GRIPS

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Predicting and Monetizing Impacts

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BGVW Chapter 11 "Predicting and Monetizing Impacts"

Basic steps of policy analysis

- Understand the problems and construct a framework for analysis
  - Market failure and government failure
- Formulate policy alternatives to evaluate
- Forecast impacts of each alternatives
  - This step usually requires most resources
  - Use natural sciences, medical sciences, engineering, etc. depending on the policy area
- Evaluate the benefits and costs of policy impacts
  - Cost-Benefit Analysis
  - Cost-Effectiveness Analysis, Qualitative CBA
- Evaluate the reliability of the evaluation results (Sensitivity analysis)

Sources of errors

- A good policy analysis has to be comprehensive
  - But, more comprehensive, more sources of errors
- Sources of errors
  - Omission errors: the exclusion of impacts with substantial costs and benefits, prevent CBAs from being comprehensive.
  - Forecasting errors: we cannot predict the future with certainty.
  - Valuation errors: we often do not have confident estimates of appropriate shadow prices for converting each predicted impact into an opportunity cost or a willingness to pay.
- Analysts must complete comprehensive CBAs while anticipating the errors and consciously assess them to the greatest extent possible

Methods of forecasting impacts I

- Simplify by predicting incremental impacts relative to the status quo
  - Predict the incremental impacts of policy alternatives relative to those that would occur under the status quo policy: “With Case” vs. “Without Case”
- Predict using the data from an ongoing policy
  - Useful for the policy question of whether a policy in place should be continued, terminated, or replicated?
    - “look back (make inferences) to look forward (make predictions)”
  - Example: An intervention to support schizophrenics in community living situations
    - Compare those who receive benefits of a policy intervention with others who do not
    - How to set the control group (Without Case)
    - The best method is an experiment with random assignment into treatment and control groups
    - Sometimes the only available comparison may be statistics on the general population or findings from research done for other purposes. For example, the suicide risk or hospital utilization rates for schizophrenics may be drawn from the medical literature and compared to those observed for the policy being assessed.

Methods of forecasting impacts II

- Predict based on single evaluation of a similar policy
  - The same underlying model? The details of the policies conform?
  - Quality of the evaluation. Based on an experiment? A good basis for inference?
  - The bias of academic journals to publish studies with statistically significant results.
  - Optimism bias
  - Should we treat estimated impacts as zero if not statistically significant?
- Predictions based on meta-analyses of similar policies
  - Drawing information from multiple evaluations reduces the chances that the overall result will suffer from the limitations of any one of the evaluations.
- Predict using generic elasticities
  - Price elasticity estimates can be used to predict the quantity of the good consumed.
  - Search the general economics literature and the specialized literatures to find empirical estimates of elasticities: ECONLIT (general), ERIC (education), PubMed (health). Search for meta-analyses of important elasticities.
- Guesstimate
  - Experts may have rules-of-thumb that help them make reasonable predictions about impacts.

Monetizing impacts

- Market goods
  - Value of a change in consumption
    - Consumer surplus using market prices
    - Shadow prices when prices are distorted: Externalities, taxes, etc.
- Missing markets
  - Estimates of shadow prices from past studies, BGVW Chapter 16.
    - Quality of research is variable. Meta-analysis
  - Transferability: difference in time, area, age, etc.
    - Example: Parents value the elimination of flu symptoms in their young children at twice the rate at which they value relief of their own symptoms could be the basis for assessing shadow prices for effects on children. Are the impacts comparable to flu symptoms?