

Units	PO w/ Treatment	PO w/o Treatment	Realised Outcome
Treatment Group ($D_i = 1$)	$E[Y_{i1} D_i = 1]$	$E[Y_{i0} D_i = 1]$	$E[Y_{i1} D_i = 1]$
Control Group ($D_i = 0$)	$E[Y_{i1} D_i = 0]$	$E[Y_{i0} D_i = 0]$	$E[Y_{i0} D_i = 0]$

Term	Meaning
$E[Y_1 - Y_0]$	Average Treatment Effect (ATE). Average difference in potential outcomes.
$E[Y_1 - Y_0 D = 1]$	Average Treatment Effect on the treated (ATT). Average difference in potential outcomes for those that received treatment. This is what we estimate when treated and control units are not interchangeable.
$E[Y_{i1} D_i = 1] - E[Y_{i0} D_i = 0]$	Difference in observed (realised) outcomes between treatment and control groups.
$E[Y_{i0} D_i = 1] - E[Y_{i0} D_i = 0]$	Difference in potential outcomes without treatment between groups. This is the expected difference in the outcome between treatment and control group if none received treatment (' <i>selection bias</i> ').