

Starting
shortly

Please
wait!

ActivityInfo

Measuring impact with ActivityInfo and post
intervention surveys

Presentation outline

Overview

1. Design
2. Sampling
3. Field work
4. Analysis

1. Design

Quantitative impact evaluation

Case study


Quantitative Impact Evaluation

Causal impact

$$\Delta = (Y | P = 1) - (Y | P = 0)$$

Outcome Y without the program

Outcome Y with the program



The lack of a multiverse is inconvenient

Peter parker in Universe 1 with vocational training

Peter parker in Universe 2 with cash transfer

Peter parker in Universe 3 with no intervention



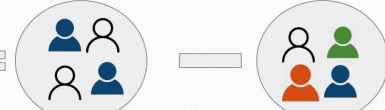
Example: vocational training in refugee camp

Is participation the only difference??

$(Y | P = 1) = 60\$/\text{month}$


$(Y | P = 0) = 10\$/\text{month}$

+50\$



Choose to Enroll
Received training

Choose not to Enroll
No training



Case study: Pennsylvania Maple Syrup

Case study



Key indicators - outcomes

Case study

- Total yield per farm increases 20% among participants
- Yield per tap increases 10% among participants by end of program

Database design

Set up forms and reports

Reference forms

- Geography
- Categories
- Macro statistics

Registry forms

- Individuals
- Farms
- Firms
- Loans

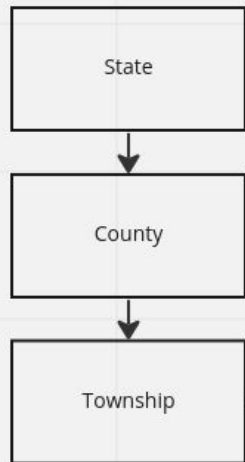
Trackers

- Activities
- Training
- Farm visits
- Communication

Surveys

- In depth sample
- Measure outcomes

Reference



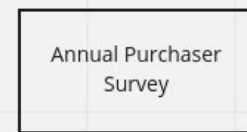
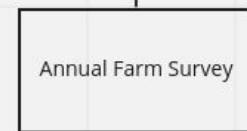
Registry



Tracker



Survey



Try it yourself:



Development assistance for projects

Track outputs, outcomes, impact with reference, registry, trackers and survey forms.

Try this template



Activity
Info

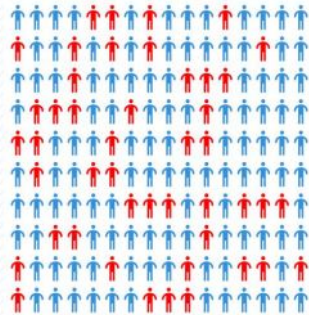
<https://www.activityinfo.org/support/templates/development-assistance-project.html>

2. Sampling

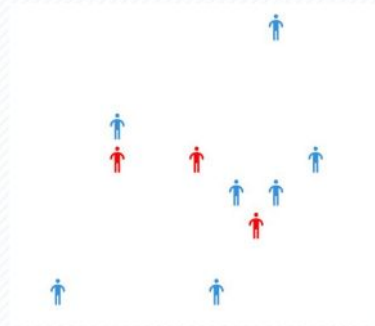
Population and sample

Sampling

Population is the entire 20,000 IDP **households** about which we are concerned.



A **sample** is the specific 200 households we will interview.



Sample frame

Sampling

Sample frame:

the list of all those within a population who can be sampled, and might include individuals, households, farms, firms, etc.

Sample frame in ActivityInfo

Sampling

Scenario 1: Sampling only from your participants.
Your **Registry** forms will typically serve as your sample frame.

Scenario 2: Sampling from both participants and non-participants
You should add a separate sample frame form with a reference to your Registry

Sample form in ActivityInfo

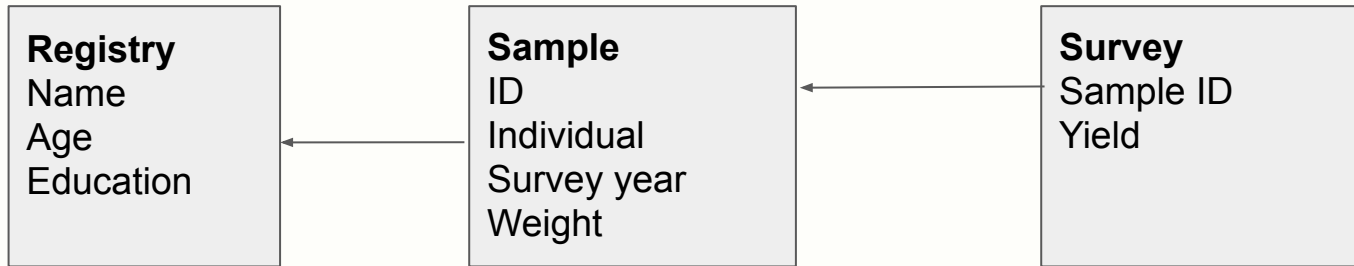
Sampling

The sample form is a list of the selected members of the population to survey.

Should include weights.

Form design

Sampling



Drawing a sample

Sampling

Excel:

*Simple random sampling
and basic stratified
sampling*

=RAND() and sort

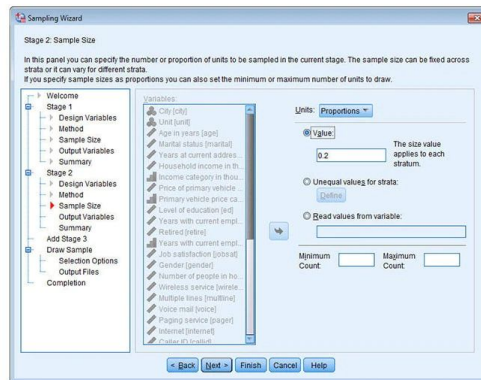
R

Complex sampling

```
library(survey)  
library(activityinfo)
```

SPSS

Complex sampling



Inclusion probabilities

Sampling

Inclusion Probability (IP) : the probability that an individual member of the population will be included in the sample.

Simple Random Sampling (SRS): every member of the population has an equal and independent probability of being selected.

$$= \frac{\text{Number sampled}}{\text{Total population}} = \frac{10}{55}$$

Weight

Sampling

Each respondent's weight (W) is equal to the reciprocal of their inclusion probability.

$$\mathbf{IP} = \frac{\text{Number sampled}}{\text{Total population}} = \frac{10}{50} = 0.20 \quad \mathbf{W} = \frac{\text{Total population}}{\text{Number sampled}} = \frac{50}{10} = 5.0$$

DEMO

Sampling

Let's try it!

3. Field work

Preparing the field plan

Field work

- Your Sample form provides a roadmap for interviewers
- Include data linked from the Registry form to orient field staff

Invite surveyors

Field work

- Define a role for Surveyors
- Invite surveyors by email
- For casual staff, use the Google account associated with the Android device.
- When inviting new users, be sure to select the right **language**

Train surveyors

Field work

- Install app from Android Play Store, or from the website for iPhones
- Download the database offline
- Collect!

Demo...

4. Analysis

Analyzing one survey

Analysis

- Weight data using the inclusion probabilities from the sampling
- Use notebooks to assemble analyses
- Weights