Block 5: Survey and quantitative observation techniques

(Activity solutions can be found at the end of the document.)

We consider major techniques employed in descriptive research design. Specifically, describing consumer or market characteristics. Survey techniques concern the mode of administration. Key observational techniques are also presented. We explore the merits and limitations of each.

Learning Objectives

- Discuss and classify survey techniques available to researchers, and describe various survey techniques
- Identify the criteria for evaluating survey techniques, compare the different techniques and evaluate which is the best for a particular research project
- Explain and classify the different quantitative observation techniques
- Identify the criteria for evaluating observation techniques, compare the different techniques and evaluate which are suited for a particular research project.

Reading List

Malhotra, N.K., D. Nunan and D.F. Birks. Marketing Research: An Applied Approach. (Pearson, 2017) 5th edition [ISBN 9781292103129] Chapter 10.

5.1 Survey and quantitative observation techniques

For each section of *Survey and quantitative observation techniques*, use the LSE ELearning resources to test your knowledge with the Key terms and concepts flip cards.

Survey techniques and response rates

Survey techniques are based on *structured questionnaires* given to a sample drawn from a population. Structured data collection refers to a formal questionnaire which presents questions in a *prearranged order*.

Most questions will be **fixed-response alternative questions** - questions requiring the participant to choose from a set of predetermined answers. For example, ticking a box indicating your degree of agreement with some given statement (Strongly agree, Agree, …).

Reasons for the decrease in the **response rate** of surveys in (business) research include:

- concerns about confidentiality
- the length of interviews
- the relevance of questions
- the number of requests
- when there is no direct benefit to the company
- fears of **sugging** and **frugging**.

Survey methods

Survey methods concerns the choice of **contact method**. Researchers have several contact methods available including:

- **telephone interviews**
- **personal (face-to-face) interviews**
- **mail (postal) interviews**
- **electronic surveys.**

Inevitably, there are merits and limitations to each. Figure 10.1 of the textbook provides a classification of survey methods.

Features of **telephone interviews** are the following.

- Fast and inexpensive.
- Do not cover households without telephones.
- Possible absence of a **sampling frame**, although **telephone directories** - up-to-date? complete? - and **random digit dialling** - for example, election opinion polling.

Features of **personal (face-to-face) interviews** are the following.

- High cost.
- Time-consuming to conduct.
- High quality process.
- Effective for **image-based issues**.

Mail (postal) interviews have the following advantages.

- Cheaper than other methods.
- Quick method (allows for follow-ups).
- No interviewer error.
- Information concerning several members of the household can be obtained.
- Appropriate for information which demands consultation.
- Personal or embarrassing questions can be asked.
- Avoids the problem of not-at-homes.

Disadvantages of mail (postal) interviews are the following.

- Usually high non-response rates.
- Only simple questions which can be easily understood by the participant can be asked.
- The answers have to be accepted as final.
- Inappropriate when spontaneous answers are required.

- Different answers cannot be treated as independent of each other.
- No opportunity to supplement the participant's answers by observational data.
- No information on who fills in the questionnaire.

Electronic surveys have the following advantages.

- Speed.
- Cost.
- Quality of response.
- No interviewer bias.
- Data quality.
- Contact with certain target groups.

Disadvantages of electronic surveys are the following.

- Sampling frames.
- Access to the web.
- Technical problems.

Criteria	**Telephone**	**Personal**	**Mail**	**Electronic**
High sample control	+	+	-	-
Difficulty in locating participants at home	+	-	+	+
Inaccessibility of homes	+	-	+	+
Unavailability of a large pool of trained interviewers	+	-	+	+
Large population in rural areas	-	+	-	-
Unavailability of maps	+	-	+	+
Unavailability of current telephone directory	-	+	-	+
Unavailability of mailing lists	+	+	-	+
Low penetration of telephones	-	+	+	-
Lack of an efficient postal system	+	+	-	+

Criteria	Telephone	Personal	Mail	Electronic
Low level of literacy	-	+	-	-
Face-to-face communication culture	-	+	-	-
Poor access to computers and internet	+	+	+	-

A comparative evaluation of survey techniques. A '+' denotes a relative advantage; a '-' denotes a relative disadvantage.

Criteria for evaluating survey methods

Control of field force - the ability to control the interviewers and supervisors involved in data collection.

Control of the data collection environment - the degree of control a researcher has over the environment in which the participant answers the questionnaire.

Cost - the total cost of administering the survey and collecting the data.

Diversity of questions - the diversity of questions which can be asked in a survey depends on the degree of interaction the participant has with the interviewer and the questionnaire, as well as the ability to actually see the questions.

Flexibility of data collection - the flexibility of data collection is determined primarily by the extent to which the participant can interact with the interviewer and the survey questionnaire.

Obtaining sensitive information - sensitive information may mean an issue which is personally sensitive, such as the way in which a participant may be classified or the use of hygiene products. What may be deemed 'sensitive' varies enormously between different types of participant.

Perceived participant anonymity - perceived participant anonymity refers to the participants' perceptions that their identities will not be discerned by the interviewer or the researcher.

Potential for interviewer bias - the extent of the interviewer's role determines the potential for bias.

Potential to build rapport - rapport may be vital to communicate why the survey is being conducted, with a corresponding rationale for the participant to spend time answering the questions.

Potential to probe - though the interviewer has the potential to create bias in the responses elicited from participants, it is balanced somewhat by the amount of probing which can be done.

Quantity of data - the ability to collect large amounts of data.

Response rate - the survey response rate is broadly defined as the percentage of the total attempted interviews which are completed.

Sample control - sample control is the ability of the survey mode to reach the units specified in the sample effectively and efficiently.

Social desirability - social desirability is the tendency of participants to give answers which they feel to be acceptable in front of others, including interviewers.

Speed - the total time taken for administering the survey to the entire sample.

Use of physical stimuli - the ability to use physical stimuli such as the product, a product prototype, commercials or promotional displays during the interview.

Quantitative observation techniques

Quantitative observation involves recording the behavioural patterns of people, objects and events in a systematic manner to obtain information about the phenomenon of interest. The observer does not question or communicate with the people being observed unless he or she takes the role of a mystery shopper. Information may be recorded as the events occur or from records of past events.

For **structured observation**, the researcher specifies in detail what is to be observed and how the measurements are to be recorded - for example, an auditor performing inventory analysis in a store.

In **unstructured observation**, the observer monitors all aspects of the phenomenon which seem relevant to the problem at hand - for example, observing children playing with new toys.

In **disguised observation**:

- The participants are unaware that they are being observed
- Disguise may be accomplished by using two-way mirrors, hidden cameras or inconspicuous electronic devices
- Observers may be disguised as mystery shoppers or sales staff.

In **undisguised observation**, the participants are aware that they are under observation.

Natural observation involves observing behaviour as it takes places in the environment - for example, one could observe the behaviour of participants eating a new menu option in Burger King.

In **contrived observation**, participants' behaviour is observed in an artificial environment, such as a test kitchen.

Observation methods

In **personal observation**:

- a researcher observes actual behaviour as it occurs
- the observer does *not attempt to manipulate* the phenomenon being observed but merely records what takes place
- a researcher, for example, might record the time, day and number of shoppers who enter a shop and observe where those shoppers 'flow' once they are in the shop.

In **electronic observation**, electronic devices rather than human observers record the phenomenon being observed. They are used for *continuously recording* ongoing behaviour for later analysis. **Neuromarketing** is concerned with the direct measurement of the brain's conscious and unconscious response to marketing stimuli.

Devices requiring participants' direct participation include:

- the AC Nielsen audimeter
- turnstiles which record the number of people entering or leaving a building
- on-site cameras (still, motion picture or video)
- optical scanners in supermarkets.

Devices not requiring participant involvement include:

- eye-tracking equipment
- pupilometer
- psychogalvanometer
- voice-pitch analysis
- devices measuring response latency.

In an **audit**, the researcher collects data by *examining physical records* or *performing inventory analysis*. Data are collected personally by the researcher. The data are based on *counts*, usually of physical objects.

In **trace analysis**, data collection is based on *physical traces*, or *evidence of past behaviour*. For example:

- the selective erosion of tiles in a museum could be used to determine the relative popularity of exhibits
- the number of different fingerprints on a page could be used to gauge the readership of various advertisements in a magazine
- the radio station playing in cars brought in for service could be used to estimate the audience share of various radio stations
- the age and condition of cars in a parking lot could be used to assess the affluence of customers
- the magazines people donated to charity could be used to determine people's favourite magazines
- internet visitors leave traces which could be analysed to examine browsing and usage behaviour by using a **cookie**.

A comparative evaluation of observation techniques

Criteria	**Personal observation**	**Electronic observation**	**Audit**	**Trace analysis**
Degree of structure	Low	Low to high	High	Medium
Degree of disguise	Medium	Low to high	Low	High
Natural setting	High	Low to high	High	Low
Observation bias	High	Low	Low	Medium
Analysis bias	High	Low to medium	Low	Medium
General remarks	Most flexible	Can be intrusive	Expensive	Limited traces available

Questions, solutions and case study

To access the solutions to these questions and case study, click here to access the printable Word document or click here to go to LSE's Elearning resources.

Questions on the block's topics

1. Evaluate the reasons why response rates to industrial surveys are declining.
2. What are the relevant factors for evaluating which survey method is best suited to a particular research project?
3. What are the key advantages of conducting online surveys?
4. What are the downsides of conducting online surveys?
5. How would you classify mystery shopping as an observation technique? Why would you classify it in this way?
6. How may electronic observation techniques be used in supermarkets?
7. What is the difference between qualitative and quantitative observation?
8. Describe the relative advantages and disadvantages of observation.

Learning outcomes checklist

Use this to assess your own understanding of the chapter. You can always go back and amend the checklist when it comes to revision!

- Discuss and classify survey techniques available to researchers, and describe various survey techniques
- Identify the criteria for evaluating survey techniques, compare the different techniques and evaluate which is the best for a particular research project
- Explain and classify the different quantitative observation techniques
- Identify the criteria for evaluating observation techniques, compare the different techniques and evaluate which are suited for a particular research project.

Block 5: Survey and quantitative observation techniques

Solutions to Questions on the block's topics

1. Response rates to all types of survey are declining throughout Western economies. Reasons for this in industrial surveys may include the following.
   The growth in the number of surveys being conducted by business schools, consultancies, research agencies and researchers within other companies. Participants, especially in large and successful organisations, get many requests to participate in surveys, to the point where many organisations have a policy not to participate in surveys at all.
   A lack of appreciation of what benefits the participant may get from answering the set questions.
   Even when there are clear benefits for the participant, a lack of communication of the potential benefits to the participant.
   A lack of appreciation of the time and effort needed to complete a survey.
   A lack of appreciation of how interesting the subject and research process may be to participants.
   Disillusionment with the use of research findings, i.e. the image of surveys damaged by 'sugging' and 'frugging' activities.
   In summary, little appreciation of how target participants view survey work and experience the survey process.

2. The relevant factors are the following.
   1. *Flexibility of data collection* - i.e. being able to administer complex questionnaires, including explaining and clarifying questions.
   2. *Diversity of questions* - i.e. a variety of question and scale formats.
   3. *Use of physical stimuli* - i.e. being able to show lists of potential participants, pictures, video and audio clips.
   4. *Sample control* - i.e. being able to reach target participants efficiently and effectively.
   5. *Control of the data collection environment* - i.e. being able to manage and control the context of where the questionnaire is completed.
   6. *Control of field force* - i.e. being able to manage or control the interviewers or other individuals who are collecting data.
   7. *Quantity of data* - i.e. the size of questionnaires and the length of time needed by participants to complete the questionnaire.
   8. *Response rate* - i.e. the percentage of the total attempted questionnaires which are complete.
   9. *Perceived participant anonymity* - i.e. participants' perceptions that their identities will not be discerned.
   10. *Social desirability* - i.e. the tendency of participants to give answers which they feel to be acceptable in front of others, including interviewers.
   11. *Obtaining sensitive information* - i.e. issues which are personally sensitive, such as the way that a participant may be classified or the use of hygiene products.
   12. *Potential for interviewer bias* - i.e. the biased selection of participants, asking and recording of questions.
   13. *Potential to probe* - i.e. being able to follow up a structured question with a request to elaborate further.
   14. *Potential to build rapport* - i.e. being able to engage with participants to make them feel more relaxed, friendly and trusting.
   15. *Speed* - i.e. the quickest means to collect and code data, ready for analysis.
   16. *Cost* - i.e. the expense involved in collecting and coding data, ready for analysis.

3. The advantages are the following.
   - Speed - compared to a postal survey, especially on an international basis, the time taken can be reduced to a matter of days rather than weeks. Even if one includes the time taken

to contact participants by email, to establish their willingness to take part in a survey, for them to reply, for the survey to be sent, for it to be completed and then emailed back (the procedure adopted to reduce the perception of 'junk' email), it can be completed far more quickly than a postal procedure. There can be a 'seamless' international coordination which using traditional mail would be very time-consuming to organise.
    - Cost - once the electronic questionnaire is set up, it is almost as easy to mail it to 10,000 people as to 10. This is without the printing, stationery and postage costs.
    - Quality of response - this is measured by the number and clarity of responses to open-ended questions. Graphics can be displayed to maintain the interest of participants, but also to put them in a frame of mind which elicits more from them.
    - Interviewer bias removed - the method maintains the key advantage of mail surveys in being able to present a consistent form of measurement.
    - Data quality - logic and validity checks can be built in, and in areas where open-ended or 'other - please state' responses are required, the participant types in answers ready for analysis.
    - Contacting certain target groups - mostly those who are regular internet users, and certain business target markets. It has been argued that the use of the internet to conduct market research is more revolutionary than other technological developments such as computer-assisted telephone interviewing (CATI) or computer-assisted personal interviewing (CAPI). Practitioners argue that the internet has fundamentally changed the way in which market researchers design questionnaires, collect and analyse data. The internet is a visual medium, allowing participants to see images, long text messages, long lists of response options and, as bandwidth grows, video images. It captures the unedited view of the participant, eliciting responses to open-ended questions which are long, rich and revealing. It may be more effective in addressing sensitive issues - for example, adults may be more willing to reveal information about their experiences of sensitive medical conditions.

4. The downside of the internet should be considered when evaluating its potential. The main drawback of internet surveys is their representativeness of broader populations. It is extremely difficult to conduct probability sampling and response depends mostly on 'volunteer' or convenience sampling. Another limitation is the verification of who is actually responding to the survey. The absence of a human facilitator to motivate participants, security and privacy are also areas of concern. There are also ethical considerations in conducting surveys on the internet which primarily concern the fact that it is so inexpensive to use and difficult to regulate.
   This means that it can be open to misuse by less experienced or less scrupulous organisations, often based outside the research industry. Internet surveys which fall seriously below the high standards promoted by the European Society for Opinion and Market Research (ESOMAR) and other leading professional bodies make it more difficult to use the medium for research and could seriously damage the credibility of such research, as well as being an abuse of the goodwill of internet users generally.

5. Mystery shopping should be classified as 'personal observation'. The mystery shopper observes actual service delivery behaviour as it occurs. The mystery shopper does not attempt to control those who are observed. The mystery shoppers present themselves as 'customers' and a service is delivered to them in a 'natural' manner. The service is delivered and the mystery shoppers record their observations.

6. The use of the 'loyalty card' and the scanner at the supermarket is a form of electronic observation. The 'loyalty card' is issued following an application from a shopper who may

supply many personal details. Each time the card is used, it records who is purchasing from a store. When the individual cardholder purchases goods and uses their loyalty card, electronic observation of their behaviour can be performed. Linking the loyalty card of individual shoppers to the scanned items in a shopping trolley allows the observation of:

1. which products were bought - individual items and combinations
2. which special offers or sales promotion items were responded to
3. how much was spent
4. when shopping occurred - the time and day
5. patterns and changes in all the above features - if observed over time.

7. Observation may be used to discern quite subtle differences between consumers of their customs and habits. Observing the individual buying or consuming a product is to see a scenario which is laden with 'signals'. How the individual uses and interacts with the product, how they interact with those around them, how they are dressed and project themselves, how they seem to be enjoying themselves or not, are all examples of the 'signals' to be discerned. As well as discerning individual 'signals', the significance of the interconnection between 'signals' should be discerned - the meaning of the context related to specific acts is the focus.

   Such an approach may be contrasted with quantitative observation where observing the fact that the consumer is carrying out a particular act and counting the frequency of the behaviour is the main focus. Qualitative observation is laden with interpreting the meaning and significance of consumer acts. A much higher level of theoretical input is needed in the analysis of qualitative observations. This contrasts with quantitative observations where the prime means of analysis involves counting the occurrence of phenomena, allowing a whole array of statistical tests.

8. Advantages are the following.
   Observational methods permit the measurement of many forms of consumer behaviour.
   The potential bias caused by the interviewer and the interviewing process is eliminated or reduced.
   Consumers may not remember or be aware of certain behaviour patterns they display; only by observation may these patterns be captured.
   If the observed phenomenon occurs at relatively frequent intervals and is of short duration, observational methods may cost less and be faster than interview methods.
   Disadvantages are the following.
   Little can be inferred about the motives, beliefs, attitudes and preferences underlying the observed behaviour - much interpretation and validation are needed to make inferences.
   Selective perception of the observer can bias what is observed and interpreted.
   In some cases the use of observational methods may border on being unethical because consumer behaviour is being monitored without their explicit knowledge or consent.

Solution to Case study: Subaru

The key to this question is that we are looking at Subaru buyers - individuals with much experience with the product and hopefully a positive bond to the brand. This is quite a different prospect compared to tracking down potential buyers. Probably, if complex questions and a diversity of questions were asked, face-to-face interviews could be effective. These would allow for much visual stimuli to be presented and reactions to be gauged. If participants were genuinely interested in the topic of the questionnaire, i.e. their beloved car, then with the right rapport, a great amount of probing and a lengthy interview could be

completed. This could be done either at the car showroom or in the home. One big advantage of conducting an interview in a car showroom is the massive amount of stimuli, the control of the environment and the amount of comfort and interest which could be instilled in the whole interviewing process.

Keeping in touch with Subaru buyers could be readily achieved through internet surveys, even through the use of an online panel. The following advantages would hold for this method, with few disadvantages, assuming that Subaru buyers are likely to have access to the internet.

- *Speed* - even if one includes the time taken to contact participants by email, to establish their willingness to take part in a survey, for them to reply, for the survey to be sent, for it to be completed and then emailed back (the procedure adopted to reduce the perception of 'junk' email), such a survey can be completed far more quickly than other methods.
- *Cost* - once the electronic questionnaire is set up, it is almost as easy to mail it to 10,000 people as to 10, since there are no printing, stationery and postage costs.
- *Quality of response* - quality can be measured by the number and clarity of responses to open-ended questions. Graphics can be displayed to maintain the interest of participants, but also to put them in a frame of mind which elicits more from them.
- *Interviewer bias removed* - the method maintains the key advantage of mail surveys in being able to present a consistent form of measurement.
- *Data quality* - logic and validity checks can be built in, and in areas where open-ended or 'other - please state' responses are required, the participant types in answers ready for analysis.
- *Contacting certain target groups* - as the target group is the Subaru buyer, a modern, technologically-savvy person would seem ideal.