

An Interior Point Algorithm for Nonlinear Quantile Regression

Roger Koenker^{*}

and

Beum J. Park^{*}

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Abstract

A new algorithm for computing quantile regression estimates for problems in which the response function is nonlinear in parameters is described. The nonlinear l_1 estimation problem is a special (median) case. The algorithm is closely related to recent developments on interior point methods for solving linear programs. Performance of the algorithm on a variety of test problems including the censored linear quantile regression problem of Powell (1986) is reported.

Keywords: Quantile Regression, Nonlinear Regression, Linear Programming, Interior Point Algorithms, Nonlinear Programming

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Correspondence: Roger Koenker