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Webinar of Computational Social Science Laboratory (CSSL@CUHK)

Heterogeneous Treatment Effect Bounds under Sample Selection with an Application to the Effects of Social Media on Political Polarization

19 April 2024 (Friday), 09:00 - 10:30 (UTC+8, HKT)

Abstract

A method for estimation and inference for bounds for heterogeneous causal effect parameters in general sample selection models is proposed where the treatment can affect whether an outcome is observed and no exclusion restrictions are available. The method provides conditional effect bounds as functions of policy relevant pre-treatment variables. It allows for conducting valid statistical inference on the unidentified conditional effects. A flexible debiased/double machine learning approach is used, which can accommodate non-linear functional forms and high-dimensional confounders. Easily verifiable high-level conditions for estimation, misspecification robust confidence intervals, and uniform confidence bands are provided as well. Data from a large scale field experiment on Facebook on counter-attitudinal news subscription with attrition is re-analyzed. This method yields substantially tighter effect bounds compared to conventional methods and suggests depolarization effects for younger users.



Prof. Phillip Heiler
Associate Professor

Department of Economics and Business Economics
Aarhus University

Biography

Phillip Heiler is an Associate Professor at Aarhus University at the Department of Economics and Business Economics and the TrygFonden's Centre for Child Research (on leave) and currently visiting Associate Professor at the Department of Economics at Harvard University. His main research interests are econometrics of causal inference, causal machine learning, non- and semiparametric econometrics, and partial identification.



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