INSTITUT FÜR HÖHERE STUDIEN
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ECONOMETRIC RESEARCH SEMINAR

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- SZVI
  Institut für Höhere Studien
  Stumpergasse 56, 1060 Wien

Uwe Hassler,
Goethe University Frankfurt:

"Testing for General Fractional Integration in the Time Domain"

In this paper we propose a family of least-squares based testing procedures that look to detect general forms of fractional integration at the long-run and/or the cyclical component of a time series, and which are asymptotically equivalent to Lagrange Multiplier tests. Our setting extends Robinson's (1994) results to allow for short memory in a regression framework and generalises the procedures in Agiakloglou and Newbold (1994), Tanaka (1999) and Breitung and Hassler (2002) by allowing for single or multiple fractional unit roots at any frequency in [0, π]. Our testing procedure can be easily implemented in practical settings and is flexible enough to account for a broad family of long- and shortmemory specifications, including ARMA and/or GARCH-type dynamics among others. Furthermore, these tests have power against different types of alternative hypotheses and enable inference to be conducted under critical values drawn from a standard Chi-squared distribution, irrespective of the long-memory parameters.

with Paulo M.M. Rodrigues (University of Algarve) and Antonio Rubia (University of Alicante).