

Unit Root Tests Based On the Robust Estimator

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Abstract :

The unit root tests based on the robust estimator for the first-order autoregressive process are proposed and compared with the unit root tests based on the ordinary least squares (OLS) estimator. The percentiles of the null distributions of the unit root test are also reported. The empirical probabilities of Type I error and powers of the unit root tests are estimated via Monte Carlo simulation. Simulation results show that all unit root tests can control the probability of Type I error for all situations. The empirical power of the unit root tests based on the robust estimator are higher than the unit root tests based on the OLS estimator.

Keywords : autoregressive, ordinary least squares, type i error, power of the test, Monte Carlo simulation

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