

ADJUSTED R SQUARE

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Adjusted R^2

$$R^2 = 1 - \frac{SS_{\text{res}}}{SS_{\text{tot}}}$$

R^2 – Goodness of fit
(greater is better)

$$y = b_0 + b_1 * x_1$$

$$y = b_0 + b_1 * x_1 + b_2 * x_2$$

Problem:

$$+ b_3 * x_3$$

$$SS_{\text{res}} \rightarrow \text{Min}$$

R^2 will never decrease

Adjusted R^2

$$R^2 = 1 - \frac{SS_{\text{res}}}{SS_{\text{tot}}}$$

$$\text{Adj } R^2 = 1 - (1 - R^2) \frac{n - 1}{n - p - 1}$$

p - number of regressors
n - sample size