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Thesis
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A NONPARAMETRIC APPROACH TO VARIANCE FUNCTION ETIMATION: AN APPLICATION TO NAIROBI'S STOCK EXCHANGE MARKET

Abstract

We consider the analysis of a method for fitting regression models to data in the field which exhibit nonconstant variances. We focus on various approaches and methods of estimating the nonconstant variances. We discuss the nonparametric approach which includes the smoothing methods and the selection of the optimal bandwidth. Generally the principal problems of interest are the choice of the smoothing method and the selection of the bandwidth. We compare the three mostly used smoothing techniques; the Kernel, the Spline and the K-nearest neighbor. We illustrate the three smoothing techniques from the data obtained from Nairobi stock exchange market.