

Potential outcomes and Causal Models

What if?

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Introduction: What if?

From here on, the whole purpose of the methodologies we will discuss is the analysis of causal effects of some:

Policy, treatment, experiment, or otherwise event

But, How is it different from what we did before?

It isn't.

Under Exogeneity assumption $E(e|X) = 0$, one can make causal effect claims.

! We seek the truth

How much of the change in outcome is caused by the program alone?

But this is not as easy.

Examples...Where is the challenge?

A few examples for Causal effect questions:

- Do minimum wages increase unemployment ?
- Do Conditional cash transfers improve health outcomes in children?
- Do Covid Vaccines help reduce the Spread of Covid?

These questions are, however, difficult to answer.

- How do you make sure the “treatment” is the Only factor that explains the difference in outcome across groups??