

Designing Descriptive and Analytical Surveys

Presentation based on Chapter 9 of:
Gray, D. (2014) *Doing Research in the Real World*.
London: Sage

Objectives

After this session you will be able to:

- Distinguish between descriptive and analytical surveys.
- Describe and apply different approaches to both analytical and descriptive surveys.
- Select alternative survey data collection methods.
- Implement special approaches to maximize response rates to organizational surveys.
- Take steps to counteract some of the limitations of survey design.

Definition

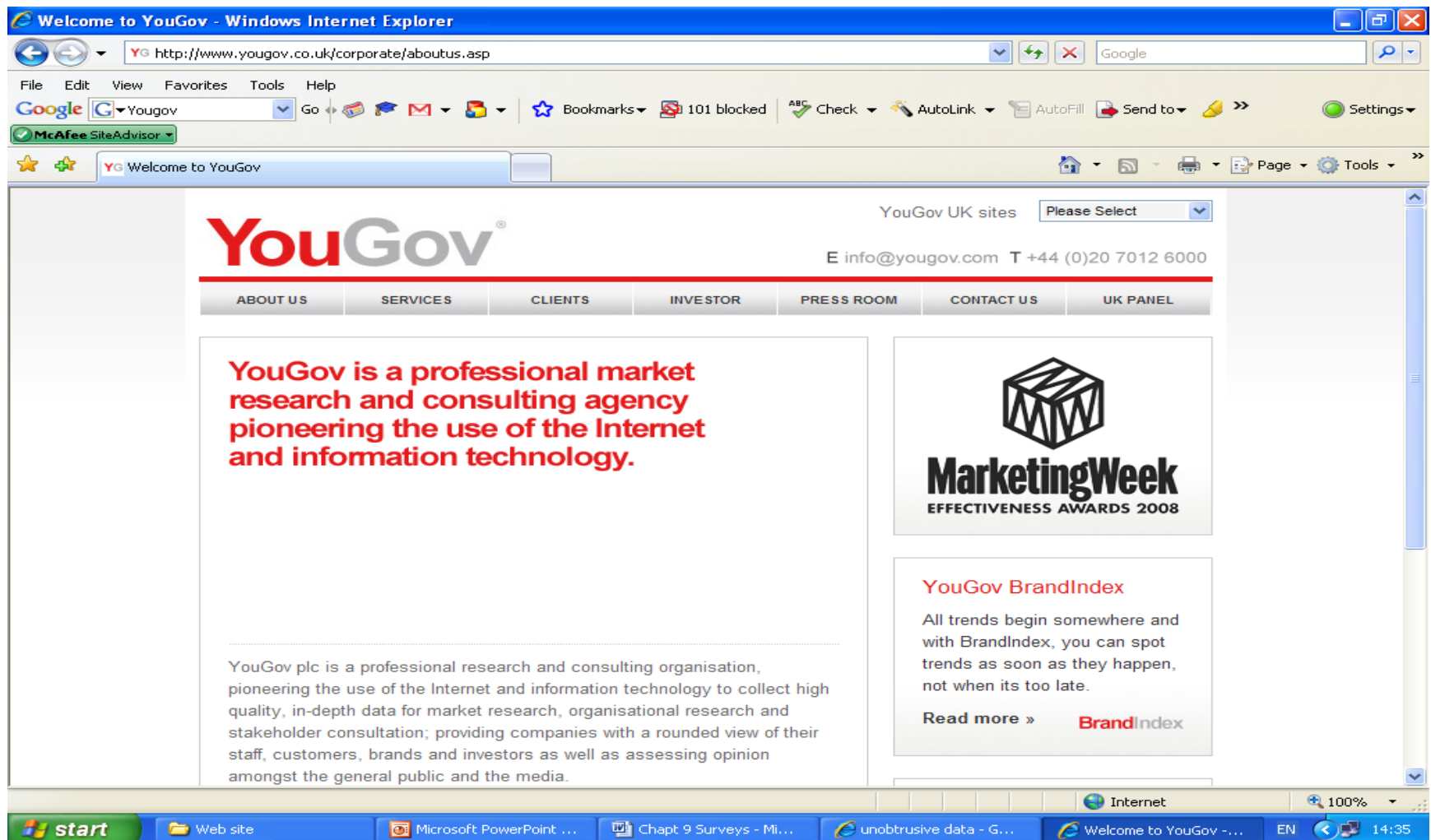
A survey is:

- A detailed and quantified description of a population – a precise map or a precise measurement of potential.
- Surveys involve the *systematic* collecting of data, whether this be by:
 - Interview
 - Questionnaire
 - Observation methods
- At the very heart of surveys lies the importance of **standardization**.

Typical examples of surveys

- The Doomsday Book
- UK census
- Staff satisfaction surveys
- Public opinion surveys e.g., opinion polls
- Customer opinions

Example: YouGov survey site



Descriptive surveys

- Measure the characteristics of a particular population, either at a fixed point in time, or comparatively over time.

Analytical surveys

Analytical surveys attempt to test a theory in the field, their main purpose being to explore and test associations between variables such as:

- *Dependent* variables – the subject of the research, the gains or losses produced by the impact of the research study.
- *Independent* variables – the ‘causes’ of the changes in the dependent variables that will be manipulated or observed, then measured by the analytical survey.
- *Uncontrolled* variables – including error variables that may confound the results of the study. It is hoped that such variables are randomly distributed so any confounding effects are limited.

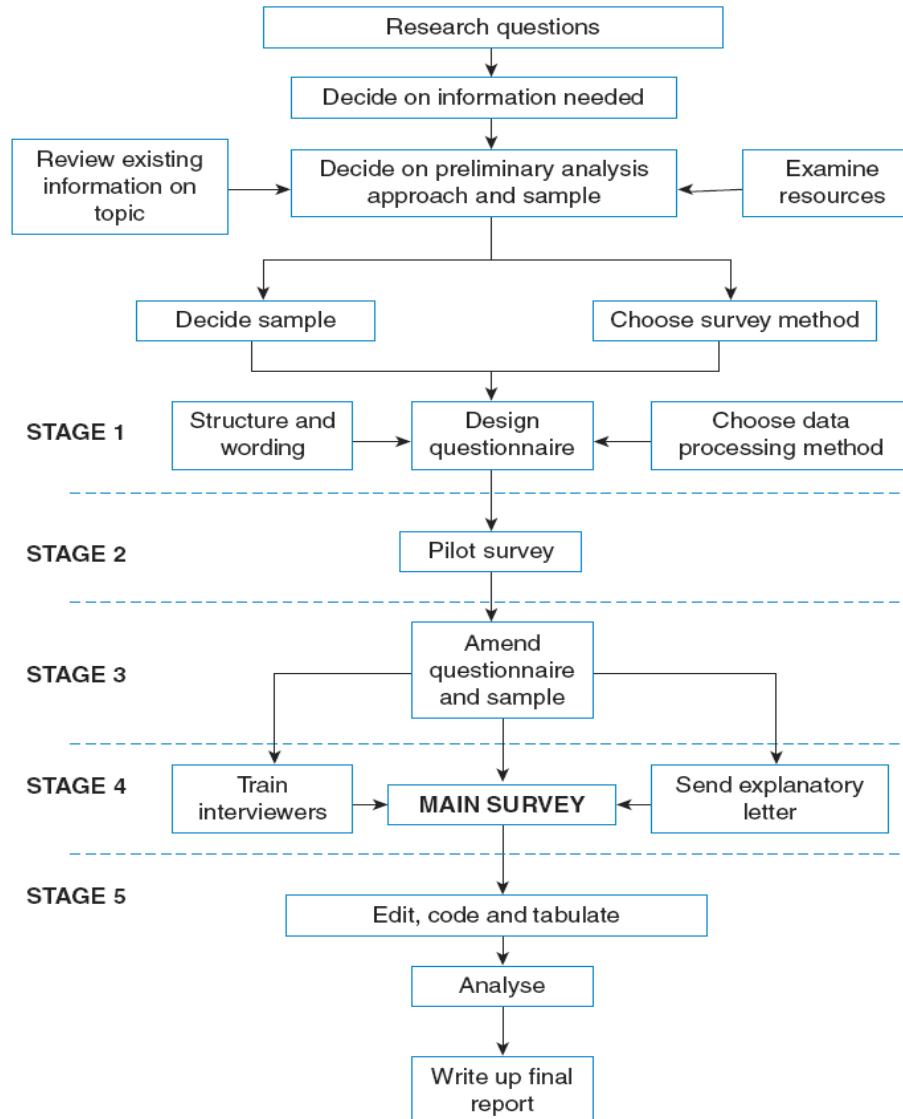
Extraneous variables controlled by...

- Holding them constant (e.g., by interviewing respondents on the same day so as to eliminate the effects of time).
- Exclusion (such as only using females in the study so as to eliminate the possible confounding effects of gender).

Stages in the survey process

Figure 9.1

Stages in the survey planning process (adapted from Czaja and Blair, 2005)



Survey process: Stage 1– survey design and planning

- Specification of research questions or hypothesis.
- Establishing time frame.
- Identifying location for the research.
- Deciding on the focus of the research e.g., describing a group or patterns amongst sub-groups.
- Specifying sample size and composition – and sampling frame.

Survey process: Stage 2 – piloting

Piloting/testing of:

- Sampling frame (is it representative of the target population?)
- Survey questions.
- Data collection tools.

Survey process: Stage 3 – final survey design and planning

- Make changes on the basis of the pre-testing e.g., composition of sample.

Survey process: Stage 4 – data collection

Monitor the rate of non-response, including:

- Non-contacts (try to re-contact).
- Refusals (try to ascertain reasons for refusal).
- Ineligibles (replace by eligible respondents).

Monitor performance of interviewers:

- Do some have high refusal rate?

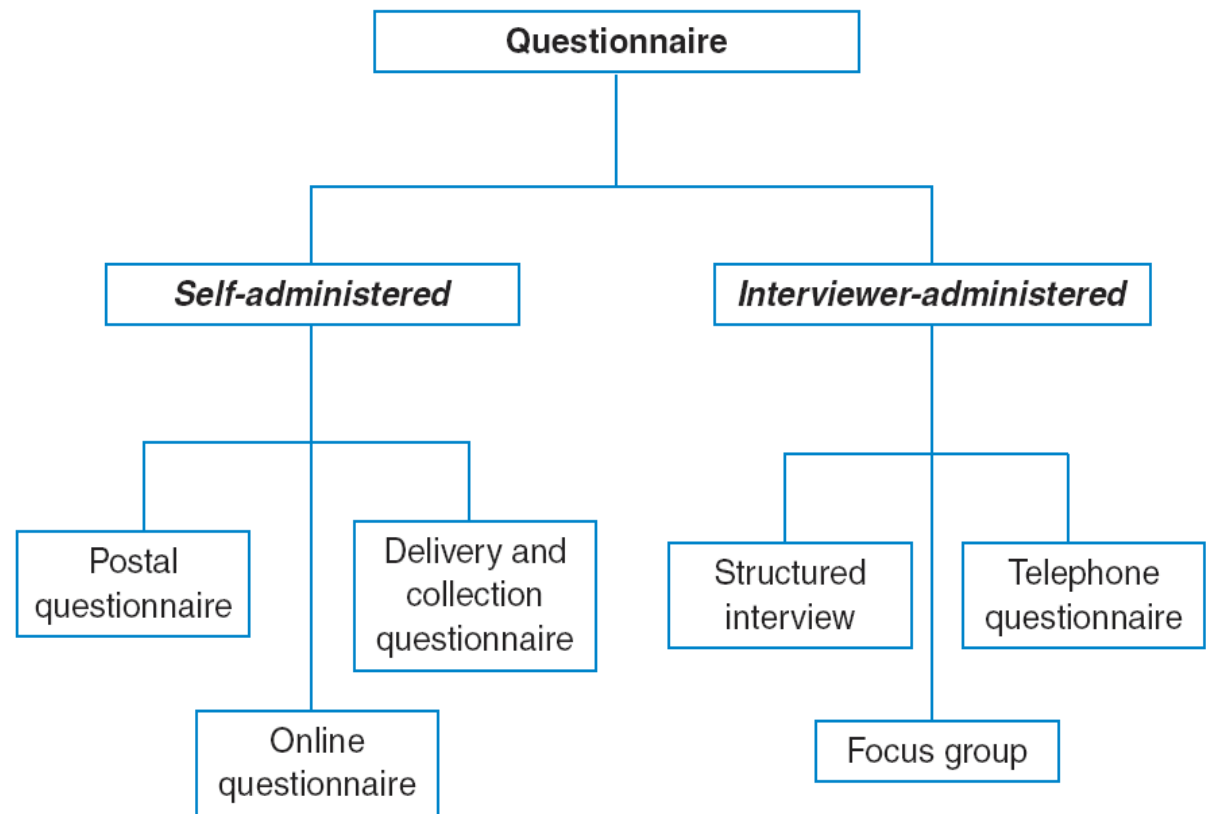
Survey process: Stage 5 – data coding, analysis and reporting

- Allocate unique identification number to each respondent.
- ‘Clean’ the data to check for errors.

Selecting a survey method

Figure 9.2

Types of
questionnaire
(adapted from
Saunders et al.,
2007)



Postal questionnaires

Postal surveys are best considered when:

- The research sample is widely distributed geographically.
- Research subjects need to be given time to reflect on their answers.
- The research subjects have a moderate to high interest in the subject.
- The questions are mostly written in a close-ended style.



Delivery and collection questionnaires

- Delivered by hand to each respondent and collected later.
- This has the advantage over postal questionnaires in that there is some direct contact with potential respondents that might in turn induce a greater proportion of people to complete the questionnaire.

Online questionnaires

Example Website Survey - Windows Internet Explorer

http://www.surveymonkey.com/s.aspx?sm=D4aI4ZVWg3ql1CfP9d1z1Q%3d%3d

File Edit View Favorites Tools Help

Google Go Bookmarks 102 blocked Check AutoLink AutoFill Send to Settings

McAfee SiteAdvisor

Example Website Survey

Example Website Survey [Exit this survey >>](#)

3. Demographic

Please provide us with some background information to help us design the website around your needs.

2. What kind of connection do you have to the Internet?

- ☐ 28.8 Kbps modem
- ☐ 56 Kbps modem
- ☐ ISDN
- ☐ Cable modem
- ☐ DSL
- ☐ T1 or better
- ☐ Do not know

3. Where are you located?

- ☐ United States
- ☐ Other Country

<< Prev Next >>

Done Internet 100%

start Web site Final documents Microsoft Power... Chapt 9 Survey... SurveyMonkey... Example Websit... EN 23:12

Online questionnaires

Advantages:

- Low cost.
- Easy to design and administer.

Disadvantages:

- Volunteer sample (little control over who responds).
- Sampling error (non-Internet users).

Structured questionnaires

Advantages:

- Response rates usually higher.
- Can ask open questions for detailed responses.
- Additional probes.

Disadvantages:

- Time consuming.
- Expensive.

Focus groups

- Allow for a variety of views to emerge.
- Group dynamics can often allow for the stimulation of new perspectives (which may provide the basis for a survey).

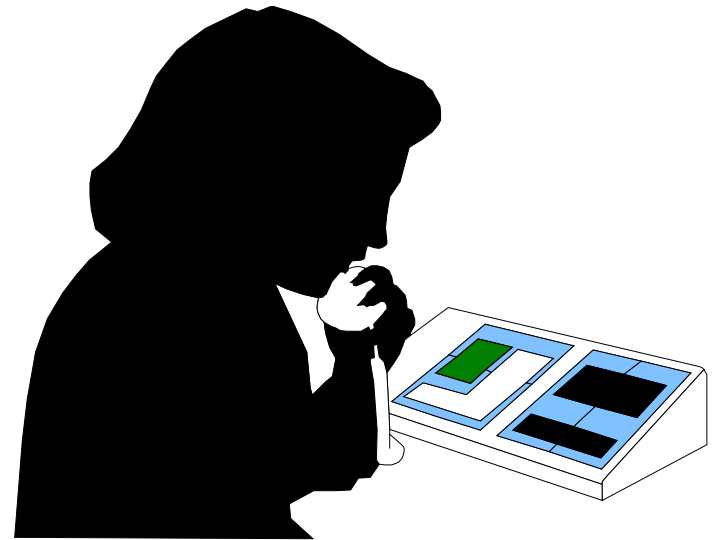
Telephone surveys

Advantages:

- Most households possess a telephone.
- Response rates relatively high.

Disadvantages:

- Questions need to be short.



Reducing sources of error

Sampling error:

- Contact members of the sampling frame and ascertain whether they belong to the required sample.
- Design the questionnaire or interview schedule in such a way that ineligible respondents are identified early and screened out.

Reducing sources of error

Data collection error:

- Follow up non-respondents.
- Reduce non-response by making questionnaires easy to answer.

Reducing sources of error

Achieve high return rates by:

- Identifying the most appropriate respondents.
- Using not only a questionnaire but other forms of contact such as emails or the telephone.
- Developing an easy-to-complete questionnaire with embedded instructions on how to complete the questions.
- Conducting on-site interviews to help tailor the questionnaire to the knowledge and cognitive capabilities of the audience.
- Targeting organizational surveys on gatekeepers if possible.
- Being cautious about the use of financial incentives as this may not be ethically acceptable in some organizations.

Reducing sources of error

Reducing item non-response:

- Avoid intrusive questions.
- Emphasize confidentiality.

Reducing sources of error

Reducing interviewer error

- Train interviewers to:
 - Follow instructions exactly.
 - Ask unbiased probes.
 - Avoid biasing responses by use of body language or comments.

Summary

- Surveys allow for the collection of large amounts of data from large samples.
- Stages include the definition of research objectives, questionnaire design, piloting, survey distribution, coding and analysis.
- Descriptive surveys provide illuminating data which may provide the basis for more detailed analytical investigations. Analytical surveys are capable of finding associations between dependent and independent variables.
- Survey methods include self-administered questionnaires (postal, delivery and collection and online) and interviewer-administered questionnaires (structured, focus groups and telephone).
- Sources of error include variance and bias. To reduce sources of error, steps must be taken to minimize under-coverage and over-coverage in sampling frames, and to minimize the amount of missing data.
- In encouraging high response rates, care must be taken to abide by research ethics in not pressurizing people to participate or to answer questions that they find intrusive.