

Generalizations of Burr Type X distribution with applications

ABSTRACT

We propose the generalizations of Burr Type X distribution with two parameters by using the methods of Beta-G, Gamma-G and Weibull-G families of distributions. We discuss maximum likelihood estimation of the model's parameters. The performances of the parameter's estimates are assessed via simulation studies under different sets of conditions. In the applications to real data sets, three sets of data are used whereby from the results we can deduce that these models can be used quite effectively in analysing lifetime data.

Keyword: Cumulative density function; Lifetime data; Maximum likelihood estimation