

Härdle, W.; Mammen, E.

Comparing nonparametric versus parametric regression fits. (English) Zbl 0795.62036
Ann. Stat. 21, No. 4, 1926-1947 (1993).

The authors consider the problem to test the parametric model $\{m_\theta; \theta \in \Theta\}$ against the nonparametric alternative that only assumes $m(\cdot)$ is 'smooth'. They propose to use as a test statistics the integrated squared deviation of the parametric and nonparametric curve estimate. They show that the standard way of bootstrapping this statistics fails, however, wild bootstrap works. The validity of the asymptotic results is checked in a Monte Carlo experiment and on the fitting Engel curves in the mean expenditure curve of a certain food.

Reviewer: [M.Hušková \(Praha\)](#)

MSC:

[62G07](#) Density estimation
[62G09](#) Nonparametric statistical resampling methods
[62G20](#) Asymptotic properties of nonparametric inference
[62F99](#) Parametric inference

Cited in **3** Reviews
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Keywords:

[kernel estimators](#); [bootstrap](#); [goodness-of-fit-test](#); [integrated squared deviation](#); [curve estimate](#); [wild bootstrap](#); [Monte Carlo](#); [Engel curves](#)

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