Statistical Inference for Pareto Distribution based on Progressive Type-I Hybrid Censoring Scheme

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Abstract

In this paper, the maximum likelihood and Bayesian estimations are developed based on progressive Type-I hybrid censored sample from the Pareto distribution. The Bayesian estimators for the unknown parameters are computed using the squared error loss function. Also, the point and interval Bayesian predictions for the unobserved failures from the same sample and that from the future sample are derived. Moreover, a Monte Carlo simulation study is carried out to compare the performance of the maximum likelihood and the Bayesian estimators. Finally, numerical example is presented for illustrating all the inferential procedures developed here.

References


Index Terms

Computer Science

Applied Mathematics
Keywords

Bayesian estimation, Bayesian prediction, Pareto distribution, Maximum likelihood estimation, progressive hybrid censoring sample