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Lorenz curve for truncated and censored data

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Abstract In this paper, we consider a nonparametric estimator of the Lorenz curve and Gini index when the data are subjected to random left truncation and right censorship. Strong Gaussian approximations for the associated Lorenz process are established under appropriate assumptions. A law of the iterated logarithm for the Lorenz curve is also derived. Lastly, we obtain a central limit theorem for the corresponding Gini index.

Keywords Left truncation · Right censorship · Product-limit · Quantile process · Strong Gaussian approximations · Lorenz process · Gini index · Law of the iterated logarithm