

Smoothed jackknife empirical likelihood for the difference of two quantiles

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Abstract In this paper, we propose a smoothed estimating equation for the difference of quantiles with two samples. Using the jackknife pseudo-sample technique for the estimating equation, we propose the jackknife empirical likelihood (JEL) ratio and establish the Wilk's theorem. Due to avoiding estimating link variables, the simulation studies demonstrate that JEL method has computational efficiency compared with traditional normal approximation method. We carry out a simulation study in terms of coverage probability and average length of the proposed confidence intervals. A real data set is used to illustrate the JEL procedure.

Keywords Difference of quantiles · Jackknife · Kernel smoothing · Two samples

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