

## Some Useful SPSS Index:

**F Value:** It is the ratio of two mean squares. When the F value is large and the significance level is small (typically smaller than 0.05 or 0.01) the null hypothesis can be rejected. In other words, a small significance level indicates that the results probably are not due to random chance.

**Significance Level:** Often called the p value. It is the basis for deciding whether or not to reject the null hypothesis. It is the probability that a statistical result as extreme as the one observed would occur if the null hypothesis were true. If the observed significance level is small enough, usually less than 0.05 or 0.01, the null hypothesis is rejected.

**Alpha:** The significance level used for rejecting the null hypothesis. The probability of rejecting the null hypothesis when in fact the null hypothesis is true. Commonly used alpha values are 0.01, 0.05, and 0.10.

**Adjusted R Square:** The sample R squared tends to optimistically estimate how well the models fits the population. The model usually does not fit the population as well as it fits the sample from which it is derived. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population.

**Standard Error of Estimate:** A measure of how much the value of a test statistic varies from sample to sample. It is the standard deviation of the sampling distribution for a statistic. For example, the standard error of the mean is the standard deviation of the sample means.

**KMO Measure:** The Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations among variables are small. Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate. (A measure > 0.9 is marvelous, > 0.8 is meritorious, > 0.7 is middling, > 0.6 is mediocre, > 0.5 is miserable and < 0.5 is unacceptable)

**Bartlett's test of Sphericity:** It tests the null hypothesis that the correlation matrix is an identity matrix. The data must be a sample from a multivariate normal population. If the null hypothesis cannot be rejected, and the sample size is reasonably large, you should reconsider the use of multivariate analysis, since the dependent variables are not correlated. (Significance level < 0.05 approximates multivariate normal and is acceptable for Factor Analysis)

**Scree Plot:** It is plot of all component number and their corresponding eigen value. It is a graphical representation of the components / factors and their corresponding eigen values provided in 'Total Variance Explained' table.

