

The Exponentiated Half Logistic-Topp-Leone-G Power Series Class of Distributions: Model, Properties and Applications

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Abstract

We develop a new class of distributions, namely, the exponentiated half logistic-Topp-Leone-G power series (EHL-TL-GPS) class of distributions. We present some special classes in the proposed distribution. Structural properties were also derived including moments, entropy and maximum likelihood estimates. We conducted a simulation study to evaluate the consistency of the maximum likelihood estimates. We also present two real data examples to illustrate the applicability of the new class of distributions. The proposed model performs better than several non-nested models on selected data sets.