

# Inference Based on SVARs Identified with Sign and Zero Restrictions: Theory and Applications

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## Abstract

Are optimism shocks an important source of business cycle fluctuations? Are deficit-financed tax cuts better than deficit-financed spending to increase output? These questions have been previously studied using SVARs identified with sign and zero restrictions and the answers have been positive and definite in both cases. While the identification of SVARs with sign and zero restrictions is theoretically attractive because it allows the researcher to remain agnostic with respect to the responses of the key variables of interest, we show that current implementation of these techniques does not respect the agnosticism of the theory. These algorithms impose additional sign restrictions on variables that are seemingly unrestricted that bias the results and produce misleading confidence intervals. We provide an alternative and efficient algorithm that does not introduce any additional sign restriction, hence preserving the agnosticism of the theory. Without the additional restrictions, it is hard to support the claim that either optimism shocks are an important source of business cycle fluctuations or deficit-financed tax cuts work best at improving output. Our algorithm is not only correct but also faster than current ones.

Keywords: SVARs; Sign and Zero Restrictions; Optimism and Fiscal Shocks.

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