NONPARAMETRIC ESTIMATION FOR REGRESSION FUNCTION IN TRUNCATED SAMPLE

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Truncated sample arise when one do not observe a certain segment of a population. This typically happens when a survey targets a particular subset of a population and, perhaps due to the cost considerations ignores the other part of the population. This paper focus on the estimation of regression function in samples which are truncated or censored. Several study on the subject has focused on the estimation of a parametric regression function with a certain distribution of error. Others made the similar research for the unknown form of the error distribution. Here an estimator is proposed for the problem of nonparametric regression when the sample is truncated above or below some known threshold of the dependent variable. We specify the error distribution while estimating the regression function without assuming a parametric form. Nadaraya Watson estimator is employed, a Monte Carlo study is performed to ascertain the finite sample properties of the estimator.

Key words : truncated sample, nonparametric regression, Nadaraya Watson estimator, Monte Carlo simulation