BANDWIDTH SELECTION IN DENSITY ESTIMATION WITH TRUNCATED AND CENSORED DATA

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Abstract. A plug-in type bandwidth selector is presented for density estimation with truncated and censored data. It is based on a representation of the MISE function obtained in the paper. Rate of convergence and limit distribution are derived for this selector. A bootstrap method is introduced to estimate the MISE whose minimizer is an alternative bandwidth selector. A simulation study was carried out to assess the behavior with small samples. This methodology is applied to a real-data problem consisting of reporting delay of AIDS cases. The almost sure representation of the product-limit estimator is a key tool in our proofs.

Key words and phrases: LTRC model, almost sure representation, kernel estimator.