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SIZE CHARACTERISTICS OF TESTS FOR SAMPLE SELECTION BIAS: A MONTE CARLO COMPARISON AND EMPIRICAL EXAMPLE

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Abstract

The t-test of an individual coefficient is used widely in models of qualitative choice. However, it is well known that the t-test can yield misleading results when the sample size is small. This paper provides some experimental evidence on the finite sample properties of the t-test in models with sample selection biases, through a comparison of the t-test with the likelihood ratio and Lagrange multiplier tests, which are asymptotically equivalent to the squared t-test. The finite sample problems with the t-test are shown to be alarming, and much more serious than in models such as binary choice models. An empirical example is also presented to highlight the differences in the calculated test statistics.

Keywords:

Sample selection bias | t-test | Wald test | JEL Classification: C12, C24

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