Inference for Synthetic Control Methods with Multiple Treated Units

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Abstract : Although the Synthetic Control Method (SCM) is now widely applied, its most commonly- used inference method, placebo test, is often problematic, especially when the treatment is not uniquely assigned. This paper discusses the problems with the placebo test under the multivariate treatment case. And, to improve the power of inferences, I further propose an Andrews-type procedure as it potentially solves some drawbacks of the placebo test. Simulations are conducted to show the Andrews' test is often valid and powerful, compared with the placebo test.