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Social Science Methods in Accounting Research

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Overview

- Survey Research
- Verbal Protocol Analysis
- Field Studies
- Case Studies
- Clinical Studies
- Statistical Methods – Some Issues
- Proposals & Presentations next week
Survey Research

- Survey research studies large and small populations (or universes) by selecting and studying samples chosen from the population to discover the relative incidence, distribution, and interrelations of sociological and psychological variables (K&L p. 599)
- Field studies with a quantitative orientation
- Scientific research NOT status surveys, opinion polls, etc.
Survey Research

- Sociological facts
- Opinions
- Attitudes
- Behavior
- Relevance of sampling theory
Survey Research

Types of Surveys

- Interviews
  - Schedules
- Panels
- Telephone Surveys
- Mail Questionnaires
  - Low response rates
    - Follow-up
Survey Research

- Methodology
  - Flow plan
    - Specific questions
    - Operationalization
    - Sample and sampling plan
      - Multistage and areas sampling
      - Quota sampling – avoid
    - Interview schedule
    - Measuring instruments
    - Research design – cross-sectional v. longitudinal
    - Data collection
  - Analysis
    - Coding
    - Tabulation
    - Analysis & Interpretation
Survey Research

- Checking Survey Data
  - Re-interview
  - Outside criterion / data
- Relevance to educational research
Survey Research

Advantages and disadvantages

- Wide scope
- Accurate (within sampling error)
- Often superficial
- Demanding of time, energy and money
- Can change social context
- Requires good research knowledge and sophistication
Survey Research

- Meta-analysis
  - Surveys of literature on a particular topic
  - Unit of analysis is individual studies
  - Measure effect sizes (using Cohen’s d-statistic)
  - Typically report studies, sample sizes and effect sizes
  - Try to determine overall effect across studies
Meta-analysis

\[ * \text{d-statistic} \]

\[ \frac{M_t - M_c}{SD} \]

where \( M_t \) is the treatment mean, \( M_c \) is the control mean, and \( SD \) is the pooled standard deviation (or the standard deviation for the control group)
Verbal Protocol Analysis

At least for some cognitive tasks we can provide information about "what we are thinking" by verbally describing what is going through our mind while performing the task. This type of data is referred to as a verbal protocol.

Newell and Simon pioneered and championed the use of verbal protocols. They felt that the systematic collection of these types of observations could be used to test information processing models of human reasoning.
Verbal Protocol Analysis

- Typically VERY time-consuming and hence usually small sample sizes

- Requires
  - Researcher to prompt for verbal protocols
  - Recording of verbal protocols
  - Coding of verbal protocols
  - Analysis
Field Studies

Nonexperimental scientific inquiries aimed at discovering the relations and interactions among sociological, psychological, and educational variables in real social structures.
Case Studies

- Researcher Robert K. Yin defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 1984, Case study research: Design and methods. Newbury Park, CA: Sage, p. 23).
Case Studies

- Case study research excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research.

- Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships.

- Researchers have used the case study research method for many years across a variety of disciplines. Social scientists, in particular, have made wide use of this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods.
Clinical Studies

In addition to the scientific and artistic groups, there is a third group of researchers who struggle with the subjective nature of knowledge and practice and who employ descriptive, interpretive, and non-quantitative means in their work and study: the clinicians. Like their counterparts in the sciences, arts, and humanities, these clinical researchers also use qualitative methods in their research and reflection: case study, participant observation, long interviews, grounded theory, as ways of knowing and not knowing. Unlike the scientists and the artists, these clinicians are organized by the praxis of their work: They must use methods which produce practical distinctions which can be used in real-time decision making and/or problem solving. This style of applied research is more immediate for the clinician.

A Case for Clinical Qualitative Research by Ronald J. Chenail
The Qualitative Report, Volume 1, Number 4, Fall, 1992
(http://www.nova.edu/ssss/QR/QR1-4/clinqual.html)
Statistical Methods – Some Issues

- Irrelevant Variables
- Omitted Variables
- Moderator Variables
- Mediator Variables
- Suppressor Variables
Irrelevant Variables

- True Model: \( Y = \alpha + \beta X \)
- Estimate: \( Y = \alpha + \beta_1 X + \beta_2 Z + \varepsilon \)
- Problems:
  - Estimates unbiased and consistent
  - But generally inefficient (i.e. variances too large)
  - Extra degrees of freedom consumed
  - Introduces additional multicollinearity
  - Reduces precision
  - May lead to wrong conclusions as to significance
Omitted Variables

- True Model: \[ Y = \alpha + \beta_1X + \beta_2Z \]
- Estimate: \[ Y = \alpha + \beta X + \varepsilon \]
- Problems:
  - Z and Y uncorrelated
    - Estimates of intercept biased but estimates of beta coefficients unbiased
    - Estimates inconsistent
  - Z and Y correlated
    - Estimates biased and inconsistent
    - Variances biased (could be too large or too small)
    - Even signs of beta coefficients are not reliable!
    - Worse with binary variables or in presence of heteroscedasticity
Moderator Variables

- A moderator variable alters the affect of some other predictor variable on the criterion.
- A moderator can be represented as an interaction between a focal independent variable and a factor that specifies the appropriate conditions for its operation.
- \[ Y = \alpha + \beta_1 X + \beta_2 Z + \beta_3 X \cdot Z \]
Mediator Variables

Mediator variables

* The variable M (fully) mediates the effect of variable X on variable Y iff
  - X → Y
  - X → M
  - X, M → Y M is significant
  - X, M → Y but X is not significant (or effect is reduced)
Suppressor Variables

- Suppressor variables may be defined as those predictor variables which do not measure variance in the criterion measures, but which do measure some of the variance in the predictor measures which is not found in the criterion measure. They measure invalid variance in the predictor measures and serve to suppress this invalid variance.

- Suppressor variables
  - Have zero or very low correlation with the criterion variable
  - Raise the significance of other predictors
Proposals & Presentations next week

For final proposals

* Select a ‘target journal’
* Find their manuscript submission requirements
* Prepare your proposal in this format
* Tell me what you used in the note enclosing the submission in the drop box
Proposals & Presentations next week

Presentations
- Plan on 15 minutes + some questions
- There will be no discussants
- You may bring a laptop, overhead projector slides, handouts, copies of the proposal or other visual aids