

Bayesian Estimation for Inverse Size Biased p-Dimensional Rayleigh Distribution

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ABSTRACT

In this paper we consider inverse size biased p-dimensional Rayleigh distribution as a useful life time model in life testing experiments and Bayesian estimation. This paper discusses some distributional properties and reliability characteristics. The maximum likelihood estimation of unknown parameter with complete sample data from this distribution is developed. Bayesian estimates with symmetric and asymmetric loss functions such as squared error and general entropy with quasi-prior distribution are obtained. Finally, simulation of numerical comparison is made between various estimates of Bayes estimate under different loss functions.

Keywords: Squared Error; General Entropy Loss Functions; Maximum Likelihood Estimation; Quasi-prior; Bayesian Estimation.