

# מבוא לאקונומטריקה

## תרגיל 8

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( 1 )

119

*demand* : כמות החבילות שנרכשו באותו שבוע.

*price* : המחיר של חבילה באותו שבוע.

*temp* : הטמפרטורה הממוצעת באותו שבוע (במעלות צלזיוס).

*holiday* : משתנה המציין האם היה חג באותו שבוע. המשתנה מקבל ערך 1 במהלך החג

והשבוע שלפניו. בשאר השבועות, ערכו של המשתנה הוא 0.

*summer* : משתנה דמי המציין האם התצפית נאספה בשבוע של קיץ. המשתנה מקבל ערך 1

עבור שבועות של קיץ ו-0 אחרת.

$$summerholiday = summer \times holiday$$

Model 1: OLS estimates using observations 1-119

Dependent variable: demand

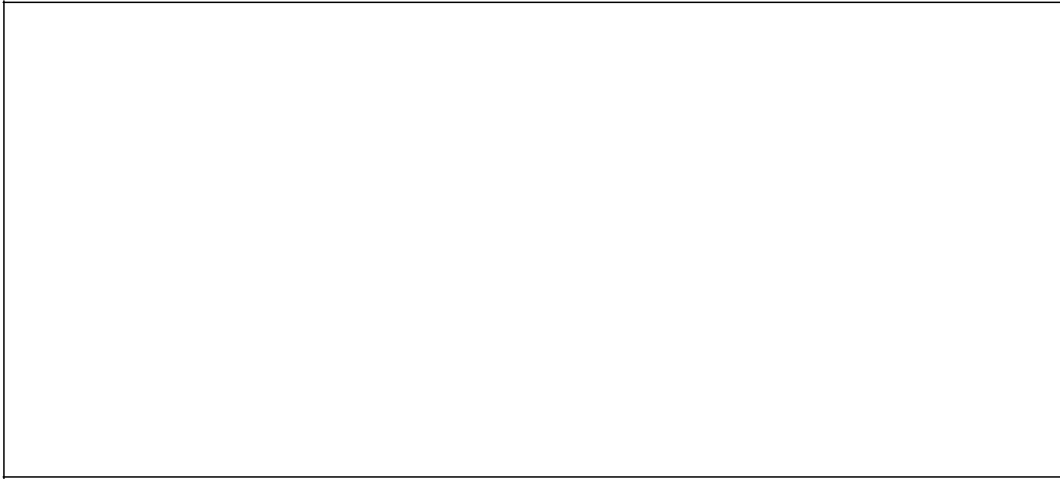
VARIABLE	COEFFICIENT	STD.ERROR	T- STAT	P-VALUE
const	1135.327	201.4657	5.635333	1.30E-07
price	-35.1018	8.529938	-4.11513	7.38E-05
temp	11.31003	3.420232	3.306802	0.001266
summer	666.0505	87.52836	7.609539	8.93E-12
holiday	486.9597	182.0207	2.675298	0.008575
summerholiday	987.7279	222.129	4.446642	2.05E-05

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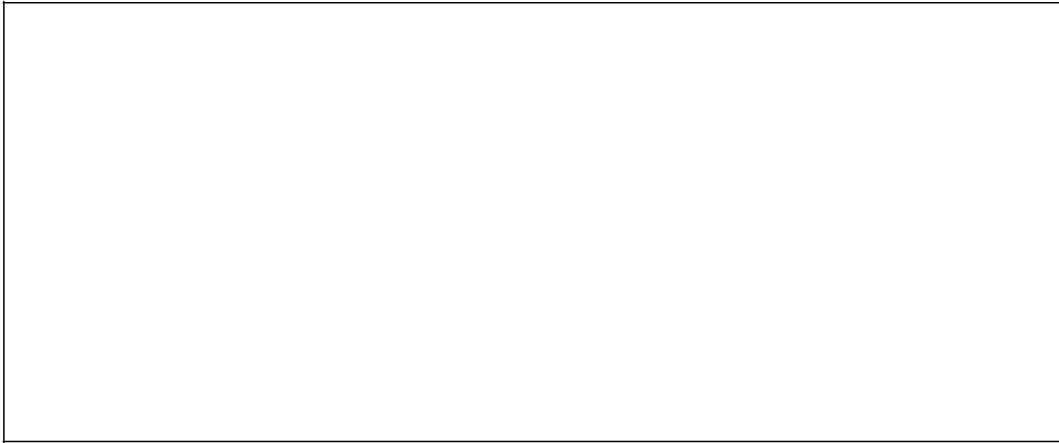
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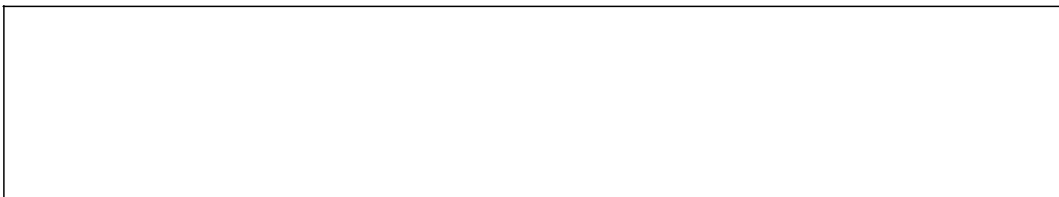
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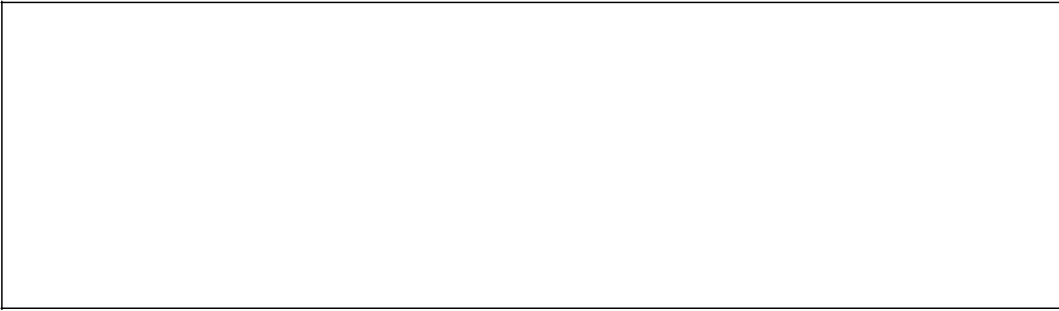
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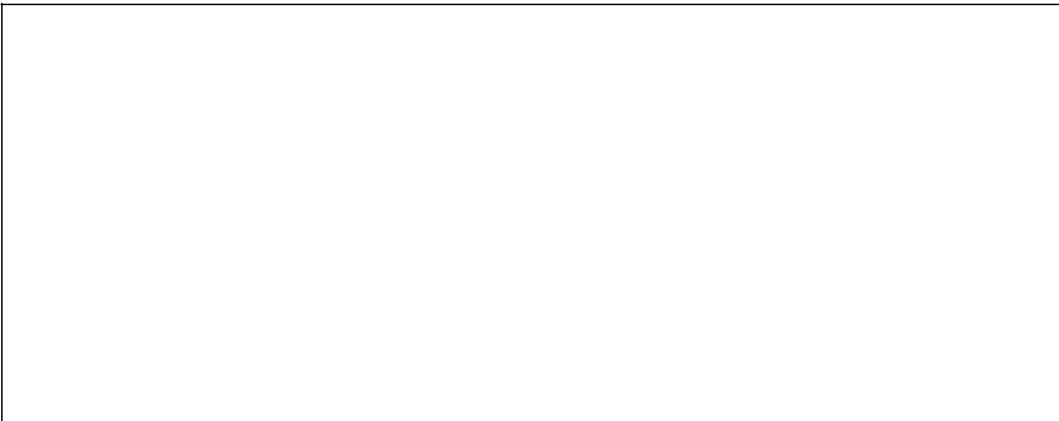
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$.e = demand - \hat{demand}$  ,

summer	holiday	temp	price	demand	<i>demand</i>	<i>e</i>
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1	0	30	19.99	1447		
0	0	-2	19.99	381		
1	0	31	23.99	1350		
0	0	4	25.99	267		
1	1	31	23.99	2380		

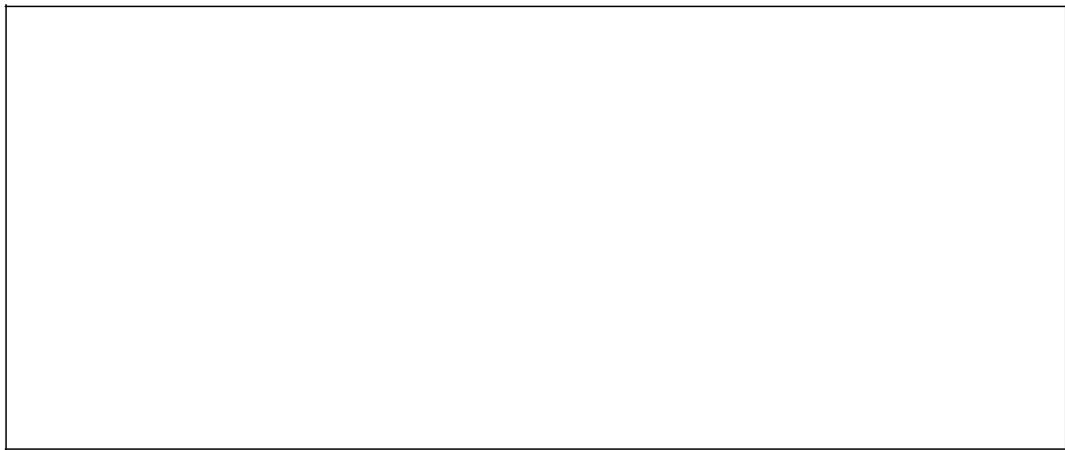
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Model 2: OLS estimates using observations 1-119  
 Dependent variable: demand

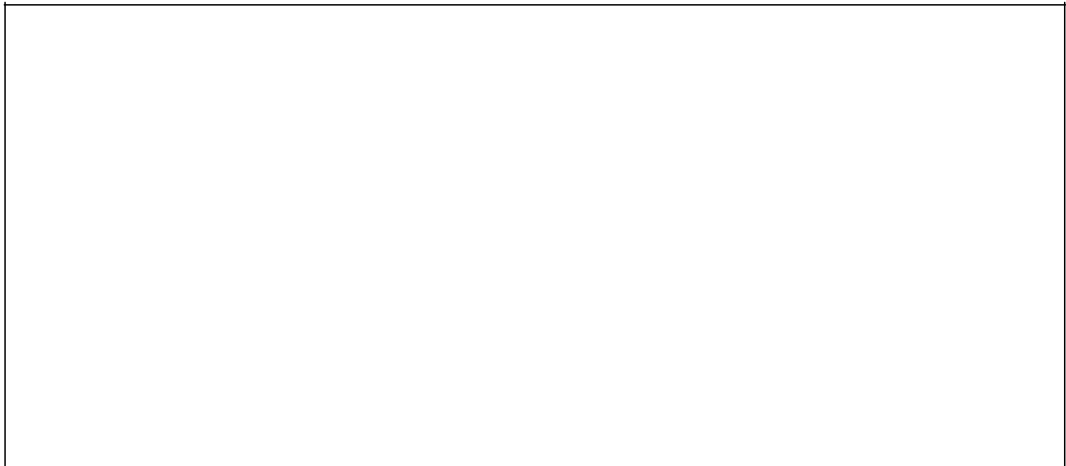
VARIABLE	COEFFICIENT	STDERROR	T STAT	P-VALUE
const	1131.685	344.0147	3.289642	0.001329
price	-37.6052	14.54709	-2.58506	0.010975
temp	35.07423	3.018517	11.61969	3.60E-21

.056

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summer	holiday	temp	price	demand	1	2
1	0	30	19.99	1447		
0	0	-2	19.99	381		
1	0	31	23.99	1350		

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**שאלה 2**

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$$Y_i = 22 - 0.002W_i - 2.76A_i + 3.28D_i + e_i$$

(0.001)
(0.71)
(1.41)

$i$  –  $Y_i$

$i$  –  $W_i$

. –  $i$  1 –  $A_i$

. –  $i$  1 –  $D_i$

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(1)  $S = r + u_1M + sI + u_2M \cdot I + u$

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 :

( " ) - S  
 0 - 1- - M  
 ( " ) - I

\_\_\_\_\_ ? ,(1)  
 \_\_\_\_\_ ? ,(1)

(2)  $S_i = 1.03 + \underset{(0.33)}{1.08} M_i + \underset{(0.47)}{0.25} I_i - \underset{(0.08)}{0.05} M_i \cdot I_i + e_i$

:

$\sum (S - \bar{S})^2 = 31.25$  : 125

$\sum e^2 = 11.25$

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$$(3) S_i = \alpha_0 + \alpha_1 I_i + u_i$$

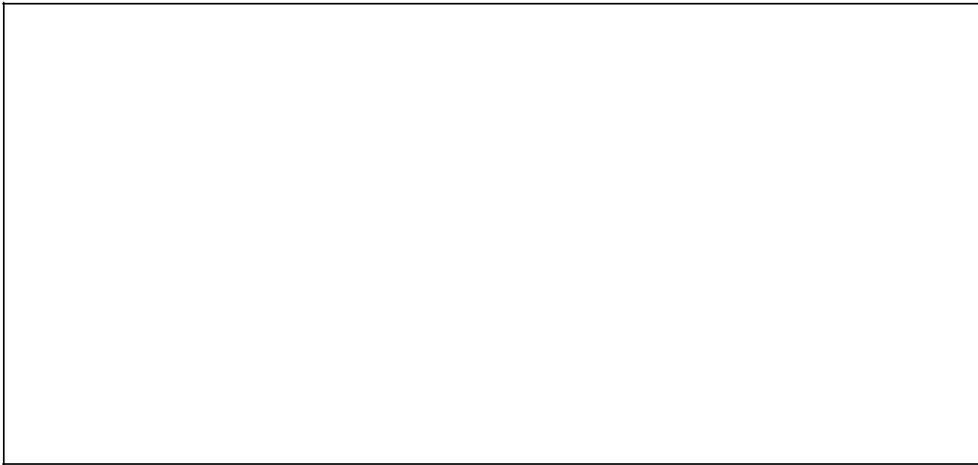
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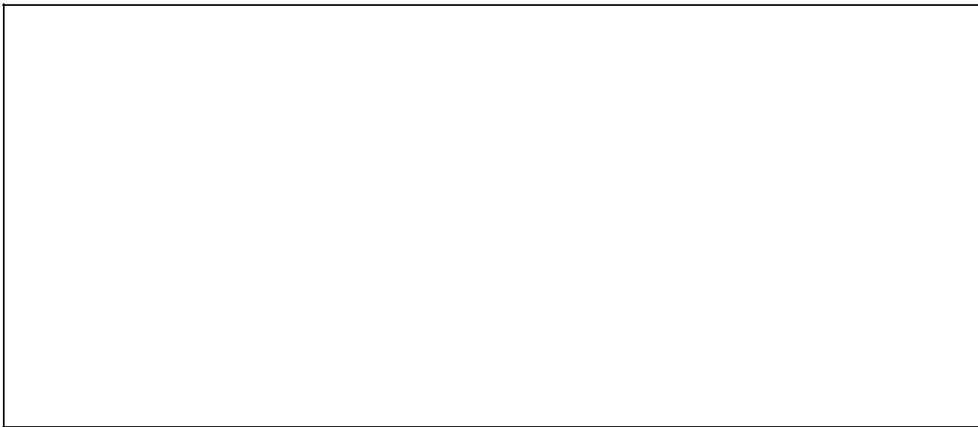
$$R^2 = 0.43$$

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0.01 " F



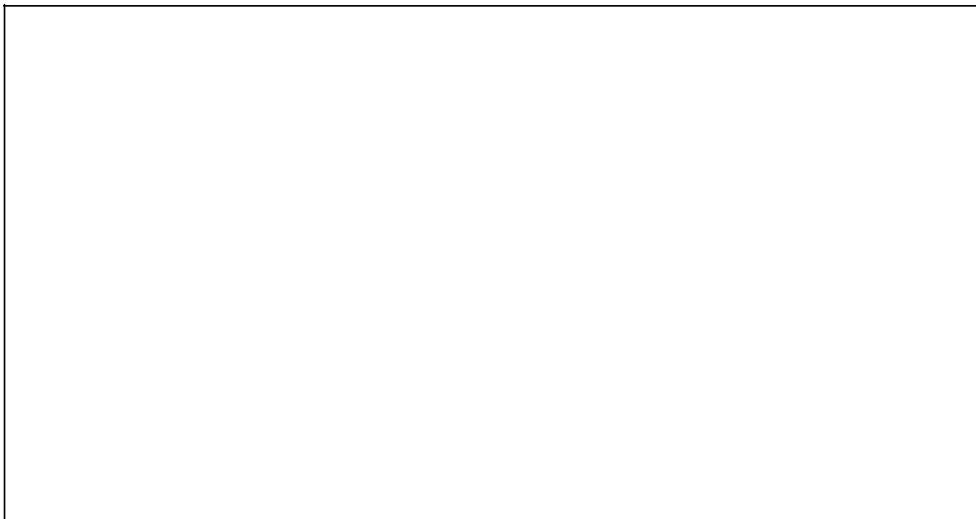
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$$S = r + sI + uM \cdot I + u \quad 0.05 \text{ " ,}$$

.4

$$.S = r + u_1M + sI + u_2M \cdot I + u$$



(1)  $Y_i = r_0 + r_1 D_1 + r_2 D_2 + r_3 (D_1 D_2) + s X_i + u_i$

:  
=  $Y_i$

$$D_1 = \begin{cases} 1 \\ 0 \end{cases}$$

$$D_2 = \begin{cases} 1 \\ 0 \end{cases}$$

=  $X_i$

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$$(1) \text{ Price}_i = S_0 + S_1 \text{ Japan}_i + S_2 \text{ Income}_i + S_3 \text{ Japan}_i \cdot \text{Income}_i + u_i$$

:

, -  $\text{Price}_i$ 0 - , 1- -  $\text{Japan}_i$ , -  $\text{Income}_i$ 

:

$$(1') \hat{\text{Price}}_i = 10.2 + 0.8 \text{ Japan}_i + 0.15 \text{ Income}_i + 0.1 \text{ Japan}_i \cdot \text{Income}_i$$

$$R^2 = 0.5252$$

$$\overline{R^2} = 0.5026$$

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.(2)

.(3)

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(2)  $Price_i = r_0 + r_1 Income_i + v_i$

(3)  $Price_i = x_0 + x_1 Income_i + w_i$

. $r_1$  -

. $x_1$  -

. , ? $r_0$  -

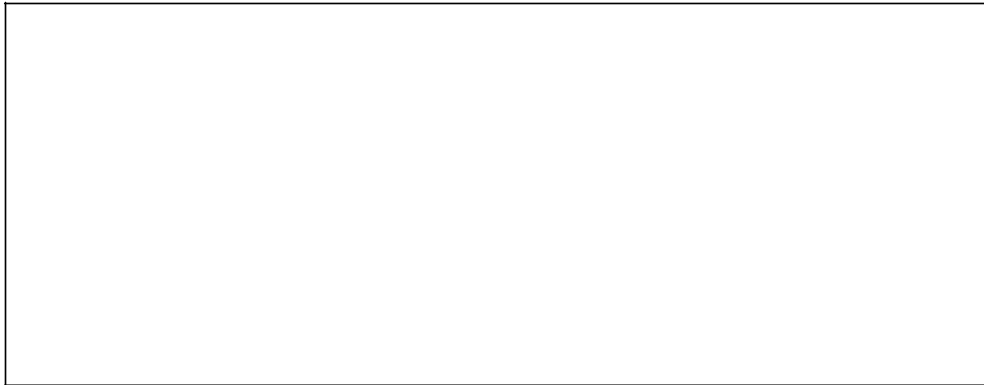
. , ? $x_0$  -

$$(4) \text{ Price}_i = \beta_0 + \beta_1 \text{ Income}_i + v_i \quad :$$

$$.R^2 = 0.4445$$

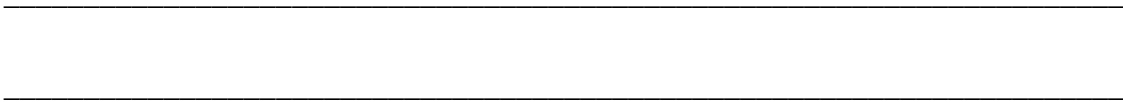
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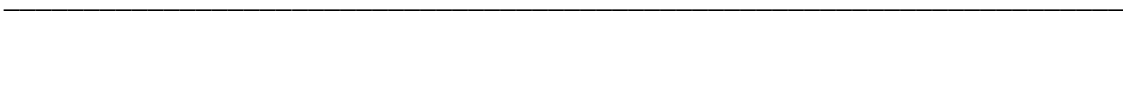
?0.4445 -

(2)



?0.4445 -

(3)



?0.4445 -

(3)

(2)

