

Estimation of Location and Scale Parameters of Extended Exponential Distribution Based on Record Statistics

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Abstract : An Extended form of exponential distribution using Marshall and Olkin method is introduced. The location scale family of these distributions is considered. For location scale free family, exact expressions for single and product moments of upper record statistics are derived. The mean, variance and covariance of record values are computed for various values of the shape parameter. Using these the BLUE's of location and scale parameters are derived. The variances and covariance of estimates are obtained. Through Monte Carlo simulation the confidence intervals for location and scale parameters are constructed. The Best linear unbiased Predictor (BLUP) of future records are also discussed.

Keywords : BLUE, BLUP, confidence interval, Marshall-Olkin distribution, Monte Carlo simulation, prediction of future records, record statistics

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