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

Authors : Heri Kuswanto, Philipp Sibbertsen, Irhamah

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
Conference Title : ICMSSC 2015 : International Conference on Mathematics, Statistics and Scientific Computing
Conference Location : Kuala Lumpur, Malaysia
Conference Dates : February 12-13, 2015