"Robust Vuong Test for Semi/Nonparametric Models",

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**Abstact**

This paper proposes a new Vuong-type test for the statistical comparison of semi/non-parametric models based on a general quasi-likelihood ratio criterion. An important feature of the new test is its robustness to the data generating process when the models compared are overlapping nonnested. Specifically, the test has uniform asymptotic size control in the overlapping nonnested case, as well as in the easier nested and strictly nonnested cases. The uniform size control is achieved without using pre-testing or sample splitting. Moreover, the test is easy to implement in that its test statistic involves only familiar statistical quantities, and it employs a standard normal critical value. We investigate the finite sample performance of the tests in two Monte Carlo examples, and apply the test to the comparison of life-time schooling choice models studied in Cameron and Heckman (1999).