

*Introduction to Econometrics, 3e (Stock)*  
**Chapter 1 Economic Questions and Data**

1.1 Multiple Choice

1) Analyzing the behavior of unemployment rates across U.S. states in March of 2006 is an example of using

- A) time series data.
- B) panel data.
- C) cross-sectional data.
- D) experimental data.

Answer: C

2) Studying inflation in the United States from 1970 to 2006 is an example of using

- A) randomized controlled experiments.
- B) time series data.
- C) panel data.
- D) cross-sectional data.

Answer: B

3) Analyzing the effect of minimum wage changes on teenage employment across the 48 contiguous U.S. states from 1980 to 2004 is an example of using

- A) time series data.
- B) panel data.
- C) having a treatment group vs. a control group, since only teenagers receive minimum wages.
- D) cross-sectional data.

Answer: B

4) Panel data

- A) is also called longitudinal data.
- B) is the same as time series data.
- C) studies a group of people at a point in time.
- D) typically uses control and treatment groups.

Answer: A

5) Econometrics can be defined as follows with the exception of

- A) the science of testing economic theory.
- B) fitting mathematical economic models to real-world data.
- C) a set of tools used for forecasting future values of economic variables.
- D) measuring the height of economists.

Answer: D

- 6) To provide quantitative answers to policy questions
- A) it is typically sufficient to use common sense.
  - B) you should interview the policy makers involved.
  - C) you should examine empirical evidence.
  - D) is typically impossible since policy questions are not quantifiable.

Answer: C

- 7) An example of a randomized controlled experiment is when
- A) households receive a tax rebate in one year but not the other.
  - B) one U.S. state increases minimum wages and an adjacent state does not, and employment differences are observed.
  - C) random variables are controlled for by holding constant other factors.
  - D) some 5<sup>th</sup> graders in a specific elementary school are allowed to use computers at school while others are not, and their end-of-year performance is compared holding constant other factors.

Answer: D

- 8) Ideal randomized controlled experiments in economics are
- A) often performed in practice.
  - B) often used by the Federal Reserve to study the effects of monetary policy.
  - C) useful because they give a definition of a causal effect.
  - D) sometimes used by universities to determine who graduates in four years rather than five.

Answer: C

- 9) Most economic data are obtained
- A) through randomized controlled experiments.
  - B) by calibration methods.
  - C) through textbook examples typically involving ten observation points.
  - D) by observing real-world behavior.

Answer: D

- 10) One of the primary advantages of using econometrics over typical results from economic theory, is that
- A) it potentially provides you with quantitative answers for a policy problem rather than simply suggesting the direction (positive/negative) of the response.
  - B) teaching you how to use statistical packages
  - C) learning how to invert a 4 by 4 matrix.
  - D) all of the above.

Answer: A

- 11) In a randomized controlled experiment
- A) there is a control group and a treatment group.
  - B) you control for the effect that random numbers are not truly randomly generated
  - C) you control for random answers
  - D) the control group receives treatment on even days only.

Answer: A

12) The reason why economists do not use experimental data more frequently is for all of the following reasons except that real-world experiments

- A) cannot be executed in economics.
- B) with humans are difficult to administer.
- C) are often unethical.
- D) have flaws relative to ideal randomized controlled experiments.

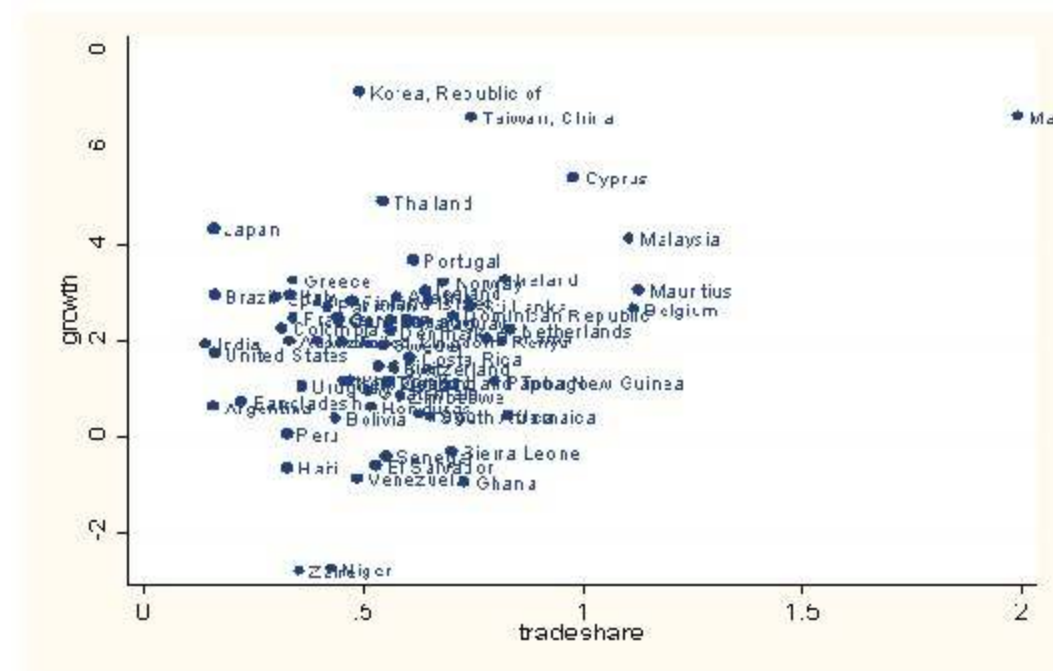
Answer: A

13) The most frequently used experimental or observational data in econometrics are of the following type:

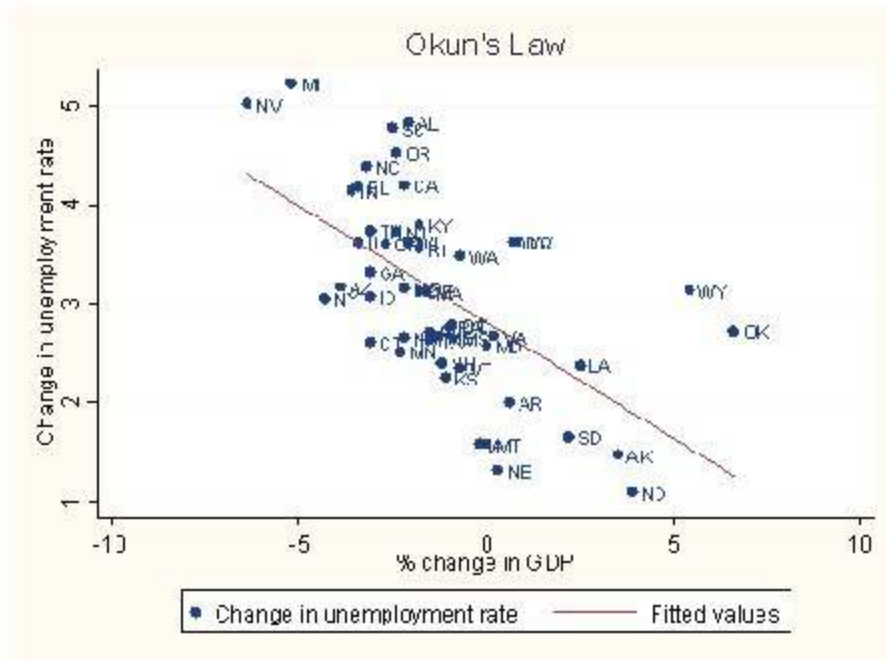
- A) cross-sectional data.
- B) randomly generated data.
- C) time series data.
- D) panel data.

Answer: A

14) In the graph below, the vertical axis represents average real GDP growth for 65 countries over the period 1960-1995, and the horizontal axis shows the average trade share within these countries.

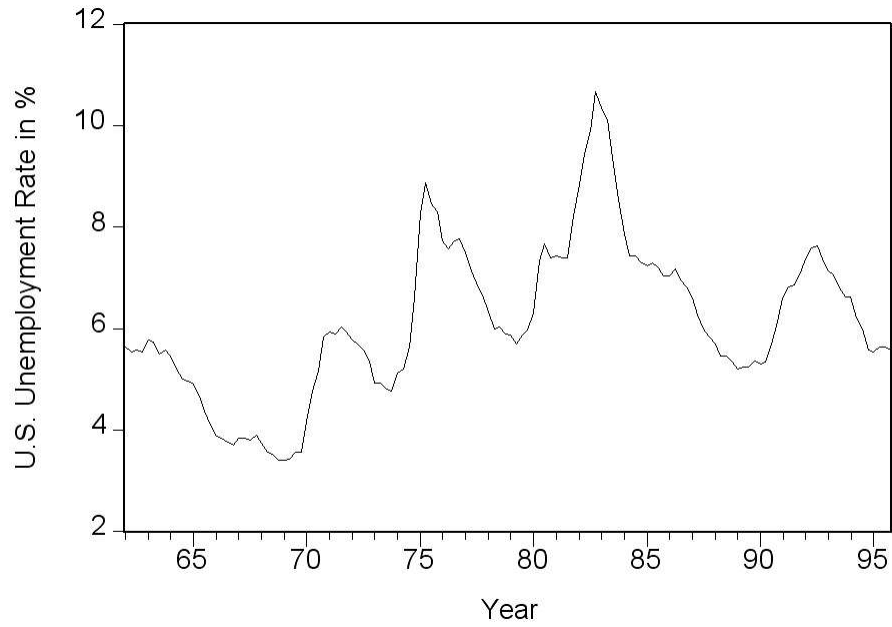


15) The accompanying graph



- Is an example of
- A) cross-sectional data.
  - B) experimental data.
  - C) a time series.
  - D) longitudinal data.
- Answer: A

16) The accompanying graph



is an example of

- A) experimental data.
- B) cross-sectional data.
- C) a time series.
- D) longitudinal data.

Answer: C

## 1.2 Essays

1) Give at least three examples from economics where each of the following type of data can be used: cross-sectional data, time series data, and panel data.

Answer: Answers will vary by student. At this level of economics, students most likely have heard of the following use of cross-sectional data: earnings functions, growth equations, the effect of class size reduction on student performance (in this chapter), demand functions (in this chapter: cigarette consumption); time series: the Phillips curve (in this chapter), consumption functions, Okun's law; panel data: various U.S. state panel studies on road fatalities (in this book), unemployment rate and unemployment benefits variations, growth regressions (across states and countries), and crime and abortion (Freakonomics).