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Consistent model specification tests for time series econometric models. (English)

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Summary: We consider general hypothesis testing problems for nonparametric and semiparametric time-series econometric models. We apply the general methodology to construct a consistent test for omitted variables and a consistent test for a partially linear model. The proposed tests are shown to have asymptotic normal distributions under their respective null hypotheses. We also discuss the problems of testing portfolio conditional mean-variance efficiency and testing a semiparametric single index model. Monte Carlo simulations are conducted to examine the finite sample performances of the nonparametric omitted variable test and the test for a partially linear specification.

MSC:

62G10 Nonparametric hypothesis testing

91B84 Economic time series analysis

62G20 Asymptotic properties of nonparametric inference

62P05 Applications of statistics to actuarial sciences and financial mathematics

62P20 Applications of statistics to economics

Cited in 46 Documents

Keywords:

consistent tests; absolutely regular process; degenerate U-statistics; kernel estimation; omitted variables; partially linear model; asymptotic normality; time-series

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