JOINT SPECIFICATION TESTS FOR RESPONSE PROBABILITIES IN UNORDERED MULTINOMIAL CHOICE MODELS[*]

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Abstract

Estimation results obtained by parametric models may be seriously misleading when the model is misspecified or poorly approximates the true model. This study proposes two tests that jointly test the specifications of multiple response probabilities in unordered multinomial choice models. Both test statistics are asymptotically chi-square distributed, consistent against a fixed alternative, and able to detect a local alternative approaching to the null at a rate slower than the parametric rate. We show that rejection regions can be calculated by a simple parametric bootstrap procedure, when the sample size is small. The size and power of the tests are investigated by Monte Carlo experiments.

Keywords: Specification test; multinomial choice models; parametric bootstrap; nonparametric methods

JEL classification: C12; C25; C15

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