Evaluation
A Systematic Approach

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Chapter 8:
Evaluating Program Impact: Designs With Strict Controls on Program Access

Evaluating Program Impact

- Two impact evaluation designs that control access to a program:
  - Randomized designs
  - Regression discontinuity designs

Controlling Selection Bias by Controlling Access to the Program

(1 of 4)

- Control conditions
- Two designs:
  - Randomized designs
  - Regression discontinuity designs

Controlling Selection Bias by Controlling Access to the Program

(2 of 4)

- Randomized Control Designs
- Equivalence:
  - Identical composition
  - Identical predispositions
  - Identical experiences

Controlling Selection Bias by Controlling Access to the Program

(3 of 4)

- Randomized Control Designs
- Random assignment
  - Two groups differ only by chance

Controlling Selection Bias by Controlling Access to the Program

(4 of 4)

- Regression Discontinuity Designs
- Quantitative assignment variable
- Participants sorted based on the cut-point

Key Concepts in Impact Evaluation

(1 of 5)

- Program Circumstances
  - Efficacy
  - Effectiveness

Key Concepts in Impact Evaluation

(2 of 5)

- Types of Counterfactuals
  - Compared to no organized intervention
  - Compared to other interventions
  - Program more effective than others

Key Concepts in Impact Evaluation

(3 of 5)

- Types of Program Effects
  - Intent-to-treat
  - Treatment-on-the-treated

Key Concepts in Impact Evaluation

(4 of 5)

- Unit of Assignment
- Cluster randomized trial
  - Multilevel design
  - Sample size needs to be large

Key Concepts in Impact Evaluation

(5 of 5)

- Multiple Intervention Conditions
  - Not limited to two conditions
  - Can include more than two programs
  - Can include different program models
  - Can include different dosage

When Is Random Assignment Ethical and Practical?

(1 of 2)

TABLE 8-B1 Conditions for Deciding to Conduct Randomized Field Trials in the Justice Area

Federal Judicial Center
1. Pre\sent practice needs improvement or is of doubtful effectiveness.
2. Significant uncertainty exists about the value of the proposed innovation.
3. A randomized experiment is the only practical means of determining effectiveness of the innovation.
4. Evidence to be used to inform future decisions about retaining status quo or implementing innovation.
5. Experimentation may require different considerations, especially to protect human subjects in some fields, such as justice, than in others, such as medicine, because informed consent may not be possible.

Source: Federal Judicial Center, Advisory Committee on Experimentation in the Law (1981).

When Is Random Assignment Ethical and Practical?

(2 of 2)

- Practical Considerations
  - Identify relevant prior studies
  - Pilot test
  - Examine the willingness of the target population to participate
  - Use valid and reliable data collection instruments

Application of the Regression Discontinuity Design

(1 of 2)

- Used when random assignment is not possible
- Assignment based on scores
- Inherently fair

Application of the Regression Discontinuity Design

(2 of 2)

- Three statistical modeling approaches are most common:
  - Regression model
  - Bands on either side of a cut-point
  - Over-weight observations

Choosing an Impact Evaluation Design

- Using comparison groups can yield similar results to randomized design
- Must draw on all available resources
- Must disclose limitations and sources of bias