Learning What Works

An Introduction to Social Experiments

April 2010

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SOCIAL RESEARCH AND DEMONSTRATION CORPORATION | SOCIÉTÉ DE RECHERCHE SOCIALE APPLIQUÉE

Outline

1. SRDC – Who we are
2. Introduction to Demonstration Projects
3. Evaluation Design
4. Social Experiments
   - How does Random Assignment Work
   - Pros and Cons
   - Conditions when experiments are feasible
5. Canadian Examples

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SRDC – Who we are

- SRDC is a non-profit policy research organization
- Our two part mission
  - Help policy-makers and practitioners identify policies and programs that improve the well being of all Canadians with special concern for the disadvantaged
  - Raise the standards of evidence that are used in assessing policies and programs
- Specialize in evaluating programs and new policy ideas "at scale" in "real-world" settings
- Use the most rigorous evaluation methods to demonstrate **what works, for whom, and why**

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SRDC – Who we are

- Pioneer in the design and implementation of social experiments in Canada
- Managed most of Canada's large-scale demonstration projects over the last 20 years
- Implemented studies in 9 provinces and over 60 communities and have recruited and randomly assigned over 31,000 participants
- Studies involve significant collaboration with practitioners, academics, and federal and provincial governments

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Introduction

What is a demonstration project?

- A "field" test of a new policy or program idea
- Implemented at scale with services delivered to actual participants under "real-world" operating conditions
- Central feature is a rigorous evaluation design drawing on both quantitative and qualitative methods

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Introduction

Evaluation Design for a demonstration project most often includes

- **An Outcome or Impact study** – to measure "program effects" – best derived from a strong counterfactual
- **Implementation research** – to explore how, why, and for whom program effects have arisen
- **Cost-benefit analysis** – to estimate returns for participants, governments, and society as a whole to inform sound policy decisions

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Evaluation Design

Impact Study – Measuring Program Effects

- Distinguish between outcomes and impacts
- **An Outcome** is a measure of some variable of interest such as participant employment levels, earnings, wages
  - e.g. 40 percent employed full time, average earnings of $400 per week, average wages of $12/hour
- **An Impact** is an estimate of the size of the *effects of the program* such as an increase in employment or earnings
  - e.g. an increase of 10 percentage points in employment, an increase in earnings of $400/month

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Evaluation Design

The Counterfactual

- Estimating program impacts requires a counterfactual
- **Counterfactual** – a measure of what would have occurred in the absence of the program
- **An impact** is the difference between the observed outcomes of participants and the counterfactual
- How the counterfactual is constructed and how impacts are estimated – critical defining features of an evaluation

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Evaluation Design

Pre-Post Designs

- Measure outcomes BEFORE and AFTER an intervention
- **Counterfactual** – assumes no change would occur on key participant outcomes in absence of the program
- If true, the difference or change over time is a valid estimate of the effect of the program
- **PROS** – simple to implement, can be low cost
- **CONS** – almost always biased as change happens for many reasons unrelated to the program

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Evaluation Design

Comparison Group Designs

- Compare outcomes between PARTICIPANTS and a similar group of NON-PARTICIPANTS
- **Counterfactual** – assumes that these non-participants are similar enough to participants before the program starts
- If true, the difference between the two groups over time provides a valid estimate of the program effect
- **PROS** – often the most readily available approach
- **CONS** – almost always biased as groups differ in ways unrelated to the program

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Evaluation Design

Quasi-Experimental – Matching Techniques

- Improve the similarity of the comparison group with program participants by statistical matching techniques
- **PROS** – provides an improvement over non-matched comparison group methods
- **CONS**
  - Requires a lot of good quality longitudinal data, which is often not available
  - Does NOT control for UNOBSERVABLE differences between the groups

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Evaluation Design

Experimental Design

- Randomly assign individuals to a treatment group that is eligible for the program and a control group that is not
- Ensures the two groups are similar on ALL traits – including unobservable and immeasurable ones
- **PROS**
  - Unbiased and most reliable estimates of program effects
  - Provides best evidence for making policy decisions
- **CONS**
  - Not always feasible to implement
  - Can be lengthy – not always providing timely results
  - Can be costly compared to some other methods

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Social Experiments

How does Random Assignment (RA) work?

- Start with a target population of interest
- Recruit eligible sample, obtain consent and baseline data
- Randomly assign into program & control groups
  - Program Group receives the intervention
  - Control does not – eligible for same services as before
- Key outcomes for both groups are tracked over time
- Differences in outcomes can be reliably attributed to program

- While there are many decisions about **when** and **how** to conduct RA – fundamentally it is a straightforward process

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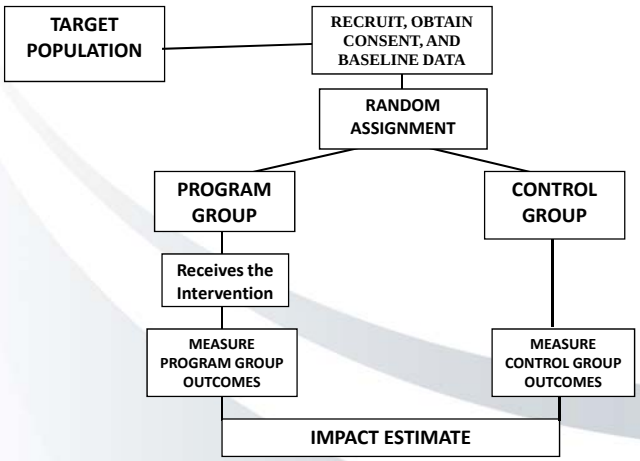
Social Experiments

Single Treatment, Simple RA (Unblocked, Unpaired)



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Social Experiments

What are some of the conditions when Random Assignment is appropriate?

- When the research objectives involve questions of program effects or impacts
- Outcomes are known (or theorized) and measurable
- When alternative methods are unlikely to yield acceptable levels of certainty
- Able to meet ethical and legal standards
- Able to match research goals with operational and political realities

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Social Experiments

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Social Experiments

When might Random Assignment be less appropriate or infeasible?

- For studies of a strict exploratory nature, or where outcome measures are unclear
- Obtaining unbiased and reliable estimates of program effects are not paramount
- Ethical or legal constraints preclude study
  - An existing and non-incremental program for which one CANNOT withhold services (from the control group)
  - Difficulties in obtaining informed consent
- Budget or timeframe inconsistent with needs of evaluation

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Canadian Social Experiments

Welfare Studies -- Self-Sufficiency Project

- 9,500 welfare recipients in three linked studies in BC and NB

Employment Insurance -- Earnings Supplement Project

- Two parallel studies: 8,200 displaced workers in five sites and 3,400 repeat EI users in four sites

Community Development – CEIP

- 1,000 EI recipients and 500 welfare recipients in Cape Breton

Savings and the Poor – *learn*$ave

- Three-way random assignment of 3,600 low-income individuals in three cities

Access to Education – Future to Discover and AVID

- 5,400 high school students in NB and Manitoba testing two interventions
- 1,000 high school students in BC to evaluate the Advancement Via Individual Determination program

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Canadian Social Experiments

Community Employment Innovation Project (CEIP)

- Employment Insurance and welfare recipients exchange their benefits for up to three years work on community-based jobs
- Participants were paid a community wage
- Communities were responsible for developing job opportunities that meet local needs
- Can communities generate meaningful work opportunities through the "social economy"?
- Will these lead to human and social capital development?
- Will this lead to long term gains in employment and reductions in reliance on EI and social assistance?

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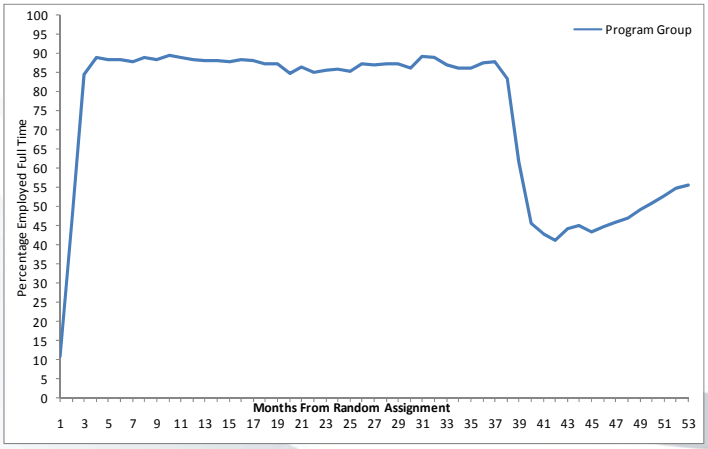
Community Employment Innovation Project

Full Time Employment



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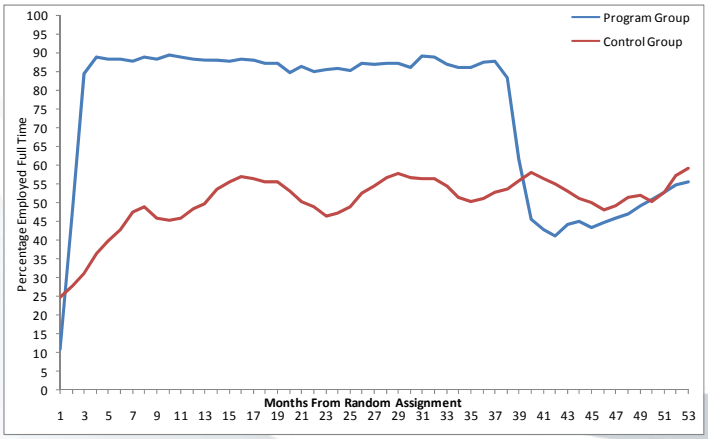
Community Employment Innovation Project

Full Time Employment



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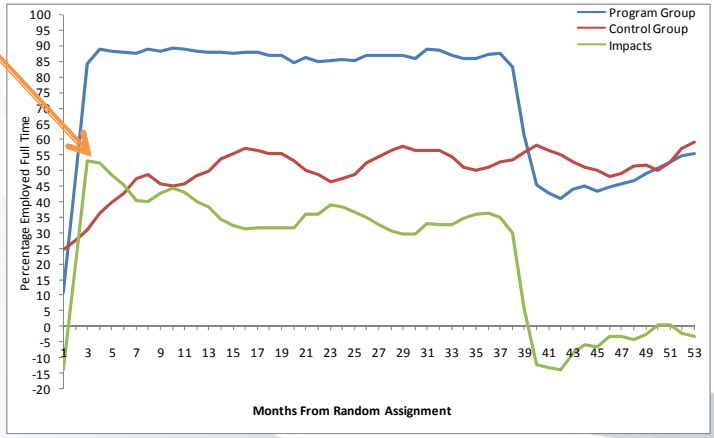
Community Employment Innovation Project

Full Time Employment

A 53 percentage point impact at peak



No significant impacts a year after end of CEIP eligibility

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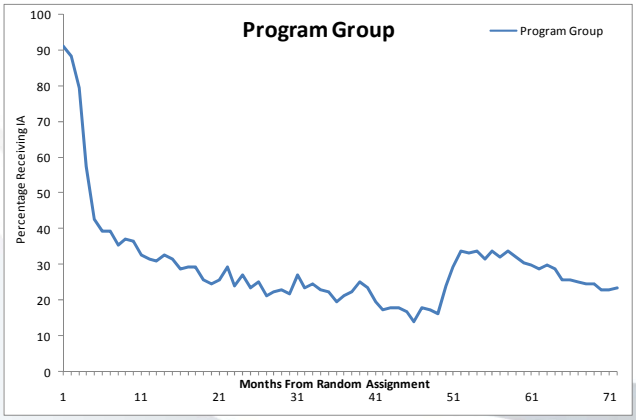
Community Employment Innovation Project

Long-term Welfare Receipt



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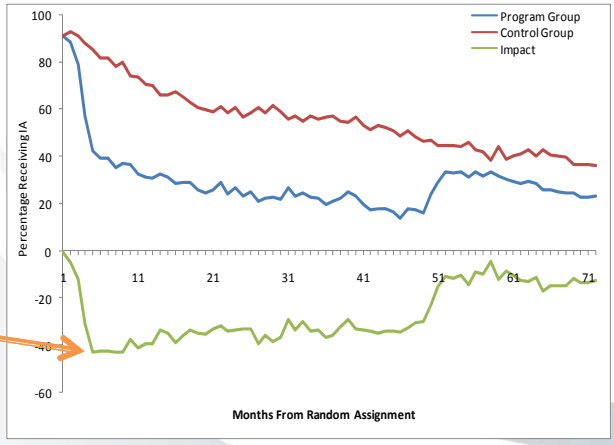
Community Employment Innovation Project

Long-term Welfare Receipt



A stable 42 percentage point reduction in IA receipt during program

A sustained 12 percentage point reduction in IA receipt

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Cost-Benefit Analysis Results

Net benefit-cost per IA program group member over the full 54-month follow-up

Component of Analysis	Accounting Perspective: Individuals	Communities	Government	Society
Monetized components				
Participant Impacts				
CEIP earnings	**34,344**	**0**	**-34,344**	**0**
Foregone non-CEIP earnings	**-10,974**	**0**	**0**	**-10,974**
Transfer payments (EI & IA)	**-11,836**	**0**	**11,836**	**0**
Tax payments (taxes and premiums)	**-3,559**	**0**	**2,921**	**-638**
Other household member earnings	**2,035**	**0**	**0**	**2,035**
Third Sector Organizational Effects				
Value from CEIP jobs (to sponsors)	**0**	**20,024**	**0**	**20,024**
Volunteering (CEIP induced)	**0**	**2,404**	**0**	**2,404**
CEIP administrative costs	**0**	**0**	**-4,274**	**-4,274**
Admin costs of EI & IA transfers	**0**	**0**	**471**	**471**
Net Benefit/Cost per Program Group Member	**10,010**	**22,428**	**-23,390**	**9,048**

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learn$ave –

- Demonstration project sponsored by HSRDC.
- 3 experimental sites.
- Approximately 3600 participants were randomly assigned into one of 3 groups:
  - Control group
  - *learn*$ave--received financial incentive
  - *learn*$ave plus--received financial incentive plus 15 hours of financial management training.

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learn$ave – Matched Saving Incentive

- Participants earn $3 in matched credits for every $1 they deposit in their *learn*$ave account
  - Must first "actively" save: at least $10 in each of 12 months
    - intended to encourage **regular** saving
  - Participants had 3 years to earn credits
  - Maximum deposits qualifying for credits: $250 monthly and $1,500 overall in saving period
- Participants had until month 48 to use their credits
  - Credits used for accredited education/training or for starting a small business, depending on their saving stream/goal

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learn$ave 40-month education impacts

	Control	*learn*$ave	*learn*$ave Plus	Overall Impact
Overall Enrolment	78.6	83.3	86.0	7.4
Program Enrollment	54.4	62.6	66.4	12.0
Course Enrollment	44.3	46.0	47.8	3.5

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Navigating the Labour Market (NLM)

- Short-term study (January to May 2008)
- Two main research objectives:
  1. To explore the relationship between literacy and labour market knowledge (non-experimental)
  2. To test the impact of a short labour market information package (experimental)
- Literacy assessed using online variant of International Adult Literacy Survey called Canadian Literacy Evaluation (CLE)
- Labour market knowledge measured by survey developed by SRDC
- Methodology: 16 classroom sessions
- Convenience sample of 600 youth aged 18-30 years in Ottawa area divided equally into treatment and control

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NLM Classroom Sessions

Participants:

- sign in; SRDC monitors explain session activities
- read and sign consent form
- seat themselves at a workstation and enter the unique authorization code (CLE code) from their consent forms
- observe a 15-minute LMI slideshow (program group) or play selected computer games for 15 minutes (control group)
- complete a labour market knowledge (LMK) survey online
- complete the CLE Locator test online
- receive their $75 incentive cheque

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NLM--Results

- Program group members (participants exposed to the LMI intervention) were more likely than control group members to:
  - Recognize the positive relationship between education and employment
  - Correctly identify employment opportunities in Ottawa
  - Understand the relationship between education and earnings
  - Assess the significance of trends affecting the labour market
  - Perceive education as important to labour market success
  - Believe they are capable of finding selected labour market information

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Questions and Discussion

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