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Estimation of Non-crossing Quantile Regression: Application of Turkey / Kesişmeyen Dilim Regresyon Tahmini: Türkiye Uygulaması

Nükhet Doğan¹, Yağmur Tokatlıoğlu¹¹Gazi University, Turkey

ABSTRACT

Quantile regression curves are estimated individually. In this case the quantile regression curves can cross and distribution of the response can be invalid when quantile regression at multiple percentiles. This problem also known as the quantile crossing problem (Bassett and Koenker, 1982). In this paper we introduce the method developed by Chernozhuko, Fern'andez-Val and Galichio (2010). Their method is about monotone rearranging the original estimated nonmonotone curve into a monotone rearranged curve. And then they show that the rearranged curve is closer to the true quantile curve in finite samples than the original curve. We illustrate the empirical example with an estimation of wage, using microdata of Household Budget Survey of the Turkish Statistical Institute (TurkStat).

KEYWORDS Quantile Regression; Crossing Quantile Curves; Estimation of Wage

JEL C10, C31, C50