

An Improved Bootstrap Test for Restricted Stochastic Dominance (with T. M. Lok)

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Abstract:

This paper proposes a method of bootstrap testing for restricted stochastic dominance between two income distributions. The proposed testing procedure retains the bootstrap test procedure of Linton et al. (2010) (LSW), but reformulates their bootstrap test statistics using an estimator of the contact set based on the method of constrained empirical likelihood that imposes the restrictions of the null hypothesis. This paper characterizes the set of probabilities in the null hypothesis so that the proposed test has asymptotically correct level, and the subsets of this set on which its asymptotic size is exactly equal to the nominal level. The testing procedure of this paper is less conservative than the one LSW propose. Furthermore, it is consistent and has asymptotic local power function that is at least as large as its LSW counterpart under regularity conditions. We report simulation results that show the proposed test is noticeably less conservative than the test of LSW and improves its power.