

תרגיל 10

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$$y_t = \alpha + \beta_1 x_{1t} + \beta_2 x_{2t} + u_t$$

$$x_{1t} + x_{2t} = 1$$

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(AvgD)

(Accid)

: " ,1993

$$\text{Accid}_t = \alpha + \beta \cdot \text{AvgD}_t + U_t$$

$$= \text{VM}$$

$$.r^2=0.98 : \text{ AvgD} \quad \text{VM}$$

?VM

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VM

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$$.t \quad x_t > 0 \quad y_t = \alpha + \beta_1 \cdot x_t + \beta_2 \cdot x_t^2 + u_t$$

$$\beta_2$$

$$.x_t^2 \quad x_t$$

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$$Y = r + s_{01.2}X_1 + s_{02.1}X_2 + u$$

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$$(1) \sum e_i = 0$$

$$(2) \sum e_i X_{1i} = 0$$

$$(3) \sum e_i X_{2i} = 0$$

$$e_i = Y_i - (r + \hat{s}_{01.2}X_{1i} + \hat{s}_{02.1}X_{2i}) :$$

$$. \hat{r}, \hat{s}_{01.2}, \hat{s}_{02.1} :$$

(1)

(3)

,

$$, X_{1i} + X_{2i} = 1 :$$

$$. \sum e_i X_{2i} = \sum e_i (1 - X_{1i}) = \sum e_i - \sum e_i X_{1i} \quad (2)$$

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$$\hat{s}_{01.2} = \frac{\sum y x_1 \sum x_2^2 - \sum y x_2 \sum x_1 x_2}{\sum x_1^2 \sum x_2^2 - (\sum x_1 x_2)^2}$$

$$, \hat{s}_{01.2} - . x_2 = -x_1 - , X_{1i} + X_{2i} = 1 :$$

$$\hat{s}_{01.2} = \frac{\sum y x_1 \sum (-x_1)^2 - \sum y (-x_1) \sum x_1 (-x_1)}{\sum x_1^2 \sum (-x_1)^2 - (\sum x_1 (-x_1))^2} = \frac{\sum y x_1 \sum x_1^2 - \sum y x_1 \sum x_1^2}{\sum x_1^2 \sum x_1^2 - (\sum x_1^2)^2} = \frac{0}{0}$$

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, 1, X₁, X₂ :

$$, X_{1i} + X_{2i} = 1 :$$

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$$, \underline{X_1 + X_2 - 1} = \underline{0}$$

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, VM AvgD .

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