EXPONENTIATED HALF-LOGISTIC LOMAX DISTRIBUTION WITH PROPERTIES AND APPLICATION

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Abstract:
A new three-parameter continuous model called the exponentiated half-logistic Lomax distribution is introduced in this paper. Basic mathematical properties for the proposed model were investigated which include raw and incomplete moments, skewness, kurtosis, generating functions, Rényi entropy, Lorenz, Bonferroni and Zenga curves, probability weighted moment, stress strength model, order statistics, and record statistics. The model parameters were estimated by using the maximum likelihood criterion and the behaviours of these estimates were examined by conducting a simulation study. The applicability of the new model is illustrated by applying it on a real data set.

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