

The Coefficient of Variation

The sizes or magnitudes of the variance or standard deviation will depend on the units with which a particular variable is measured. Consequently, a measure of the variability expressed relative to the magnitude of the mean, called the *coefficient of variation* has been defined:

$$C.V. = \frac{S}{\bar{X}} \text{ or sometimes } C.V. = 100 \times \frac{S}{\bar{X}} \%$$

The coefficient of variation in practice “scales” the standard deviation by the size of the mean, making it possible to compare coefficients of variation across variables measured on different scales.