

BAYESIAN PREDICTION BASED ON RIGHT TYPE-II CENSORED SAMPLE FOR GOMPERTZ DISTRIBUTION IN THE PRESENCE OF OUTLIERS

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SUMMARY

In this article, the problem of obtaining Bayesian prediction bounds for some certain order statistics in samples from the ($Gomp(\alpha, \beta)$) distribution has been studied in the presence of outlier arising from different members of the same family of distributions. By using a bivariate prior density for α and β a single outlier of types $\beta \beta_0$ and $\beta + \beta_0$ are obtained. Markov Chain Monte carlo (MCMC) has been used to obtain Bayesian prediction intervals for both single outliers of types $\beta \beta_0$ and $\beta + \beta_0$. Numerical examples are used to illustrate the procedure.

Keywords and phrases: Type II censored; Gompertz distribution; Single outlier; Bivariate prior density, Predictive distribution; Markov Chain Monte Carlo

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