

## The Relative Efficiency of Several Statistics Measuring Skewness

by

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### Abstract

Several statistics measuring skewness are compared, including the classical standardized third central sample moment. For distributions with finite support, two new functionals measuring skewness are introduced and are shown to have suitable properties as skewness measures. The natural sample estimates of these functions are compared for several families of skewed distributions with finite support. The new measures are shown to outperform the sample standardized third central moment in certain cases. For distributions with infinite support, the classical statistic is compared with two sample estimators suggested by recently proposed skewness measures. For distributions close to normality, but slightly skewed, the classical coefficient is shown to be more sensitive than these estimators. For long-tailed distributions close to symmetry, but slightly skewed, one of the new estimators is shown to outperform the classical estimator.