Abstract

A discrete distribution involving a product of two gamma functions has been proposed. It arises naturally in connection with the distribution of sample correlation coefficient based on a bivariate normal population. The first four factorial moments, raw moments, three corrected moments, coefficient of skewness and kurtosis have been derived. Some illustrations have been provided to show how the product moments of sample variances and correlation can be derived by exploiting the moments of the new distribution. These product moments are important for correlation analysis, covariance analysis, intra-sire regression and inference in bivariate normal population with a common mean.

Tea and Coffee will be served