

Advanced Methods in Impact Assessment Workshop
September 21-26, 2015
Nairobi, Kenya

Day 1: The Problem of Cause and Effect: How to Create Knowledge through Impact Assessments

- 9:00 Meet in ICRAF board room for official program opening.
Opening introduction by **Moses Siambi**, ICRISAT Director of East and Southern Africa
Statement of Workshop goals and acknowledgement of donor support by **Kizito Mazvimavi**,
Head, Impact Assessment Office and Zimbabwe Country Representative
- 9:30 Session 1A: Introduction to impact assessment
Topics: What are impact assessments?
Why do we need impact assessments?
Why is it important to get things right – cautionary tales
- 11:00 Morning coffee/tea break with snacks.
- 11:30 Session 1B: The challenge of establishing a causal effect
Topics: The Fundamental Problem of Causal Inference
Casual inference is a missing data problem
Solutions to the problem: Randomization, Matching, Instrumental Variables
- 13:00 Lunch Break
- 14:30 Session 1C: Data workshop
Topics: Introduction to Stata
Comparison of treatment and the role of confounding factors.
- 16:00 End of day

Day 2: Constructing the Appropriate Counterfactual: Randomized Control Trials & Matching

- 9:30 Session 2A: The structure and design of Randomized Control Trials (RCTs)
Topics: Why use RCTs?
How to construct an appropriate counterfactual
How to design a randomized experiment
Concerns with randomization
- 11:00 Morning coffee/tea break with snacks.
- 11:30 Session 2B: Why match and how not to do it wrong
Topics: Different matching methods: Propensity Score Matching, Nearest-Neighbor,
Stratification and Interval Matching, Local Linear Matching
How to calculate the propensity score
Necessary assumptions needed to apply PSM and what to do when these fail
- 13:00 Lunch Break
- 14:30 Session 2C: Data workshop
Topics: Determine if an RCT “worked” and measure the ATE
Establish the appropriate counterfactual using matching
- 16:00 End of day

Day 3: Measuring the Effect of the Treatment: Difference-in-Difference (DiD) and the Average Treatment Effect (ATE)

- 9:30 Session 3A: How to construct a difference-in-difference estimator
Topics: Conducting single difference evaluation and what this method misses
How to construct the DiD estimator
Potential violations of assumptions or hurdles to measurement
- 11:00 Morning coffee/tea break with snacks.

- 11:30 Session 3B: How to measure the average treatment effect
Topics: What is needed to measuring the ATE
How to measure the ATE
Issues in establishing the validity of your ATE
- 13:00 Lunch Break
- 14:30 Session 3C: Data workshop
Topics: Construct the DiD estimator
Measure a variety of treatment effect such as ATE, LATE, and MTE
- 16:00 End of day

Day 4: How to Identify a Causal Effect with Non-Experimental Data: Instrumental Variables (IVs) and Panel Data Techniques

- 9:30 Session 4A: The challenge of identifying causal effects with non-experimental data
Topics: Why we might need an Instrumental Variable?
What is an IV and how does it work?
Finding a good IV and how to identify a bad IV
- 11:00 Morning coffee/tea break with snacks.
- 11:30 Session 4B: Using panel data estimators to identify a causal effect
Topics: Panel data models: Pooled, Fixed, Random, Correlated Random, etc.
How to choose the right model
Other panel data techniques
- 13:00 Lunch Break
- 14:30 Session 4C: Data workshop
Topics: Develop an IV and test for validity
Implement a variety of panel data estimators like FE, RE, and CRE
- 16:00 End of day

Day 5: Challenges to Identification of Causal Effects

- 9:30 Session 5A: What to do when our standard assumptions are violated
Topics: Necessary assumptions for causal inference
Measuring distributional effects
Adjusting for spillover effects
Violations of i.i.d. data
- 11:00 Morning coffee/tea break with snacks.
- 11:30 Session 5B: Connecting everything back to program assessment
Topics: Theory and empirics in development economics
External validity and internal validity
Why it is important not just to do assessments but to learn from assessments
- 13:00 Lunch Break
- 14:30 Session 5C: Discuss research grant proposals
- 16:00 End of day