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Tests of Additional Conditional Moment Restrictions*

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Abstract

The primary focus of this article is the provision of tests for the validity of a set of conditional moment constraints additional to those defining the maintained hypothesis that are relevant for independent cross-sectional data contexts. The point of departure and principal contribution of the paper is the explicit and full incorporation of the conditional moment information defining the maintained hypothesis in the design of the test statistics. Thus, the approach mirrors that of the classical parametric likelihood setting by defining *restricted* tests in contradistinction to *unrestricted* tests that partially or completely fail to incorporate the maintained information in their formulation. The framework is quite general allowing the parameters defining the additional and maintained conditional moment restrictions to differ and permitting the conditioning variates to differ likewise. GMM and generalized empirical likelihood test statistics are suggested. The asymptotic properties of the statistics are described under both null hypothesis and a suitable sequence of local alternatives. An extensive set of simulation experiments explores the practical efficacy of the various test statistics in terms of empirical size and size-adjusted power confirming the superiority of restricted over unrestricted tests. A number of restricted tests possess both sufficiently satisfactory empirical size and power characteristics to allow their recommendation for econometric practice.

JEL Classification: C12, C14, C30

Key-words: GMM; Generalized Empirical Likelihood; Series Approximations; Restricted Tests; Unrestricted Tests; Local Power.

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