

ECO220Y: Homework, Lecture 5

Readings: Chapter 7 (section 7.5), handout “Economic Questions and Data”

Problems: Chapter 7: 32, 47, 49

(1) Do the following describe observational or experimental data?

- (a)** Data on the interest rate and growth rate of GDP over time in Canada
- (b)** Obesity rate in mice fed low-carb diet versus regular diet
- (c)** Prices and quantities sold of bath tissue for randomly selected retail outlets

(2) Find a recent newspaper or magazine article (popular press, not an academic journal article) about a topic not already discussed in lecture. Pick an article that inspires a research question that interests you AND that could be addressed via data analysis, even if you are not sure where to get those data from. (Note the answers to the following questions are very likely not given in your selected article. You need to answer these by thinking about the topic discussed in your article in light of what you learned in lecture and the assigned reading.)

- (a)** Identify a valid research question
- (b)** Give examples of observational and experimental data that might address the research question
- (c)** Draw a diagram like that shown in Lecture 5 (arrows and boxes) to illustrate your specific research question. For the observational data, indicate the specific unobserved variables likely to be an issue, put them in your diagram and explain the problem they create as you try to answer your research question using your observational data. Referring again to your diagram, indicate how this problem will not arise if you can address your research questions with experimental data.