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RELIABILITY ESTIMATION IN GENERALIZED GAMMA DISTRIBUTION WITH PROGRESSIVELY CENSORED DATA

Hare Krishna* and Kapil Kumar

Department of Statistics, C. C. S. University, Meerut – 250 004, India.
E-mail : hkrishnastats@yahoo.com

Abstract

Generalized gamma distribution is a generalization of most of the life time models, such as Exponential, Gamma, Weibull, Rayleigh, Pareto, Extreme Value, Half-Normal and Lognormal. With a progressive type II right censored sample, we drive in this article, the maximum likelihood and Bayes estimates of the scale parameter of generalized gamma distribution. Asymptotic results based on the maximum likelihood estimate, interval estimation and coverage probability of the parameter are considered. A Monte Carlo simulation study is performed to compare these estimates. Also, a real data example is considered for the purpose of illustration.

Key words : Generalized gamma distribution, Progressive censored data, Coverage probability.