

מבוא לאקונומטריקה

מועד הגשה: שיעור 4

תרגיל 3

.SPSS - , GRETL - , 2

שאלה 1

, 9.2012-11.2013 , 15 (, sales)
 : month = 1,2,...,15 ,

Model 1: OLS, using observations 2012:09-2013:11 (T = 15)

Dependent variable: sales

	coefficient	std. error	t-ratio	p-value
const	207.8095	7.768924	26.74882	9.44E-13
month	15.35714	0.854468	17.97276	1.46E-10
Mean dependent var	330.6667	S.D. dependent var	70.0476	
Sum squared resid	2657.619	S.E. of regression	14.29798	
R-squared	0.961312	Adjusted R-squared	0.958336	
F(1, 13)	323.0201	P-value(F)	1.46E-10	
Log-likelihood	-60.1126	Akaike criterion	124.2252	
Schwarz criterion	125.6413	Hannan-Quinn	124.2101	
rho	0.76777	Durbin-Watson	0.651093	

.GRETL-

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$?e_{15}$, .470 2013

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$? \hat{sales}_{16}$,2013

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15 , (, *adv*) (, *sales*)
 : , 9.2012-11.2013 ,

Model 2: OLS, using observations 2012:09-2013:11 (T = 15)				
Dependent variable: sales				
	coefficient	std. error	t-ratio	p-value
const	37.65930633	34.83535498	1.081065669	0.299315228
adv	4.673991923	0.543494601	8.599886573	1.00E-06
Mean dependent var	330.6666667	S.D. dependent var	70.04760286	
Sum squared resid	10269.47296	S.E. of regression	28.10621743	
R-squared	0.850502626	Adjusted R-squared	0.839002828	
F(1, 13)	73.95804906	P-value(F)	1.00E-06	
Log-likelihood	-70.25068386	Akaike criterion	144.5013677	
Schwarz criterion	145.9174681	Hannan-Quinn	144.4862833	
rho	0.857030976	Durbin-Watson	0.301734592	

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$$\text{exphlth} = \alpha + \beta \text{ income} + u$$

(\$) - income
(\$) - exphlth

Model 1: OLS, using observations 1-51
Dependent variable: exphlth

	coefficient	std. error	t-ratio	p-value
const	0.325608	0.319742	1.018347	0.313515
income	0.142099	0.001966	72.2698	1.90E-51

(income=4) ? \$4,000

? \$8,000

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,\$1,000-

: (S) (C) ,(I)

	1	2	3	4	5	6	7
(I)	5,000	7,000	9,000	10,000	10,000	12,000	20,000
(C)	7,000	7,000	9,000	10,000	10,000	11,000	16,000
(S)	-2,000	0	0	0	0	1,000	4,000

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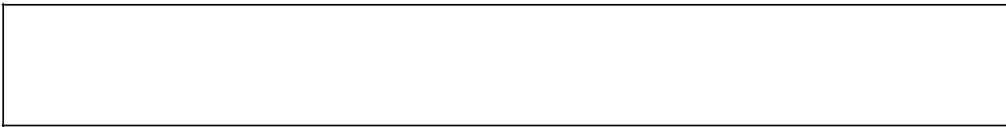
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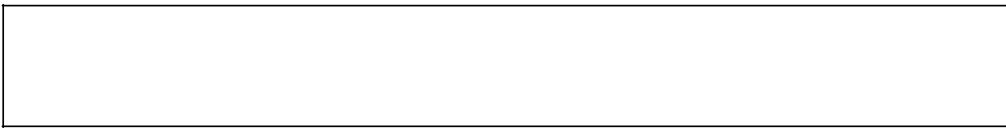
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SPSS-

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Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.991 ^a	.981	.978	455.71521

a. Predictors: (Constant), I

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54961618	1	54961618.26	264.650	.000 ^a
	Residual	1038382	5	207676.349		
	Total	56000000	6			

a. Predictors: (Constant), I

b. Dependent Variable: C

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3411.826	440.083		7.753	.001
l	.632	.039	.991	16.268	.000

a. Dependent Variable: C

:

$$\sum_{i=1}^n \hat{y}_i^2 = \quad : \quad \sum_{i=1}^n y_i^2 = \quad .10 \quad \sum_{i=1}^n e_i^2 =$$

GRETl- .11

Model 1: OLS estimates using the 7 observations 1-7
Dependent variable: S

VARIABLE	COEFFICIENT	STDERROR	T STAT	P-VALUE
const	-3411.826	440.0832595	-7.752682368	0.00057093
l	0.368000	0.038833275	9.483033756	0.000220378
Unadjusted R-squared	0.947328462			

רשמו את האומדנים שהתקבלו לפרמטרים הבאים :

(") () - PATENTS :
 (") () - R_D

Model 1: OLS, using observations 1960-1993 (T = 34)

Dependent variable: PATENTS

	coefficient	std. error	t-ratio	p-value
const	34.57106	6.357873	5.437521	5.56E-06
R_D	0.791935	0.056704	13.96621	3.64E-15

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YEAR

Model 2: OLS, using observations 1960-1993 (T = 34)

Dependent variable:
PATENTS

	coefficient	std. error	t-ratio	p-value
const	-5044.82	473.1988	-10.6611	4.63E-12
YEAR	2.612727	0.23941	10.91321	2.56E-12

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