Applied Research Methods (MULT30018)

Tutorial 7

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Outline

W1. Introduction
W2. Descriptive statistics
W3. Crosstabs and correlations
W4. Regression 1
W5. Regression 2
W6. Experiments
W7. Counterfactuals
W8. Mixed methods
W9. Group presentations
W10. Final assignment workshop

Tutorial Objectives

- Understand the value of counterfactuals for answering questions that cannot be answered using correlation, regressions and experiments
- Know how to maximize the rigour of counterfactual research
- Understand debates about the utility of counterfactual research
- Conduct analysis and planning for final assignment
  - Determinants of quality of life
- Work on group presentations

Counterfactuals

- What is the causal effect of attending catholic school vs. public school on high school graduation?
  - Treatment group: catholic
  - Control group: public
  - What would have happened if those who attend catholic school would attend public school?

- Potential vs. observed outcomes
- Direct observation of causal effects?
- Causal inference is a missing data problem
- Assumption-free causal inference is impossible
  - Not the existence, but the quality of assumption matters

Counterfactuals

- Clarity: Specify and circumscribe the independent and dependent variables (antecedent and consequent)

- Logical consistency: Specify connecting principles that link the antecedent with the consequent

- Historical consistency: Specify antecedents that require altering as few well-established facts as possible

(Tedlock & Belkin, 1996)

Counterfactuals

- Theoretical consistency: Articulate connecting principles consistent with well-established theoretical generalizations relevant to the antecedent-consequent link

- Statistical consistency: Articulate connecting principles consistent with well-established statistical generalizations relevant to the antecedent-consequent link

- Projectability: Tease out testable implications of the connecting principles and determine whether those hypotheses are consistent with additional real-world observations

(Tedlock & Belkin, 1996)

Methods Lab 4: Quality of Life

- Use World Values Survey to predict quality of life
- Create a multiple measure variable for quality of life using variables V10, V11, V23
- Select what you believe to be appropriate predictors to explain quality of life
  - Theoretical argument
  - 3-5 variables
- Conduct descriptive statistics and regression analyses
- Outputs:
  - Tabulate dependent and independent variables
  - Correlations between dependent and independent variables
  - Run linear regressions
  - Write up results
  - Write up a conclusion

Preparation for Group Presentation

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