

The Nature and Scope of Econometrics (Practice)

1. What would you expect the sign of β_2 to be and why?

$$\text{healthcare spending} = \beta_0 + \beta_1 \text{income} + \beta_2 \text{age} + u$$

- (a) positive, older patients spend less.
- (b) negative, older patients spend less.
- (c) positive, older patients spend more, perhaps due to medical problems linked to age.
- (d) negative, older patients spend more, perhaps due to medical problems linked to age.

Use the data in “*wage1*” for question 2-6.

2. Find the average education level in the sample. What are the lowest and highest years of education?
3. Find the average hourly wage in the sample. Does it seem high or low?
4. The wage data are reported in 1976 dollars. Using the Internet or a printed source, find the Consumer Price Index (CPI) for the years 1976 and 2013.
5. Use the CPI values from question 4 to find the average hourly wage in 2013 dollars. Now does the average hourly wage seem reasonable?

$$\text{wage}_{2013} = \text{wage}_{1976} * \frac{CPI_{2013}}{CPI_{1976}}$$

6. How many women are in the sample? How many men?
7. The term “u” in an econometric model is usually called
 - (a) the error term
 - (b) the unknown term
 - (c) the ubiquitous term
 - (d) the hypothesis
8. Assume you have data on Clarkson University, Suny Potsdam and Saint Lawrence University. The data show enrollments, number of professors, revenues, expenses, new hires and graduation. The data starts in 1972, is collected each year until 2017. What would you call this dataset?
 - (a) time series data
 - (b) non-observational data
 - (c) panel or longitudinal data
 - (d) cross-sectional data
9. To increase your endurance on a 5K race, you join a 2 weeks training program with your friend Abby who has been doing track and field since she was 7. She still trains 8 times a week with the university team. Conversely, the extent of your workout resume includes mostly going up the stairs twice a week for class. What problem makes the results from this study flawed?
 - (a) immorality
 - (b) ceteris paribus

- (c) non-experimental data
- (d) no time dimension in the study

Use the data in BWGHT.RAW to answer question 10-12.

10. How many women are in the sample, and how many report smoking during pregnancy?
11. What is the average number of cigarettes smoked per day? Is the average a good measure of the “typical” woman in this case? Explain.
12. Among women who smoked during pregnancy, what is the average number of cigarettes smoked per day? How does this compare with your previous answer?