

# A Partly Linear Model for Censored Regression Quantiles

Tereza Neocleous  
University of Illinois at Urbana-Champaign

## **Abstract**

Partly linear models are useful as an extension to linear regression when the response can not be easily parametrized in terms of all covariates. Their flexibility in keeping some linear terms, while at the same time introducing a nonparametric relationship makes them attractive for a number of applications. In quantile regression, examples of partly linear models appear for instance in He and Liang (2000) and He and Shi (1996). In the case of survival data, Portnoy (2003) introduces a method for quantile regression on censored data by applying what is essentially a version of the Kaplan-Meier estimator. In this paper, a nonparametric term is added to the censored regression quantile model and the partly linear model theory is extended to censored regression quantiles.