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Original Articles

Some Properties of A Lack-of-Fit Test for a Linear Errors in Variables Model

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摘要 The relationship between the linear errors-in-variables model and the corresponding ordinary linear model in statistical inference is studied. It is shown that normality of the distribution of covariate is a necessary and sufficient condition for the equivalence. Therefore, testing for lack-of-fit in linear errors-in-variables model can be converted into testing for it in the corresponding ordinary linear model under normality assumption. A test of score type is constructed and the limiting chi-squared distribution is derived under the null hypothesis. Furthermore, we discuss the power of the test and the choice of the weight function involved in the test statistic.

关键词 Linear errors-in-variables model, model checking, conditional expectation, weight score test

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  - Heng-jian Cui
  - KW Ng

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Key words

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