

LEC 3.3 SEMILOG MODEL

SEMILOG MODEL

$$\ln Y = B_1 + B_2t + U_t$$

It is called semilog model because only one variable is in logarithm form

obs	LY	T	Y
1973	12.15794	1.000000	190601.0
1974	12.20289	2.000000	199365.0
1975	12.23058	3.000000	204963.0
1976	12.33781	4.000000	228162.0
1977	12.48298	5.000000	263808.0
1978	12.63874	6.000000	308272.0
1979	12.75854	7.000000	347507.0
1980	12.76393	8.000000	349386.0
1981	12.81202	9.000000	366597.0
1982	12.85086	10.00000	381115.0
1983	12.97243	11.00000	430382.0
1984	13.14563	12.00000	511768.0
1985	13.29195	13.00000	592409.0
1986	13.37864	14.00000	646055.0
1987	13.43797	15.00000	685545.0

PURPOSE

The purpose is to estimate growth rate

Our Model

Y= Consumer credit outstanding from 1973-1987

Dependent Variable: LY				
Method: Least Squares				
Date: 02/20/09 Time: 21:30				
Sample: 1973 1987				
Included observations: 15				
	Coefficient	Std. Error	t-Statistic	Prob.
C	12.00708	0.031924	376.1174	0.0000
T	0.094639	0.003511	26.95383	0.0000
R-squared	0.982421	Mean dependent var		12.76419
Adjusted R-squared	0.981069	S.D. dependent var		0.427008
S.E. of regression	0.058753	Akaike info criterion		-2.707393
Sum squared resid	0.044874	Schwarz criterion		-2.612986
Log likelihood	22.30545	Hannan-Quinn criter.		-2.708399
F-statistic	726.5092	Durbin-Watson stat		0.850265
Prob(F-statistic)	0.000000			

$$Y = 12.007 + 0.094639T$$

The slope coefficient of 0.0946 suggests that on the average log of Y (consumer credit outstanding) is growing at the rate of 9.46 percent. In other words Y has been increasing at the rate of 9.46 percent per year.

Ref: Essentials of Econometrics by Damodar Gujarati, Chapter 8

END