Επενδύσεις σε Σπίτια
(10.7)

$$y_t = \beta_0 + \beta_1 \, x_t + u_t$$

$y(t) = 0.0081 \times t + uHat$
      $(.0018)$

Προβληματικά
(Αυτοσυσχέτιση)

$x(t) = 0.0044 \times t + uHat$
      $(.0004)$

$y_t = log(Επενδύσεις\ σε\ Σπίτια)$
$x_t = log(Τιμές\ Σπιτιών)$

Dependent Variable:
LOG(HOUSING_INVESTMENTS)
Method: Least Squares
Sample: 1947-1988

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.55	0.04	-12.79	0.00
LOG(PRICE)	1.24	0.38	3.24	0.00

R-squared	0.21	Mean dependent var	-0.67
Adjusted R-squared	0.19	S.D. dependent var	0.17
S.E. of regression	0.16	Akaike info criterion	-0.84
Sum squared resid	0.97	Schwarz criterion	-0.76
Log likelihood	19.62	Hannan-Quinn criter.	-0.81
F-statistic	10.53	Durbin-Watson stat	0.81
Prob(F-statistic)	0.00		

Command Window:
LS LOG(HOUSING_INVESTMENTS) C LOG(PRICE)

Dependent Variable:
LOG(HOUSING_INVESTMENTS)

Method: Least Squares
Sample: 1947-1988

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.833	0.043	-19.297	0.000
@TREND	0.008	0.002	4.493	0.000

R-squared	0.335	Mean dependent var	-0.666
Adjusted R-squared	0.319	S.D. dependent var	0.173
S.E. of regression	0.142	Akaike info criterion	-1.014
Sum squared resid	0.811	Schwarz criterion	-0.931
Log likelihood	23.290	Hannan-Quinn criter.	-0.983
F-statistic	20.190	Durbin-Watson stat	1.014
Prob(F-statistic)	0.000		

Command Window:
LS LOG(HOUSING_INVESTMENTS) C @TREND

Dependent Variable: LOG(PRICE)

Method: Least Squares

Sample: 1947-1988

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.184	0.010	-18.137	0.000
@TREND	0.004	0.000	10.371	0.000

R-squared	0.729	Mean dependent var	-0.093
Adjusted R-squared	0.722	S.D. dependent var	0.063
S.E. of regression	0.033	Akaike info criterion	-3.911
Sum squared resid	0.045	Schwarz criterion	-3.828
Log likelihood	84.124	Hannan-Quinn criter.	-3.880
F-statistic	107.566	Durbin-Watson stat	0.355
Prob(F-statistic)	0.000		

Command Window:
LS LOG(PRICE) C @TREND

Dependent Variable:
LOG(HOUSING_INVESTMENT)

Method: Least Squares
Sample: 1947-1988

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.90	0.13	-6.83	0.00
LOG(PRICE)	-0.38	0.68	-0.56	0.58
@TREND	0.01	0.00	2.80	0.01

R-squared	0.34	Mean dependent var	-0.67
Adjusted R-squared	0.31	S.D. dependent var	0.17
S.E. of regression	0.14	Akaike info criterion	-0.97
Sum squared resid	0.80	Schwarz criterion	-0.85
Log likelihood	23.46	Hannan-Quinn criter.	-0.93
F-statistic	10.08	Durbin-Watson stat	1.05
Prob(F-statistic)	0.00		

```
Command Window:
LS LOG(HOUSING_INVESTMENTS) C  LOG(PRICE) @TREND
```

• Τιμές ασήμαντες

• Επενδύσεις ⇧ 1%/έτος

• Σημαντική «εξήγηση» αποτελεσμάτων σύμφωνα με το R2

Αν όμως αφαιρέσουμε την τάση πριν την παλινδρόμηση

Dependent Variable: EPSILON_HAT
Method: Least Squares
Sample: 1947-1988

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.072	0.136	-0.529	0.600
LPRICE	-0.381	0.679	-0.561	0.578
T	0.002	0.004	0.479	0.635

R-squared	0.008	Mean dependent var	-0.000
Adjusted R-squared	-0.043	S.D. dependent var	0.141
S.E. of regression	0.144	Akaike info criterion	-0.974
Sum squared resid	0.805	Schwarz criterion	-0.850
Log likelihood	23.459	Hannan-Quinn criter.	-0.929
F-statistic	0.157	Durbin-Watson stat	1.049
Prob(F-statistic)	0.855		

Command Window:
LS EPSILON_HAT C LPRICE T