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Consistent model specification tests. (English) Zbl 0549.62076
J. Econom. 20, 105-134 (1982).

Summary: In this paper we propose two consistent tests for functional form of nonlinear regression models without employing specified alternative models. The null hypothesis is that the regression function equals the conditional expectation function, which is tested against the alternative hypothesis that the null is false. These tests are based on a Fourier transform characterization of conditional expectations.

MSC:

62P20 Applications of statistics to economics
62J02 General nonlinear regression

Cited in **10** Reviews
Cited in **115** Documents

Keywords:

consistent model specification tests; Fourier transform characterization of conditional expectations

Full Text: [DOI](#)

References:

- [1] Aguirre-Torres, V.; Gallant, A.R., The null and non-null asymptotic distribution of the Cox test for multivariate nonlinear regression: alternatives and a new distribution-free Cox test, *Journal of econometrics*, 21, no.1, (1983), forthcoming · [Zbl 0506.62048](#)
- [2] Atkinson, A.C., A test for discriminating between models, *Biometrika*, 56, 337-347, (1969) · [Zbl 0193.16601](#)
- [3] Atkinson, A.C., A method for discriminating between models, *Journal of the royal statistical society B*, 32, 323-353, (1970) · [Zbl 0225.62020](#)
- [4] Bierens, H.J., Robust methods and asymptotic theory in nonlinear econometrics, () · [Zbl 0504.62081](#)
- [5] Bierens, H.J., A test for model specification in the absence of alternative hypotheses, () · [Zbl 0504.62081](#)
- [6] Bierens, H.J., A test for model specification of nonlinear time series regressions, () · [Zbl 0504.62081](#)
- [7] Bierens, H.J., A uniform weak law of large numbers under ϕ -mixing with application to nonlinear least squares estimation, *Statistica neerlandica*, 36, 81-86, (1982) · [Zbl 0504.62081](#)
- [8] Chung, K.L., A course in probability theory, (1974), Academic Press New York · [Zbl 0159.45701](#)
- [9] Cox, D.R., Test for separate families of hypotheses, *Proceedings of the 4th Berkeley symposium*, 1, 105-123, (1961) · [Zbl 0201.52102](#)
- [10] Cox, D.R., Further results on tests of separate families of hypotheses, *Journal of the royal statistical society B*, 24, 406-424, (1962) · [Zbl 0131.35801](#)
- [11] Davidson, R.; MacKinnon, J.G., Several tests for model specification in the presence of alternative hypotheses, *Econometrica*, 49, 781-793, (1981) · [Zbl 0472.62108](#)
- [12] Domowitz, I.; White, H., Misspecified models with dependent observations, *Annals of applied econometrics*, (1982), this issue · [Zbl 0512.62114](#)
- [13] Hausman, J.A., Specifications tests in econometrics, *Econometrica*, 46, 1251-1271, (1978) · [Zbl 0397.62043](#)
- [14] Jenrich, R.I., Asymptotic properties of nonlinear least squares estimators, *Annals of mathematical statistics*, 40, 633-643, (1969) · [Zbl 0193.47201](#)
- [15] Pereira, B.de B., A note on the consistency and on the finite sample comparisons of some tests of separate families of hypotheses, *Biometrika*, 64, 109-113, (1977) · [Zbl 0375.62055](#)
- [16] Pereira, B.de B., Tests and efficiencies of separate regressions models, *Biometrika*, 65, 319-327, (1978) · [Zbl 0382.62056](#)
- [17] Pesaran, M.H.; Deaton, A.S., Testing non-nested nonlinear regression models, *Econometrica*, 46, 677-694, (1978) · [Zbl 0379.62089](#)
- [18] Quandt, R.E., A comparison of methods for testing nonnested hypotheses, *Review of economics and statistics*, 56, 92-99, (1974)
- [19] Ramsey, J.B., Tests for specification errors in classical linear least-squares regression analysis, *Journal of the royal statistical society B*, 31, 350-371, (1969) · [Zbl 0179.48902](#)
- [20] Ramsey, J.B., Models, specification error, and inference: A discussion of some problems in econometric methodology, *Bulletin*

of the Oxford institute of economics and statistics, 32, 301-318, (1970)

- [21] White, H., Nonlinear regression on cross-section data, *Econometrica*, 48, 721-746, (1980) · [Zbl 0442.62050](#)
- [22] White, H., Consequences and detection of misspecified nonlinear regression models, *Journal of the American statistical association*, 76, 419-433, (1981) · [Zbl 0467.62058](#)

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