey responses are summarised and analysed. The results can be presented in graphs and tables and explain what conclusions can be drawn from the data. It is advisable to:

- Interpret survey data not as facts, but as perceptions.
- Interpret results together with other data sources.
- Understand what is behind the results to draw policy conclusions (The next chapter explains the fundamental drivers of perceptions and ways to bring them to light.).
- Take into account the number and the way respondents were selected in the interpretation of the results. For example, if random samples were drawn from more than one group, general conclusions about the full group may require some adjustments (Lohr, 2010).
- Take into account the response rate in the interpretation of the results. If the response rate is too low, no generalisations about the views of the targeted population group can be drawn. Groves *et al.* (2001) and Lohr (2010), for example, explain how to deal with non-respondents (see Box 3.2). This may include analysing whether non-respondents would have replied differently than respondents, which would introduce bias into the survey results.
- Document Steps 1 to 6 well and report transparently how the survey was conducted to assist users to interpret the results.

Box 3.2. Literature hints for designing an effective survey

General (all steps)

For general guidance on survey design written in a non-technical way: Fowler, Floyd J., Jr. (2009), *Survey Research Methods*, 4th Edition, Thousand Oaks, CA: Sage.

For more technical guidance: De Leeuw, Edith D., Joop J. Hox and Don A. Dillman (eds.) (2008), *The international handbook of survey methodology*, Mahwah, NJ: Lawrence Erlbaum.

Designing and testing questions

Fowler, Floyd J., Jr. (1995), *Improving Survey Questions: Design and Evaluation*, Thousand Oaks, CA: Sage.

Fowler, Floyd J., Jr. and Carol Cosenza (2008). “Writing effective survey questions”, in: De Leeuw, Edith D., Joop J. Hox and Don A. Dillman (eds.), *The international handbook of survey methodology*, Mahwah, NJ: Lawrence Erlbaum, pp. 136-160.

DeMaio, Theresa J. and Jennifer M. Rothgeb (1995), “Cognitive interviewing techniques-in the lab and in the field”, in: Norbert Schwarz and Seymour Sudman (eds.), *Answering questions*, San Francisco: Jossey-Bass, pp.177-196.

For a more comprehensive and technical guide to the psychological roots of survey data, how survey responses are formulated, and how seemingly unimportant features of surveys can affect the answers obtained, see Tourangeau, Roger, Lance J. Rips and Kenneth Rasinski (2000), *The Psychology of Survey Response*, Cambridge University Press, Cambridge.

Selecting your survey respondents and dealing with non-responses

For advice on sampling design (how to choose your respondents) and analysis: Lohr, Sharon (2010), *Sampling: Design and Analysis*, 2nd edition, Boston, MA: Brooks/Cole.

For advice on dealing with low response rates: Groves, Robert M. *et al.* (2001), *Survey Nonresponse* (Wiley Series in Survey Methodology), Chichester, England: John Wiley and Sons, Ltd.

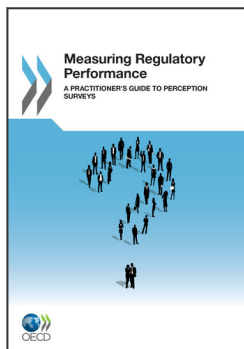
Analysing and presenting data

For a basic step-by-step guide on presenting data effectively: Wallgren, Anders *et al.* (1996), *Graphing Statistics & Data*, Thousand Oaks, CA: Sage.

For a more comprehensive guide on analyzing and presenting data: Pearson, Robert W. (2010), *Statistical Persuasion: How to Collect, Analyze, and Present Data...Accurately, Honestly, and Persuasively*, Thousand Oaks, CA: Sage.

Conclusion

Use of good practice methodologies will improve the quality of results considerably and help to avoid pitfalls. First, the objectives and the target population are defined. This is followed by drafting the survey questions, running a pilot and re-adjusting the questionnaire, selecting respondents and the data collection method, running the survey, and analysing the results. The sequential order is important: a step skipped at the outset cannot simply be inserted later. For example, if survey questions are not carefully designed, even the best methods to collect, analyse and display the data at later stages cannot make up for the bad design. The consequence is that the results can be useless for policy makers. While officials may outsource most of the steps to consultants, they should be aware of the key issues in each of the steps in order to judge the quality of consultant's work and understand survey results.



From:
Measuring Regulatory Performance
A Practitioner's Guide to Perception Surveys

Access the complete publication at:
<https://doi.org/10.1787/9789264167179-en>

Please cite this chapter as:

OECD (2012), "Good Practices in Survey Design Step-by-Step", in *Measuring Regulatory Performance: A Practitioner's Guide to Perception Surveys*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264167179-6-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.