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Directed-Wald Test for Distinguishing Long Memory and Nonlinearity Time Series: Power and Size Simulation

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Abstract : A Wald type test to distinguish between long memory and ESTAR nonlinearity has been developed. The test uses a directed-Wald statistic to overcome the problem of restricted parameters under the alternative. The test is derived from a model specification i.e. allows the transition parameter to appear as a nuisance parameter in the transition function. A simulation study has been conducted and it indicates that the approach leads a test with good size and power properties to distinguish between stationary long memory and ESTAR.

Keywords : directed-Wald test, ESTAR, long memory, distinguish
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