

**Quiz #2**  
**Regresión Simple**  
**Econometría 06219**

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**INSTRUCCIONES:**

- Escoja la opción más adecuada.
- Usted cuenta con 5 minutos para resolver este quiz

1. For the model  $Y_i = \alpha_0 + \alpha_1 X_i + \varepsilon_i$  ( $\varepsilon_i \neq 0 \quad \forall i$ ) it is possible to affirm:
- a. The model fits perfectly to the data generating process.
  - b.  $\varepsilon_i$  represents all the important factors that are included in the model but omitted by the independent variable  $X_i$ .
  - c. The error term does not permit to interpret the slope's parameter
  - d. None of the above.

Respuesta: d)

2. For the estimated model  $Y_i = \hat{\alpha}_0 + \hat{\alpha}_1 X_i + \hat{\varepsilon}_i$  is possible to affirm:
- a.  $\hat{\varepsilon}_i$  represents the error term.
  - b.  $\hat{\varepsilon}_i$  represents the distance between the data point and the true line.
  - c.  $\hat{\varepsilon}_i$  estimates the error term.
  - d. b and c are correct.

Respuesta: c)

3. For the model  $Y_i = \alpha_0 + \alpha_1 X_i + \varepsilon_i$ , the R squared measures
- a. The variance of the model
  - b. the amount of variation in Y
  - c. the explained sum of squares (ESS) as a proportion of the Total Sum of Squares (TSS)
  - d. the residual sum of squares (RSS) as a proportion of the Total Sum of Squares (TSS)

Respuesta: c)

4. Given a single linear regression model with intercept is incorrect to affirm
- a. The Sum of the residuals is always Zero.
  - b. The least squares principle implies to choose an intercept and a slope that minimize the SSR (sum of squares residuals)
  - c. The estimated line always run through the center of the observed data
  - d. None of the above.

Respuesta: d)

5. For the model  $Y_i = \alpha_0 + \alpha_1 X_i + \varepsilon_i$ , the coefficient  $\alpha_1$  measures
- The elasticity of Y with respect to X.
  - The change in X due to a unit change in Y
  - The change in Y due to a unit change in X
  - None of the above.

Respuesta: c)