

Resultados Adicionais

X_1, X_2 v. indep. γ v. dep.

$$\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x_1 + \hat{\beta}_2 x_2$$

Sejam

$$\hat{y}_1 = a + b_{y_1} x_1$$

$$\hat{x}_1 = c + b_{x_2} x_2 \quad (2)$$

$$\hat{y}_2 = b + b_{y_2} x_2 \quad (1)$$

$$\hat{x}_2 = d + b_{x_1} x_1$$

Então

$$1) \hat{\beta}_1 = \frac{b_{y_1} - b_{y_2} b_{x_1}}{1 - b_{x_1} b_{x_2}} = \frac{r_{y_1} - r_{y_2} r_{x_1}}{1 - r_{x_1}^2} \sqrt{\frac{S_{yy}}{S_{x_1} x_1}}$$

$$\hat{\beta}_2 = \frac{b_{y_2} - b_{y_1} b_{x_2}}{1 - b_{x_1} b_{x_2}} = \frac{r_{y_2} - r_{y_1} r_{x_2}}{1 - r_{x_2}^2} \sqrt{\frac{S_{yy}}{S_{x_2} x_2}}$$

$$2) \hat{\beta}_1 = \frac{\sum (y - \hat{y}_2)(x_1 - \hat{x}_1)}{\sum (x_1 - \hat{x}_1)^2} = r_{y_1.2} \sqrt{\frac{SSE(1)}{SSE(2)}}$$

$\nearrow y \text{ elim ef. } x_2 \quad \nearrow x_1 \text{ elim ef. } x_2$

Caráter parcial de $\hat{\beta}_1$

3) $R_{y.12}^2$ - coeficiente de explicação modelo $\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x_1 + \hat{\beta}_2 x_2$

$$R_{y.12}^2 = \frac{r_{y_1}^2 + r_{y_2}^2 - 2 r_{y_1} r_{y_2} r_{12}}{1 - r_{12}^2}$$

$r_{12} = 0 \Rightarrow R_{y.12}^2 = r_{y_1}^2 + r_{y_2}^2$ (é a soma dos coeficientes de explicação dos modelos $\hat{y}_1$ e $\hat{y}_2$)