Presented by

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“Doing More When You’re Running LATE: Applying Marginal Treatment Effect Methods to Experiments”

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Cornell Hall, Room D313
UCLA Anderson School of Management

Abstract
Researchers run experiments to obtain a treatment effect estimate that is internally valid. However, the local average treatment effect (LATE) estimated by an experiment is not globally externally valid if the treatment effect varies across individuals. The LATE gives the average treatment effect for compliers who receive the treatment if and only if they win the experimental lottery. In many experiments, there are also always takers who always receive the treatment and never takers who never receive the treatment regardless of the experimental lottery. I show that it is possible to use such experiments to recover bounds on average treatment effects for always takers and never takers. These bounds can reject global external validity of the LATE in some cases, and they depend on weaker assumptions than existing tests of global external validity. Building on existing methods to recover a marginal treatment effect (MTE) with a discrete instrument, I develop weights that allow me to recover average treatment effects for discrete groups of individuals created by a discrete instrument, including always takers and never takers. I use the recovered treatment effects to decompose group average treated outcomes into selection and treatment effects. I also decompose the sample OLS estimate into a selection effect and a treatment effect. This decomposition generalizes the comparison of the OLS estimate to the LATE when the treatment effect is heterogeneous. I apply these methods to the Oregon Health Insurance Experiment. The Oregon LATE indicates that obtaining insurance increases emergency room (ER) utilization for compliers. I find that the treatment effect of insurance on ER utilization decreases from always takers to compliers to never takers. I also find that potential uninsured ER utilization decreases from always takers to compliers to never takers. Therefore, the selection effect and the treatment effect of insurance on insured ER utilization decrease as a larger fraction of individuals gain insurance. The heterogeneous selection and treatment effects that I recover from Oregon indicate that a different policy experiment could increase or decrease ER utilization, depending on which individuals it induces to gain coverage.

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