Moments of generalized order statistics from some distributions

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Abstract

In this paper, we derive explicit forms of the moments of the generalized order statistics (GOSs) from the power function and log-logistics distributions. Then, we deduce the moments of the ordinary order statistics (OOSs) and record values (RVs) as special cases. Also, we use the moments of the record values from the logistics distribution to develop the best linear unbiased estimate (BLUE) of the scale parameter. Finally, we show the usefulness of the BLUE through Monte Carlo Simulations.

Keywords

Order statistics, Record values, Single moments, Product moments, Scale parameter, Coefficients of the BLUE and Monte Carlo simulations.

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