



UNIVERSITY OF MINNESOTA

Department of
**APPLIED
ECONOMICS**

Agricultural and Applied Economics Seminar

Poorly Measured Confounders are More Useful on the Left Than on the Right

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12:00 – 1:30 pm

119 Ruttan Hall

Researchers frequently test identifying assumptions in regression based research designs (which include instrumental variables or difference- in-differences models) by adding additional control variables on the right hand side of the regression. If such additions do not affect the coefficient of interest (much) a study is presumed to be reliable. We caution that such invariance may result from the fact that the observed variables used in such robustness checks are often poor measures of the potential underlying confounders. In this case, a more powerful test of the identifying assumption is to put the variable on the left hand side of the candidate regression. We provide derivations for the estimators and test statistics involved, as well as power calculations, which can help applied researchers interpret their findings. We illustrate these results in the context of various strategies which have been suggested to identify the returns to schooling. (co-authors: Zhuan Pei, Jörn-Steffen Pischke)