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Tests for the error distribution in nonparametric possibly heteroscedastic regression models.
(English) [Zbl 1203.62069](#)
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Summary: Consistent procedures are constructed for testing the goodness-of-fit of the error distribution in nonparametric regression models. The test starts with a kernel-type regression fit and proceeds with the construction of a test statistic in the form of an L_2 distance between a parametric and a nonparametric estimates of the residual characteristic function. The asymptotic null distribution and the behavior of the test statistic under alternatives are investigated. A simulation study compares bootstrap versions of the proposed test to corresponding procedures utilizing the empirical distribution function.

MSC:

[62G08](#) Nonparametric regression and quantile regression
[62E20](#) Asymptotic distribution theory in statistics
[62G30](#) Order statistics; empirical distribution functions
[62G10](#) Nonparametric hypothesis testing
[62G20](#) Asymptotic properties of nonparametric inference
[65C60](#) Computational problems in statistics (MSC2010)

Cited in **15** Documents

Keywords:

[empirical characteristic function](#); [kernel regression estimator](#); [goodness-of-fit](#); [parametric bootstrap](#)

Full Text: [DOI](#)

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