Goodness-of-fit tests in conditional duration models

Simos G. Meintanis¹, Bojana Milošević², and Marko Obradović²

¹Department of Economics, National and Kapodistrian University of Athens, Greece simosmei@econ.uoa.gr

¹Unit for Business, Mathematics and Informatics, North-West University, Potchefstroom, South Africa

²Faculty of Mathematics, University of Belgrade, bojana@matf.bg.ac.rs, marcone@matf.bg.ac.rs

We propose specification tests for the innovation distribution in conditional duration models. The new tests are based either on the cumulative distribution function, or on exponential transforms such as the Laplace transform and the characteristic function, or on characterizations of the innovation-distribution under test. We study the finite-sample performance of the proposed procedures in comparison with alternative tests which employ nonparametric density estimates as well as with tests based on entropy. A bootstrap version of the tests is utilized in order to study the small sample behavior of the procedures. A real-data example illustrates the applicability of our method and confirms conclusions drawn by earlier authors.

References

 S. G. Meintanis, B. Milošević and M. Obradović, Goodness-of-fit tests in conditional duration models, Statist. Papers (2017), DOI 10.1007/s00362-017-0930-81