Examples from J.M. Wooldridge, Introductory Econometrics, South-Western College Publishing (Thomson Learning) 2000, p. 64

2.11 The data set in CEOSAL2.xls contains information on chief executive officers for U.S. corporations. The variable salary is annual compensation, in thousands of dollars, and ceoten is prior number of years as company CEO.

(i) Find the average salary and the average tenure in the sample.

(ii) How many CEOs are in their first year as CEO (that is, ceoten = 0)? What is the longest tenure as a CEO?

(iii) Estimate the simple regression model

\[ \log(\text{salary}) = c(1) + c(2) \text{ceoten} + u, \]

and report your results in the usual form. What is the (approximate) predicted percentage increase in salary given one more year as a CEO? To get log(salary) in EViews you can simply enter @log(salary).

2.12 Use the data in SLEEP75.xls from Biddle and Hamermesh (1990) to study whether there is a tradeoff between the time spent sleeping per week and the time spent in paid work. We could use either variable as the dependent variable. For concreteness, estimate the model

\[ \text{sleep} = c(1) + c(2) \text{totwrk} + u, \]

where sleep is minutes spent sleeping at night per week and totwrk is total minutes worked during the week.

(i) Report your results in equation form along with the number of observations and \( R^2 \). What does the intercept in this equation mean?

(ii) If totwrk increases by 2 hours, by how much is sleep estimated to fall? Do you find this to be a large effect?

2.13 Use the data in WAGE2.RAW to estimate a simple regression explaining monthly salary (wage) in terms of IQ score (IQ).

(i) Find the average salary and average IQ in the sample. What is the standard deviation of IQ? (IQ scores are standardized so that the average in the population is 100 with a standard deviation equal to 15.)

(ii) Estimate a simple regression model where a one-point increase in IQ changes wage by a constant dollar amount. Use this model to find the predicted increase in wage for an increase in IQ of 15 points. Does IQ explain most of the variation in wage?