

Ch 01 The Nature of Econometrics and Economic Data

1. Econometrics is the branch of economics that
- studies the behavior of individual economic agents in making economic decisions.
 - develops and uses statistical methods for estimating economic relationships.
 - deals with the performance, structure, behavior, and decision-making of an economy as a whole.
 - applies mathematical methods to represent economic theories and solve economic problems.

ANSWER: b

2. Nonexperimental data is called
- cross-sectional data.
 - observational data.
 - time series data.
 - panel data.

ANSWER: b

3. Which of the following is true of experimental data?
- Experimental data are collected in laboratory environments in the natural sciences.
 - Experimental data cannot be collected in a controlled environment.
 - Experimental data is sometimes called observational data.
 - Experimental data is sometimes called retrospective data.

ANSWER: a

4. An empirical analysis relies on _____ to test a theory.
- common sense
 - ethical considerations
 - data
 - customs and conventions

ANSWER: c

5. The term ' u ' in an econometric model is usually referred to as
- the error term.
 - the parameter.
 - the hypothesis.
 - the dependent variable.

ANSWER: a

6. The constants of econometric models are referred to as
- parameters.
 - statistics.
 - error terms.
 - hypotheses.

ANSWER: a

7. The parameters of an econometric model

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- a. include all unobserved factors affecting the variable being studied.
- b. describe the strength of the relationship between the variable under study and the factors affecting it.
- c. refer to the explanatory variables included in the model.
- d. refer to the predictions that can be made using the model.

ANSWER:

b

8. Which of the following is the first step in empirical economic analysis?

- a. Collection of data
- b. Statement of hypotheses
- c. Specification of an econometric model
- d. Testing of hypotheses

ANSWER:

c

9. A data set that consists of a sample of individuals, households, firms, cities, states, countries, or a variety of other units, taken at a given point in time, is called

- a. a cross-sectional data set.
- b. a longitudinal data set.
- c. a time series data set.
- d. an experimental data set.

ANSWER:

a

10. Data on the income of law graduates collected at different times during the same year is

- a. panel data.
- b. experimental data.
- c. time series data.
- d. cross-sectional data.

ANSWER:

d

11. A data set that consists of observations on a variable or several variables over time is called a(n) _____ data set.

- a. binary
- b. cross-sectional
- c. time series
- d. experimental

ANSWER:

c

12. Which of the following is true of time series data?

- a. The time series data is easier to analyze than cross-sectional data.
- b. The time series data are independent across time.
- c. The chronological ordering of observations in a time series conveys potentially important information.
- d. A time series data set consists of observations on a variable or several variables at a given time.

ANSWER:

c

13. Which of the following is an example of time series data?

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- a. Data on the unemployment rates in different parts of a country during a year.
- b. Data on the consumption of wheat by 200 households during a year.
- c. Data on the gross domestic product of a country over a period of 10 years.
- d. Data on the number of vacancies in various departments of an organization on a particular month.

ANSWER:

c

14. Which of the following refers to panel data?

- a. Data on the unemployment rate in a country over a 5-year period
- b. Data on the birth rate, death rate, and population growth rate in developing countries over a 10-year period.
- c. Data on the income of 5 members of a family in a particular year.
- d. Data on the price of a company's share during a year.

ANSWER:

b

15. Which of the following is a difference between panel and pooled cross-sectional data?

- a. A panel data set consists of data on different cross-sectional units over a given period of time, while a pooled data set consists of data on the same cross-sectional units over a given period of time.
- b. A panel data set consists of data on the same cross-sectional units over a given period of time, while a pooled data set consists of data on different cross-sectional units over a given period of time
- c. A panel data consists of data on a single variable measured at a given point in time, while a pooled data set consists of data on the same cross-sectional units over a given period of time.
- d. A panel data set consists of data on a single variable measured at a given point in time, while a pooled data set consists of data on more than one variable at a given point in time.

ANSWER:

b

16. _____ has a causal effect on _____.

- a. Income; unemployment
- b. Height; health
- c. Income; consumption
- d. Age; wage

ANSWER:

c

17. Which of the following is true?

- a. A variable has a causal effect on another variable if both variables increase or decrease simultaneously.
- b. The notion of 'ceteris paribus' plays an important role in causal analysis.
- c. Difficulty in inferring causality disappears when studying data at fairly high levels of aggregation.
- d. The problem of inferring causality arises if experimental data is used for analysis.

ANSWER:

b

18. Which of the following terms measures the association between two variables?

- a. Casual effect
- b. Independence
- c. Average
- d. Correlation

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ANSWER: d

19. Experimental data are sometimes called retrospective data.

- a. True
- b. False

ANSWER: False

20. Experimental data are easy to obtain in the social sciences.

- a. True
- b. False

ANSWER: False

21. An economic model consists of mathematical equations that describe various relationships between economic variables.

- a. True
- b. False

ANSWER: True

22. Random sampling complicates the analysis of cross-sectional data.

- a. True
- b. False

ANSWER: False

23. A cross-sectional data set consists of observations on a variable or several variables over time.

- a. True
- b. False

ANSWER: False

24. A time series data is also called a longitudinal data set.

- a. True
- b. False

ANSWER: False

25. The notion of ***ceteris paribus*** means “other factors being equal.”

- a. True
- b. False

ANSWER: True

26. In the following econometric model, $wage = \beta_0 + \beta_1 educ + u$, which of the following factors would **not** be contained in the term u ?

- a. Experience (*exper*)
- b. Family background (*fback*)
- c. Innate ability (*abil*)

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d. Education (*educ*)

ANSWER:

d

27. Given the following econometric model, $wage = \beta_0 + \beta_1 educ + u$, can we eliminate the error term u entirely?

- a. Yes, by including other observable factors, such as experience, that can also influence wage.
- b. Yes, by ensuring that everyone reports wage accurately and truthfully.
- c. No, because education is not always reported accurately.
- d. No, because many factors affect wage, that we cannot even list, let alone observe.

ANSWER:

d

28. Why do labor economists often find it difficult to estimate the ceteris paribus return to education, in terms of wage, using non-experimental data?

- a. Education level in non-experimental data is probably dependent on other omitted factors that also affect wage.
- b. In a non-experimental setting, education level is often difficult to measure.
- c. Wage is often reported unreliably and inaccurately.
- d. Experience, another factor that also affects wage, is generally difficult to measure.

ANSWER:

a

29. Why do labor economists often find it difficult to estimate the ceteris paribus return to education, in terms of wage, using non-experimental data?

- a. Education levels are not independent of all other factors affecting wage because people choose their education levels.
- b. It is not possible to know the exact levels of education for most people.
- c. Nonexperimental data sets often miss the years of schooling.
- d. Nonexperimental data omit data on experience and ability.

ANSWER:

a

30. Which of the following is an example of a counterfactual outcome?

- a. What would be the crime rate in a French town of Carcassonne if its police force doubled?
- b. What is the ability level of people with a college degree compared to people with only a high school diploma?
- c. How much bigger is the effect of fertilizer used on the better plots of land?
- d. Do wages reflect abilities, experience, or years of schooling?

ANSWER:

a

31. Consider studying the impact of a job training program required by certain firm on earnings. For each worker, their earnings would be under two states of the world: having participated in the job training program and having not participated. This is an example of a study using

- a. a counterfactual reasoning.
- b. the expectations hypothesis.
- c. longitudinal data.
- d. random sampling.

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ANSWER: a

32. What is the meaning of data frequency?

- a. It is a feature of time series data describing the regularity at which the data are collected, e.g., quarterly, or annually.
- b. It is a feature of the cross-sectional (or repeated) data describing the regularity at which the data are collected, e.g., quarterly, or annually.
- c. It is a feature of time series data describing how granular the data are, e.g., industry level, or firm level.
- d. It is a feature of panel data sets describing how granular the data are, e.g., industry level, or firm level.

ANSWER: a

33. Which is true about econometric models?

- a. Some econometric models are based on informal economic reasoning and intuition.
- b. It is not possible to build an econometric model without a formal economic models.
- c. The overwhelming majority of econometric models use pooled cross-sectional data structures.
- d. Econometric models are largely informal investigations in economic reasoning and intuition.

ANSWER: a

34. Which of the following is an accurate description of empirical analysis?

- a. An analysis that uses data to test a theory or to estimate a relationship.
- b. An analysis that uses personal observations to draw conclusions.
- c. An analysis that consists of mathematical equations that describe various relationships.
- d. An analysis that connects several empirical studies to build a theory.

ANSWER: a

35. What is the goal of the pooled cross-sectional analysis?

- a. To show how a key relationship has changed over time.
- b. To study the importance of lags in behavior or the result of decision making.
- c. To facilitate causal inference in situations where inferring causality would be very difficult.
- d. To control for certain unobserved characteristics of individuals or firms.

ANSWER: a

36. Which of the following is an example of random sampling violation?

- a. A small number of villages sampled in a developing country. Then, farmers sampled from those villages and surveyed about their practices.
- b. Different variables correspond to different time periods in cross-sectional data sets.
- c. A data set consists of observations on a variable or several variables over time.
- d. Cross-sectional data collected from the years before and after a key policy change.

ANSWER: a