Accepted Manuscript

Nonparametric tests for conditional symmetry

Miguel A. Delgado, Xiaojun Song

PII: S0304-4076(18)30104-0
DOI: https://doi.org/10.1016/j.jeconom.2018.06.010
Reference: ECONOM 4521

To appear in: *Journal of Econometrics*

Please cite this article as: Delgado M.A., Song X., Nonparametric tests for conditional symmetry. *Journal of Econometrics* (2018), https://doi.org/10.1016/j.jeconom.2018.06.010

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Nonparametric Tests for Conditional Symmetry[1]

Miguel A. Delgado[2] Xiaojun Song [3]
Universidad Carlos III de Madrid Peking University

This version: October 23th 2017

Abstract: We propose omnibus tests for symmetry of the conditional distribution of a time series process about a nonparametric regression function. The test statistic is a weighted version of the integrated squared difference between the restricted and unrestricted estimators of the joint characteristic function of nonparametric residuals and explanatory variables, whose critical values are estimated with the assistance of a bootstrap technique. The test is sensitive to local alternatives converging to the null at the parametric rate $T^{-1/2}$, with T the sample size. We investigate the finite sample performance of the test by means of Monte Carlo experiments and two empirical applications to test whether losses are more likely than gains in financial markets, and whether expansions and contractions are equally likely in business cycles, given the relevant information.

Keywords: Conditional symmetry; Nonparametric testing; Permutation; Smoothing; Time series data.

JEL classification: C12; C14; C15.

[1]We are most thankful to the co-editors and two referees for their many insightful comments and suggestions, which have led to an improved version of the article. Support from Ministerio Economía y Competitividad (Spain), grant numbers ECO2014-55858-P and MDM 2014-0431, Comunidad de Madrid (Spain), MadEco-CM grant number S2015/HUM-3444, and the National Natural Science Foundation of China, grant number 71532001.

[2]Departamento de Economía, Universidad Carlos III de Madrid, 28903 Getafe (Madrid), Spain. E-mail: delgado@est-econ.uc3m.es.

[3]Department of Business Statistics and Econometrics, Guanghua School of Management and Center for Statistical Science, Peking University, Beijing, 100871, China. E-mail: sxj@gsm.pku.edu.cn.

Download English Version:

https://daneshyari.com/en/article/8960866

Download Persian Version:

https://daneshyari.com/article/8960866

Daneshyari.com