

Computation of extreme-value parameters and inference by approximation covariance technique.

ABSTRACT

Ordinary least squares (OLS) and Linear (LIN) estimators are commonly used in estimating the parameters of location-scale family of distributions. Various works have been done to compare the efficiency between these two estimators for the two-parameter exponential distribution and the two-parameter Weibull distribution. Motivated by these works, it would be of interest to evaluate the performance of the LIN method for the extreme-value distribution. We found that the performance of LIN estimator is better than that of OLS estimator in the sense that it had smaller standard errors and better efficiency.

Keyword: Ordinary least squares; Linear estimator; Relative efficiency; Location-scale family; Generalized variance; Approximation covariance.