Interpreting Eviews Regression output E270; April 2, 1999

The following Eviews output was generated with LS HHSNTR C LHUR PDOT

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LS // Dependent Variable is HHSNTR
Date: 03/13/98   Time: 13:43
Sample(adjusted): 1978:01 1997:07
Included observations: 235 after adjusting endpoints
Variable     Coefficient     Std. Error        t-Statistic       Prob.
C             116.0666        2.573406          45.10233          0.0000
LHUR         -2.693746        0.366245         -7.355028          0.0000
PDOT         -2.634644        0.148685         -17.71959          0.0000

R-squared            0.624519         Mean dependent var         84.52638
Adjusted R-squared   0.621282         S.D. dependent var         11.89146
S.E. of regression   7.318012         Akaike info criterion      3.993361
Sum squared resid    12424.37         Schwarz criterion          4.037526
Log likelihood-799.6705               F-statistic                192.9368
Durbin-Watson stat   0.280117         Prob(F-statistic)          0.000000
```

Interpreting Eviews Output.

When you copy/paste output from Eviews into Word it may not display very well because Eviews uses both tabs and spaces in its output. The first remedy is to try changing the Font size. If it still doesn't look right, select the area with the problem and adjust the locations of the tabs.

Sample(adjusted): 1978:01 1997:07: The actual period covered by the regression

Included observations: 235: i.e., n = 235

Variable Coefficient Std. Error t-Statistic Prob.

Following this line there is one row for each parameter in the equation that is being estimated. The C row refers to the intercept of the equation. In this instance, there were two explanatory variables, LHUR (the unemployment rate) and PDOT (the rate of inflation).

The *Coefficient* column gives the b_i: this is the estimate of the parameter β_i.

The *Std. Error* column is $\bar{S}_{b_i}$; this is an estimate of σ_{b_i}, which is the standard deviation of the sampling distribution of b_i; the bar indicates that $\bar{S}_{b_i}$ is adjusted for degrees of freedom. $\bar{S}_{b_i}^{\,2}$ is an unbiased estimate of $\sigma_{b_i}^2$

t-statistics is $t_i = b_i/\bar{S}_{b_i}$ .Under appropriate (maintained) assumptions (Regression Handout #2, assumptions #1 through #5), the statistic $t_i = (b_I-\beta_i)/\bar{S}_{b_i}$ will have the t distribution with n – k –1 degrees of freedom. When H_o: $\beta_i = 0$ is true, this reduces to the t-stat reported by Eviews: $t_i = b_i/\bar{S}_{b_i}$. Thus the number reported in this column is relevant for testing H_o: $\beta_i = 0$.

Prob is $P(|t \geq t_i|, \ |\beta_i = 0)$ If this number is less than 5% your regression coefficient is significant at the 5% level!

R-squared is $1 - S_e^2/S_Y^2$. Adjusted R squared = $\bar{R}^2$; S.E of regression is $\bar{S}_e = [\sum e_i^2/(n-k-1)]^{1/2}$; Sum squared residuals = $\sum e_i^2$

Durbin-Watson stat is the Durbin Watson diagnostic statistic used for checking if the ε are auto-correlated rather than independently distributed.

Mean of dependent variable is $\bar{Y}$ and S.D. dependent var is $\bar{S}_y$.

F-statistic and Prob(F-statistic) are for testing H_o: $\beta_1 = 0, \beta_2 = 0, \ldots, \beta_k = 0$. (i.e., $Y = \bar{Y} + \varepsilon$)