Data Exercises

Chapter 5

1. Try to work out what sign you would have expected each of the estimated parameters, b_1,b_2 and b_3 to have in the last regression you estimated and check to see if the results agree with this.

2. Having estimated this equation, interpret the following items:

(i) each coefficient
(ii) the R squared
(iii) the 'F' statistic which is shown in the 'Analysis of Variance' portion of the output
(iv) the 't' values and significance levels which are shown in the regression output table

3. Use a word processor to rearrange your results into a table of the following form:

TITLE OF TABLE
(for example: OLS Estimates of an equation for car acceleration)

Independent Variables	**Coefficient**
R Squared	
F	
N	

The blank portion above is to be filled with the variable names in the first column and in the second the coefficient with the 't' ratio in a bracket underneath.

NOTE: You can use a right mouse click to copy and paste an SPSS table into a word processor but this only takes an item which is in a box so for a regression you need to paste the R squared and F separately from the coefficients and t-ratios.

4. Work out by how many seconds the predicted time to accelerate would change by, cetris paribus, if the vehicle weight of a given car was increased by 25 pounds. Work out the amount by which horsepower would need to be decreased in order to completely cancel out the increase in time to accelerate in part (i).

5. Work out the elasticities for each of the three independent variables at the means of the data.