

Comparing Apples to Apples: Estimating Consistent Partial Effects of Preferential Economic Integration Agreements

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Abstract:

Trade and trade policy such as the membership in preferential economic integration agreements (PEIAs; e.g., customs unions or free-trade areas) are jointly determined by the same factors. Therefore, work on the causal effects of trade policy on trade relies on the selection on observables, with propensity-score matching being the leading example. Conditional on some compact metric (the score) of observable joint determinants of PEIAs and trade flows, the causal average partial effect of PEIAs on trade is obtained from a simple (weighted) mean comparison of trade flows between members and non-members. A key prerequisite for this approach to obtain consistent estimates is that the score is balanced: similarity of country pairs in the score (the propensity of PEIA membership) means similarity in each and everyone of the observables behind it. Otherwise the effect estimates may be biased, and one would mis-ascribe nonparametric effects of differences in individual observables to PEIA membership. We demonstrate that there is a severe upward bias of PEIA effects on trade flows from lack of covariate balancing in real-world data, employ a remedy of this bias through entropy balancing, and quantify the bias for partial as well as general-equilibrium effects.