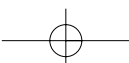
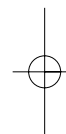
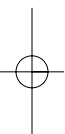

Part A

INTRODUCTION





1

WHAT IS SURVEY RESEARCH?

This chapter looks at the nature of survey research in its broadest sense, as the collection of quantified data from a population for purposes of description or to identify covariation between variables that may point to causal relationships or predictive patterns of influence. It introduces the notions of representative sampling and of inference from comparison between groups – the three major ‘technologies’ of survey research.

What is a survey?

What do you mean by the word ‘survey’? List some of the different ways in which the word can be used.

- Standing on a hill-top, I survey the surrounding countryside – I look out over it and see what is there.
- The original Domesday Book, in the eleventh century, surveyed the manors and farms of England – it aimed to list and describe them all.
- The decennial UK Census of Population (see Example 1.1) surveys the population of England and Wales – it provides a detailed description of all people and households.

A survey describes a population; it counts and describes ‘what is out there’.

- When an architect or engineer does a survey of a house or a tract of land, something more is suggested by the term than just a general description or list of attributes. A survey of a tract of land involves precise mapping of all the major features, but especially those which are of relevance to the survey’s purpose: the lay of the rock, clay and water, if houses are to be built; the formation of the rocks, if mining is intended. *A survey in this sense is a detailed and quantified description – a precise map and/or a precise measurement of potential.*
- The Census can be seen as a survey in this more detailed sense also. What it measures is the nature of the ‘human stock’ or ‘human resource’ – the population to be governed and put to work, its housing, its employment, its level of education and training, and so on.

Censuses and surveys of this sort originated during a conceptual transition from population as a collection of people to population as a resource, during

the industrialization of society in the late eighteenth and nineteenth centuries. (The first British Census took place in 1801.) If we want to exploit the agricultural land of a region with maximum efficiency we need detailed maps of land use and land potential. If we want to exploit mineral resources, we need detailed geological maps. In the same way, we need a 'mapping' of the human population if we want to make best use of them in industry and to provide the services that they need. We need to know their geographical distribution, the distribution by age, how many are of working age, what children are coming forward as replacements, how many older or disabled people will need support, how adequate the housing stock is for the use to which it is put, and so on. The Census 'maps' population, for purposes of planning and forecasting, in the same kind of way as the geologist maps potential mineral deposits or the surveyor maps possible uses of land.

Example 1.1 THE DECENNIAL CENSUS OF POPULATION

The British Census has taken every ten years since 1801, except in 1941, and it aims to provide a complete count of every person resident in England and Wales on a particular night (there are separate censuses of Scotland and Northern Ireland) and of the households or institutions within which they live. The Census of Population in the United States is even older, having been held every 10 years since 1790, and the first Swedish Census also dates from the late eighteenth century.

In the England and Wales Census, enumerators go round their allocated districts before the event, identifying every house or other dwelling-place, and they attend briefing meetings in which they receive standardized instruction on the use of the Census questionnaire and the nature of their duties. At these meetings perceived ambiguities in the questions and procedures can be explained. During the week before Census night the enumerators then go round their districts delivering a form to every residential household. (Institutions such as nursing homes and hotels are dealt with separately.)

One person in every household is charged with filling in the form, giving information about everyone resident in the household on the night of the Census (plus details of people normally resident but temporarily absent). The first decision the enumerator has to make, therefore, is what constitutes a household – in other words, how many forms to leave at a given address. A reasonably precise definition will have been given – for example, that people constitute a household if they are normally resident at the same address and share the majority of meals. 'Nuclear family' households are not normally a problem for the enumerator, but he or she may have to take decisions about, for example, establishments such as shared flats, which may contain one household or several.

Informants then fill in the Census form. This asks for names of everyone resident or normally resident in the household. For those resident it will ask a number of personal details – age, gender, employment, previous address and so on. Questions are also asked about the house or flat: ownership, number of rooms, facilities such as bathrooms available,

whether there is a car available to household members, etc. In the 1991 Census, after 20 years of thought and consultation of minority ethnic communities, a detailed question on ethnic origin/grouping was included for the first time, which has made it possible to look in detail at the employment and housing of people in these groups.

After Census night the enumerator returns to the household to collect the completed form. A few simple checks are performed at the time of collection – that all questions have been answered, that some key questions have been correctly understood (for example, the count of rooms and whether kitchens and bathrooms are to be included) and that key linked questions have logical answers (for example, where a spouse's occupation is entered on the form, that there *is* a spouse for him or her to be partnered with). The forms are then taken away and checked again in more detail; if necessary, the enumerator will return to some households to clear up ambiguities and mistakes. The enumerator then does some preliminary coding – enters numerical values for some of the key answers on a machine-readable sheet – and sends the coded sheets and the forms off to the central office, where the coded sheets are entered for quick analysis and the rest of the form is coded and entered on computer for subsequent more detailed examination. Before the rest of the form is coded further checking is done, and it may be necessary to contact some informants if mistakes have been made. (The entirety of the form, including 'difficult to code' items where there is a high proportion of hand-written answers, will be coded for only a 10 per cent sample of forms.) Finally, an officer visits a sample of households in a follow-up survey, to check on the work of the enumerators. Figures are also compared with other data sources, including extrapolations from the previous Census, to check that the counts are plausible. In 1991 such checks revealed a probable under-count of about 4–5 per cent of the population.

Responses from institutions – hospitals, prisons, hotels, nursing homes – are also entered centrally. There is even an attempt to provide at least a count and some basic descriptive information for those who do not live in households at all: police officers tour metropolitan areas and try to count and briefly interview those who are 'sleeping rough'.

The Census provides a snapshot of the population on a particular night. A sample of 'anonymized' records is available for analysis by researchers. By comparing current and past responses for a nominated panel of households it is also possible to publish longitudinal figures that show what has happened to a sample of households over a period of time; the results of such examinations since 1971 are published as the ONS Longitudinal Study.

Further detail, and free access to results, can be obtained at www.statistics.gov.uk/census/.

The Census provides a general description, but there are many other government surveys which examine particular aspects of the life of the population in more detail and with greater frequency. Specific surveys are also carried out by commercial organizations, government departments and groups of academics, to obtain more focused information about the population for particular purposes. Counting people's age, location and work status was only one aspect of the growth of 'the managed society'. Tools were developed during the first half of

the twentieth century – the ancestors and close relatives of psychometric instruments still in use today – to measure intelligence and capability, personality, skill and aptitude and a wide range of characteristics relevant to designing and recruiting to schools and factories. Even more extensive is the growth, since the middle of the twentieth century, in surveys to measure beliefs, opinions, preferences and habits – so that government and other directive organizations can respond to popular wishes, or to test whether government policies will be acceptable to the electorate, or to forecast the outcome of national events (such as general elections) or reaction to local events (such as the intention to site a prison or psychiatric hostel in a particular locality), or most often to assess the market for products and the effectiveness of advertising for them. Measurement of population by means of surveys has become a major resource for planners and for commerce. Wherever we need to know the characteristics of a population, or its resources, or its needs, or its opinions, the natural thing to do is to go out and ask questions or to count what we need to know about it by direct observation.

Box 1.1 POPULATION

The word 'population', in statistical terminology and when used in survey research, means the entire set of objects about which we wish to speak. In ordinary language populations are usually made up of individual people – we talk about 'the population of London', meaning all the people who live and/or work in London – but the term is also commonly used of animals or plants to be found in a given locality. In surveys 'the population' means the entire set about which we wish to make generalizations. This may be (and often is) people, but objects or institutions may also be populations – a survey of British schools, for example, would want to generalize about 'the population of British schools' (that is, to say what is true of all of them).

Clear definition of the population to which the results are to generalize is essential in survey research and not always obvious. 'The population of London' is a case in point: do we mean just those people who live in London, or all those who are to be found there on a weekday (including those who work in London but live outside? those who are there on holiday? those who are passing through to some other destination?). Or do we have some more limited and closely defined subset in mind – for example, 'the population of people using the London transport system on a given day'?

Quantification

What differentiates surveys from other kinds of research project?

Surveys involve systematic observation or systematic interviewing. They ask the questions that the researcher wants answered, and often they dictate the range of answers that may be given. Standardization lies at the heart of survey research, and the whole point is to get consistent answers to consistent questions. We ask everyone precisely those questions that we want answered. More than this, we try to ask the questions in precisely the same way in each interview – to standardize the questionnaire as a measuring instrument. (Not all surveys involve asking people questions, of course – systematic observation is a form of survey research – but the same issues apply: we try to define precisely what is to be observed, to observe it in every case or setting or location and to train the observers so that they apply the criteria consistently and reliably.) From being just a counting exercise, like the Norman Domesday Book, surveys have developed into exercises in measurement. A substantial technology has grown up around the notion of validity – the extent to which a test or question measures what it is intended to measure. This is the first of the three ‘technologies of research’ which we shall consider in this chapter. They are not unique to survey research – all research has to demonstrate validity, for example – but they are well developed in particular ways in survey research.

Sampling

The Census is nearly unique among large-scale surveys in collecting data on every single case within a population; most make do with a sample.

Box 1.2 CENSUS AND SAMPLE

A census is a study that includes every member of a given population. With a capital letter, ‘Census’ usually means the decennial count of every member of the country’s population. However, every 100 per cent study is correctly described as ‘a census’; for example, an interview study of every prisoner on a given prison wing is a census of opinion on that wing.

A sample is a subset of the population – usually with the implication that the subset resembles the population closely on key characteristics (is representative of the population). If the sample is representative of the population, then what is true of the sample will also be true of the population (within a calculable margin of error).

Why, do you think? List some possible reasons for sampling rather than collecting data from the whole population.

There are many reasons.

- One is sheer cost and the time involved in counting every case of a large population. With all the resources of government, the British Census can be run only once every 10 years, and it requires a vast army of enumerators nation-wide. Until recently the results have taken several years to process, so that detailed figures were always several years out of date by the time they were released; modern computing resources have speeded up the analysis of preliminary figures, but the operation still takes 2–3 years to produce detailed analyses.
- The second reason is coverage: a very large survey, particularly if it is to be made compulsory (as the British Census is) has to be limited in what it asks, while a smaller-scale operation may be able to ask a longer list of questions. (It may also be able to ask questions about more sensitive areas, because more interviewer time can be devoted to each case.)
- The third reason is training: a relatively small-scale survey can be carried out by the researchers themselves or by a relatively small number of interviewers who can be trained and briefed in some depth.

For all these reasons, Census figures are supplemented by more frequent collection of more detailed data from a sample of the population, in surveys such as the annual General Household Survey (Example 1.2).

Example 1.2 THE GENERAL HOUSEHOLD SURVEY

As well as organising the decennial Census, the Office for National Statistics (formerly the Office of Population Censuses and Surveys or OPCS) has also carried out a General Household Survey every year since 1971. A random sample of 15,000 households are approached, yielding an eventual sample of some 13,000 households after some have refused to take part – which means data on over 30,000 people. (The response rate is around 72 per cent; about a sixth of non-response is due to failure to contact the household, and the remainder is refusal to participate – see OPCS, 1996.) The purpose was ably described in an early report (OPCS, 1978):

It aims to provide a means of examining relationships between the most significant variables with which social policy is concerned and, in particular, of monitoring changes ... over time. It is thus of particular importance as a source of background information for central government decisions on resource allocation between social programmes.

The sampling pattern is not a simple random one, but a complex stratified design which aims to produce as good as possible a representation of the population, including people in rare but important categories. Until 1984 the sampling frame employed was the electoral registers, but since then these have been replaced by the Postcode Address File. A two-stage sampling design is used. First, postcode sectors are allocated

to strata on the basis of region and type of area, 22 such major strata being created. Second, within the major strata, postcode sectors are stratified according to economic and housing indicators derived from the most recent Census to yield groups which are relatively homogeneous with respect to proportion of private sector renting, proportion of households renting from local authorities and the socio-economic class of heads of household. This process yields 576 groups of equal size, and one postcode sector is chosen randomly from each group. Up to three households will then be interviewed at each address, if there is multi-occupancy.

The interviews are conducted throughout the year. Interviewers undertake a three-day initial training course and are briefed before starting the survey, and new recruits are accompanied by a training officer during their first interviews. Interviewers are also monitored regularly in the field. The current structure of the survey comprises a general questionnaire filled in for the household by the identified contact and individual questionnaires filled in by each household member. The regular core questions are supplemented by 'trailers' in any given year, asking specific questions on, for example, carers and caring (2000/1), or alcohol consumption, sport and leisure, contraception and hearing (2002/3).

The main areas of enquiry are population (numbers of people by age, gender, family relationships and so on), housing, employment, education and health. As well as a bank of permanently present questions which allow comparisons over time, the survey also asks specific blocks of questions from time to time in order to illuminate particular areas; notable examples have been smoking and drinking, crime victimisation, housing costs, experience of long-term unemployment and information about older people in private households.

Results and further description may be accessed at www.statistics.gov.uk/ssd/survey/general_household_survey.asp.

Clearly, if the figures are to be useful then we must be confident that they actually do describe the population, and it would be all too easy to question even a very large sample and still get unrepresentative results. If the sample were confined to one region of the country, or if it over-represented males or females, or the young or the old, or the rich or the poor, the results would not give us a fair and useful picture of the population as a whole. To guarantee representation, a substantial technology has grown up around the business of sampling. Broadly, two approaches to this problem are possible.

On the one hand we can deliberately construct a sample which is representative of its population in this respect: using census figures as 'facts about the population', we can construct our sample to be distributed in the same proportions as the population by age, gender and anything else that strikes us as of importance. This by itself does not guarantee a properly representative sample, however, because our sample may differ from the population in ways which did not strike us as important but turn out to be so with hindsight or, worse, distort the figures without us ever realizing they are doing so.

The alternative approach is to select our cases randomly, so that pure chance determines who is approached and every case has an equal chance of being selected; this maximizes the likelihood that there will be no systematic bias in the sampling. However, random samples can turn out to be unrepresentative – taking a sample from a pack of cards, there is no absolute guarantee that any given sample will contain equal numbers of red and black ones, though the likelihood of this increases if the sample is large.

The General Household Survey (Example 1.2) in fact combines these approaches in a stratified sampling pattern, taking random samples but within subsets of the population (by region, class and so on) so determined that the sample will definitely be representative of the population in these respects. The technology of sampling is discussed in depth in Chapters 3 and 4.

Comparison

Most surveys are not just about describing populations, but are to be used to test some conclusion or at least to find out how one group differs from another. Thus a prime purpose of survey data is to make planned comparisons. If we are looking at changes over time, we need to compare later periods with an earlier one as baseline. If we want to evaluate the effects of a change in practice or policy, we need to compare ‘before’ with ‘after’. If we want to know the effects of some common behaviour – for example, smoking – we need to compare those who indulge in it with those who do not. Even if all we are interested in is describing some group and their particular needs – older people, perhaps, or lone parents – we often need to be able to say not just that a certain number need X or Y, but that their deprivation of X or Y is greater than, or less than, or much the same as other groups.

Comparison is the third of the ‘technologies’ of survey research (or perhaps the word ‘logic’ might be more appropriate here). For every question that needs answering on the basis of survey data we have to ask ourselves whether a comparison of some sort will be involved (it generally will!) and whether the comparison will be possible from the data which we are planning to collect. Often the basis of comparison is figures already collected for some other purpose: is this group housed better or worse than the general population, as measured by the Census or the General Household Survey, for example? More often we will be collecting both the ‘target’ data and the data for comparison, and we need to ensure that the groups are constituted on the same basis so that they can validly be compared. It is no use, for example, comparing men’s and women’s occupations using a random sample for the men but the wives of those who happen to be married as the sample of women. Convenient as this would be in terms of data collection, the comparison would be invalid because it excluded women who were not married. Properly designed comparison lies at the heart of survey analysis.

The technical term for all three of these ‘technologies’ is *validation* – establishing the validity of the research (see Box 1.3). To ask whether a study is valid – or rather, the *extent* to which it is valid – is to ask about the status of the evidence. We are asking whether what is presented as evidence can carry the weight of the conclusions drawn from it, or whether there is a logical flaw (in measurement, in sampling, in comparison) which makes the conclusions doubtful or at least detracts from our belief in them. The reader asks ‘Why should I believe these conclusions?’, and it is the job of the survey report to provide good reasons for belief. The rest of this book examines how such reasons can and should be built into the design of surveys.

Box 1.3 VALIDITY

A research argument is said to be *valid* to the extent that the conclusions drawn from the data do logically follow from them. Questions we must ask of every survey to test this involve:

- 1 *validity of measurement* – the extent to which the data constitute accurate measurements of what is supposed to be being measured;
- 2 *population validity* – the extent to which the sample gives an accurate representation of the population which it is supposed to represent;
- 3 *validity of design* – the extent to which the comparisons being made are appropriate to establish the arguments which rest on them.

Is a survey appropriate?

‘Survey’ is given a very wide meaning in this book, but it is only one form of research. The question has to be asked: ‘Is a survey what I want to do?’ This breaks down into five questions, which are covered in the rest of this book

- 1 Is research feasible at all in these circumstances?
- 2 Is survey research the right way to approach the problem, to get the kind of answers that are required?
- 3 Is a survey feasible here – would it yield valid conclusions?
- 4 Is it ethically appropriate to use survey methods here rather than some other approach?
- 5 Is it ethically and politically appropriate to carry out any form of research, given the research questions and the social context?

The technical and formal questions (questions 1–3 in the list above) inevitably take up much of this book. The first question concerns not how the research is carried out, but whether research can be carried out at all to provide the answers which are required, and this will depend not on the design of the

research in the first instance but upon the nature of the questions. Chapter 2 looks at problem formulation and setting up questions which are capable of being answered by research. Most of the rest of the book is concerned with technical issues – with how surveys should ideally be run, and with how they could be run (and are run) in less than ideal circumstances.

Questions 4 and 5 above, receive less specific coverage in the book but are equally important. We have to ask ourselves what harm could be done by our research and to design the research to avoid it. It is in the ‘contract’ between researchers and their subjects, respondents or informants – the set of ‘reasonable assumptions’ that both sides bring to research – that researchers are responsible professionals who will exercise their responsibility by protecting those with and/or on whom they work. We have also, as social theorists and critical thinkers, to be aware that research is not an asocial process but itself a part of the social world. Like any other activity in which we take part, we ought to be aware of and influenced by the likely consequences of our thinking and our actions for people, groups and social processes and to have some inkling that our work is a continuation of social history and a contribution to creating the history of the future.

Summary

This chapter has defined the ‘survey’ as a research style that involves systematic observation or systematic interviewing to describe a natural population and, generally, draw inferences about causation or patterns of influence from systematic covariation in the resulting data. It has briefly discussed three essential ‘technologies’ of survey research – measurement, sampling and comparison – that will be discussed in more detail in the remainder of the book. It also raises questions of ethical behaviour and political influence.

Further reading



The role of further reading in this book is to expand on the subject-matter and arguments, to offer alternative points of view and, in the ‘technical’ chapters, to provide sources of reference for those who need to explore a topic in more detail than is possible here. It will also include follow-up reading on studies used as major illustrations.)

Good general introductions to surveys and survey design include Chapters 1,2 and 6 of Abbott and Sapsford (1998) and Chapters 1–3 of Oppenheim (1992).

For further reading on the Census, see Dale and Marsh (1993) and OPCS (1980). Barrett (1994) gives useful coverage of the US Census.

A good introduction to the General Household Survey is the original one (OPCS, 1973).