INTRODUCTION TO SURVEY RESEARCH DESIGN

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WHY DO A SURVEY?

1. **Uniqueness**: gather information not available from other sources

2. **Probability Sampling**: unbiased representation of population of interest

3. **Standardization of measurement**: same information collected from every respondent

4. **Analysis needs**: use survey data to compliment existing data from secondary sources
**BASIC SURVEY DESIGNS**

- **Cross-Sectional Surveys**: Data are collected at one point in time from a sample selected to represent a larger population.

- **Longitudinal Surveys** = Trend, Cohort, and Panel
  
  **Trend**: Surveys of sample population at different points in time

  **Cohort**: Study of same population each time data are collected, although samples studied may be different

  **Panel**: Collection of data at various time points with the same sample of respondents.
MODES OF SURVEY ADMINISTRATION

• Personal (Face-to-Face)

• Telephone

• Mail

• Web

• Combination of Methods
HOW DO YOU DECIDE ON THE MODE OF DATA COLLECTION?

Population
+
Characteristics Of The Sample
+
Types of Questions
+
Question Topic
+
Response Rate
+
$$ Cost $$
+
Time
PERSONAL INTERVIEWING

ADVANTAGES:

✓ Generally yields highest cooperation and lowest refusal rates
✓ Allows for longer, more complex interviews
✓ High response quality
✓ Takes advantage of interviewer presence
✓ Multi-method data collection

DISADVANTAGES:

✓ Most costly mode of administration
✓ Longer data collection period
✓ Interviewer concerns
TELEPHONE INTERVIEWING

ADVANTAGES:
- Less expensive than personal interviews
- RDD samples of general population
- Shorter data collection period than personal interviews
- Interviewer administration (vs. mail)
- Better control and supervision of interviewers (vs. personal)
- Better response rate than mail for list samples

DISADVANTAGES:
- Biased against households without telephones, unlisted numbers
- Nonresponse
- Questionnaire constraints
- Difficult to administer questionnaires on sensitive or complex topics
MAIL SURVEYS

ADVANTAGES:
✓ Generally lowest cost
✓ Can be administered by smaller team of people (no field staff)
✓ Access to otherwise difficult to locate, busy populations
✓ Respondents can look up information or consult with others

DISADVANTAGES:
✓ Most difficult to obtain cooperation
✓ No interviewer involved in collection of data
✓ Need good sample
✓ More likely to need an incentive for respondents
✓ Slower data collection period than telephone
# COMPARISON OF DATA COLLECTION METHODS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mail</th>
<th>Phone</th>
<th>F/ F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Cheapest</td>
<td>Moderate</td>
<td>Costly</td>
</tr>
<tr>
<td>Speed</td>
<td>Moderate</td>
<td>Fast</td>
<td>Slow</td>
</tr>
<tr>
<td>Response rate</td>
<td>Low to moderate</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td>Sampling need</td>
<td>Address</td>
<td>Telephone number</td>
<td>Address</td>
</tr>
<tr>
<td>Burden on respondent</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Control participation of others</td>
<td>Unknown</td>
<td>High</td>
<td>Variable</td>
</tr>
<tr>
<td>Length of Questionnaire</td>
<td>Short</td>
<td>Moderate</td>
<td>Long</td>
</tr>
<tr>
<td>Sensitive questions</td>
<td>Best</td>
<td>Moderate</td>
<td>Poor</td>
</tr>
<tr>
<td>Lengthy answer choices</td>
<td>Poor</td>
<td>Good</td>
<td>Best</td>
</tr>
<tr>
<td>Open-ended responses</td>
<td>Poor</td>
<td>Good</td>
<td>Best</td>
</tr>
<tr>
<td>Complexity of Questionnaire</td>
<td>Poor</td>
<td>Good</td>
<td>Best</td>
</tr>
<tr>
<td>Possibility of interviewer bias</td>
<td>None</td>
<td>Moderate</td>
<td>High</td>
</tr>
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WEB SURVEYS

ADVANTAGES:
✓ Lower cost (no paper, postage, mailing, data entry costs)
✓ Can reach international populations
✓ Time required for implementation reduced
✓ Complex skip patterns can be programmed
✓ Sample size can be greater

DISADVANTAGES:
✓ Approximately 40% of homes own a computer; 30% have home e-mail
✓ Representative samples difficult - cannot generate random samples of general population
✓ Differences in capabilities of people's computers and software for accessing Web surveys
✓ Different ISPs/line speeds limits extent of graphics that can be used
# PAPER VS. COMPUTER ADMINISTRATION

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PAPI:</td>
<td>Paper and Pencil Interviewing</td>
</tr>
<tr>
<td>CAI:</td>
<td>Computer-Assisted Interviewing</td>
</tr>
<tr>
<td>CATI:</td>
<td>Computer-Assisted Telephone Interviewing</td>
</tr>
<tr>
<td>CAPI:</td>
<td>Computer-Assisted Personal Interviewing</td>
</tr>
<tr>
<td>CASI:</td>
<td>Computer-Assisted Self-Interview</td>
</tr>
<tr>
<td>Audio-CASI:</td>
<td>Audio Computer-Assisted Self-Interview</td>
</tr>
</tbody>
</table>
ADVANTAGES OF COMPUTER ADMINISTRATION

- Operational Issues
- Cost Comparisons
- Time to Complete
- Reduction in Interviewer Errors
  - Branching
  - Insertion of Data
  - Instant Editing
- Data Available Faster After Collection
WHICH ACRONYM?

**PAPI** is recommended for studies with pre-screening phase (i.e. when desired respondent not known)

**CATI** now standard for RDD surveys

**CASI** works well for sensitive issues

**Audio-CASI** works well for

- Low Literacy
- Non-English-Speaking Populations
OPERATIONAL/ COST ISSUES

- Computers Increase Up-Front Effort
- Data Entry Reduced or Eliminated
- Questionnaire Complexity, Revisions
- Cost Comparisons
ISSUES TO CONSIDER

- What is your research question?
- What is your target population?
- What do you know about this population?
- Do you have a sample frame? What shape is it in?
- Do you have an existing questionnaire?
- By when do you need your data?
- How much money do you have?
WHAT FACTORS INTO THE COST?

- professional time required to write, program questionnaire
- professional time to design and implement sample plan
- questionnaire length
- condition of the sample frame
- availability of the sample for interview
- the saliency of the topic to the population
- interviewer hiring and trainings
- callback procedures
- eligibility criteria (screening is VERY expensive)
- geographic dispersion of the sample (phone, personal)
- postage, mailing costs (mail)
- travel for interviewers to sample and to SRL (personal)
- coding, data entry
SUGGESTED READINGS


Journals: *Public Opinion Quarterly* and *Journal of Official Statistics*