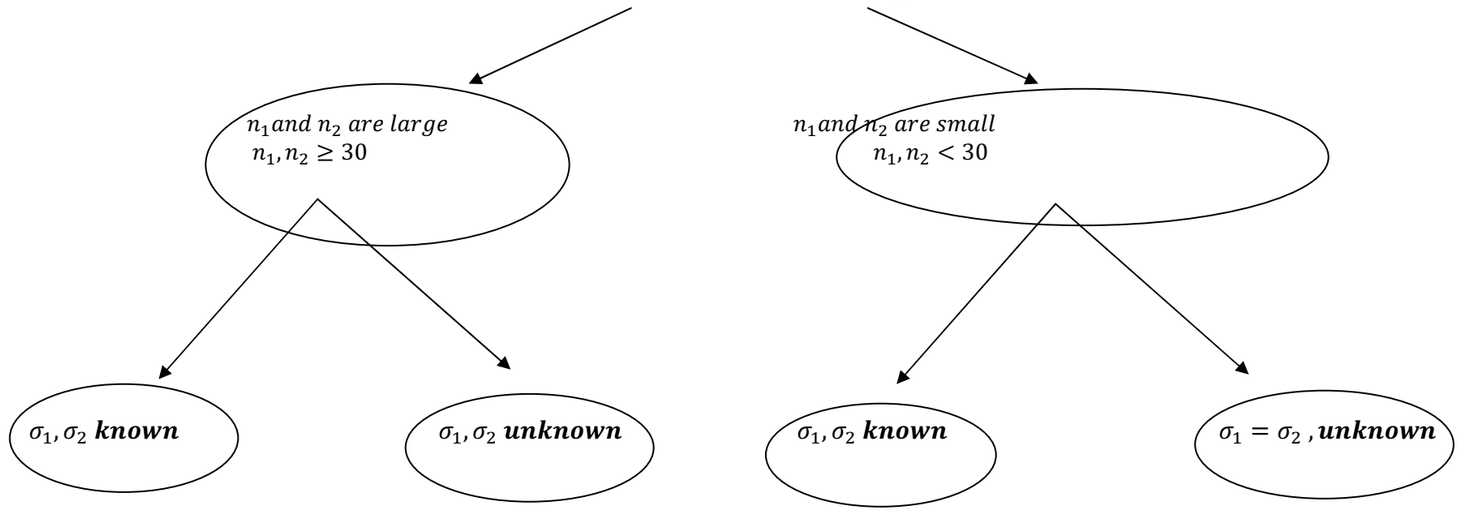
Confidence Interval for the difference between two Population Means: $(\mu_1 - \mu_2)$

The size of the two samples $(n_1 and\ n_2)$



$(\bar{x}_1 - \bar{x}_2) \mp Z_{1-\frac{\alpha}{2}} \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$

$(\bar{x}_1 - \bar{x}_2) \mp Z_{1-\frac{\alpha}{2}} \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$

$(\bar{x}_1 - \bar{x}_2) \mp Z_{1-\frac{\alpha}{2}} \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$

$(\bar{x}_1 - \bar{x}_2) \mp t_{(n_1+n_2-2,1-\frac{\alpha}{2})} . S_p \cdot \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$

Where $S_p = \sqrt{\frac{s_1^2(n_1-1)+s_2^2(n_2-1)}{n_1+n_2-2}}$