

Session 7 Notes – Students present their work

Carolina Casas-Cordero

Overview of presentation

The main aim of the research is to measure collective efficacy on survey participation. Collective efficacy can be defined as cohesion among neighbours and readiness to contribute to the common good. This concept can be applied to survey research – people in neighbourhoods with high efficacy could be more likely to participate, but also interviewers may feel more secure and confident in high efficacy neighbourhoods, thus achieving higher response rates.

The first paper will aim at constructing a measure of collective efficacy. The first attempts to measure it in 1970s were approximations from the Census. Residents' own assessment to efficacy as measured by survey results have also been used, but these could be biased, because people may rate their own area to be better than it really is. Last ten years have seen development of indicators where interviewers rate the efficacy. Data will come from a study where interviewers completed a 64-item questionnaire about each block.

The second paper will assess the quality of interviewer collected observational data. It will utilise multilevel modelling with interviewers, neighbourhoods, blocks and blockfaces as random effects and individual characteristics as fixed effects. The aim of the paper will be to find out which types of items have more error.

The third paper will estimate non-response bias with different methods and compare the findings to see which one is the most effective.

Discussion

Question: There is a dataset in Census Bureau that may be useful.

Answer: Thank you, will consider.

Question: How does the interviewer make assessments of neighbourhood efficacy?

Answer: 2-6 interviewers make independent assessments of a block. Two scales are used - physical disorder and social disorder and a measure of collective efficacy is derived with factor analysis.

Question: Is this a representative sample or is there selection bias? It might not be the neighbourhood level factors but individual level factors that make up the effect.

Answer: Household level variables will also be included in the models, as well as higher level measures.

Question: How do you test that this improves the model?

Answer: Will compare the fit of models.

Question: No direct estimates of bias?

Answer: No, just the response propensity bias.

Question: Models that fit better might do worse at adjusting for the bias.

Answer: Will investigate this in the third paper.

Emilio Lopez-Escobar

Overview of presentation

There is potential for abuse, because researchers want to use variance estimators without having to worry too much about technicalities. There is a need of generalised variance estimators with easy-to-find conditions to use them. Regularity conditions of Campbell-Berger-Skinner Jackknife Variance Estimator are too restrictive, because they do not allow the variance estimator be extended to more than one stage. The presentation proposed an adjustment that is less restrictive, but still design-consistent and can be extended to more

than one stage.

Discussion

Question: How much does it complicate things if we need to use adjusted weights?

Answer: The weights can be arbitrarily chosen. There are only mild conditions on weights: For example, these weights cannot reach 1.

Question: But sometimes weights equal 1, for example if some cases will always be selected, e.g. bigger enterprises in business surveys.

Answer: These weights are not the usual weights, i.e. the inverse of the inclusion probabilities. These are the Hajek's or standardised weights. Inclusion probabilities can be one 1 for those enterprises, while these weights are set to be different from 1. These estimation weights compensate, because there is a sum below in their definition.

Question: Does this work for all types of statistics? E.g. Gini, median

Answer: This could be done if the regularity conditions are satisfied, that means it depends mainly on the smoothness of the statistic. Order measures are known to be non-smooth. This variance estimator has some disadvantages, mainly that it is totally different from the standard methods and that it is more computationally intensive.

Question: Are the personality characteristics of persons who respond to the surveys different from non-respondents? Could these be better predictors?

Comment: For Census publicity Census Bureau has commissioned a study about mindsets in the general population. Five groups have emerged: 1) favourable about the Census and have good knowledge, 2) favourable about the Census, but do not know about it, 3) knowledgeable, but sceptical, 4) have heard about the Census, but know nothing else, 5) know nothing about the Census.