

EMPIRICAL BAYESIAN INFERENCE FOR RAYLEIGH MODEL UNDER PROGRESSIVE TYPE II CENSORED SAMPLES

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SUMMARY

This paper is devoted to an estimation of reliability performances of a Rayleigh model using the empirical Bayes procedure based on progressive Type II censored samples. The estimates are obtained using the linear exponential (*LINEX*) loss function and general entropy (*GE*) loss functions, and are compared with the corresponding maximum likelihood (*ML*) estimates. A real data set is presented to illustrate the proposed estimation method, and the performance of the estimates is examined and compared in terms of biases and estimated risks by means of Monte Carlo simulations. The simulation results show that the proposed empirical Bayes estimates perform better than their corresponding *ML* estimates.

Keywords and phrases: Empirical Bayes estimates; Progressive Type II Censored samples; *LINEX* and *GE* loss functions.

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