

## Chapter 3

# WHAT ECONOMIES DO

*Macroeconomics In Context (Goodwin, et al.)*

### Chapter Overview

This chapter introduces the four essential economic activities: resource maintenance, the production of goods and services, the distribution of goods and services, and the consumption of goods and services. The chapter highlights resource maintenance, a crucial component in ensuring the environmental sustainability of economic activities. The chapter also examines the activity of distribution. In the chapter, you will learn about ways in which economists and others measure the extent of income and wealth inequality in an economy. The chapter concludes with a description of the three spheres of economic activity: the core sphere, the public purpose sphere, and the business sphere.

### Chapter Objectives

After reading and reviewing this chapter, you should be able to:

1. Define the four essential economic activities.
2. Define the five types of capital.
3. Explain the difference between stocks and flows.
4. Discuss the limitations of substitutability with respect to natural capital.
5. Understand the importance of maintaining capital stocks.
6. Describe the difference between exchange and transfer.
7. Define the difference between wealth and income.
8. Describe the distribution of income and wealth in the United States.
9. Describe how inequality is measured.
10. Describe the three spheres of economic activity.

### Key Terms

resource maintenance  
capital stock  
natural capital  
manufactured capital  
human capital  
social capital  
financial capital  
investment  
production  
inputs  
outputs  
waste products

distribution  
exchange  
transfer  
in-kind transfers  
consumption  
saving  
stock flow  
stock-flow diagram  
depreciation  
gross investment  
net investment  
renewable resource

nonrenewable resource  
substitutability  
sustainable socioeconomic system  
restorative socioeconomic system  
labor income  
capital income  
dependency needs  
social insurance programs  
means-tested programs  
proportional income tax

regressive income tax  
progressive income tax  
Lorenz curve  
Gini ratio  
capital gain  
core sphere  
public purpose sphere  
regulation  
business sphere  
informal sphere

### Active Review

#### *Fill in the Blank*

1. Protecting wildlife in a national park is an example of the economic activity of \_\_\_\_\_.
2. Gary's Gasoline Station is for sale. Gary hopes to get a good price for the station in part because he has built up a good reputation with customers. The good will of Gary's customers is a form of \_\_\_\_\_ capital.
3. The activity that turns inputs into new goods and services, or outputs, is called \_\_\_\_\_.
4. Your grandmother sends you a check for \$100. This form of resource distribution is referred to as a \_\_\_\_\_.
5. A gardener hears that a pesticide he has been using may have toxic effects on birds. Rather than wait to find out what further studies show about its effects, he finds another way of controlling insects in his garden. By taking action to protect birds, despite uncertainty about the dangers of the pesticide, the gardener is exercising the \_\_\_\_\_ principle.
6. An oil executive states he is not concerned about the eventual depletion of fossil fuel resources. "When we run out of oil," he says, "we'll just switch to nuclear." The oil executive is basing his argument on the notion of \_\_\_\_\_.
7. The activity of consumption and the activity of investment are linked by the activity of \_\_\_\_\_, which is the refraining from consumption today in order to gain benefits in the future.
8. In one year a country adds to the capital stock with new investments, but during that year some of its capital stock is reduced through depreciation. The resulting amount of investment is called \_\_\_\_\_ investment.
9. The graph that is used to depict income inequality, showing the percent of households along one axis and the percent of income along the other, is known as the \_\_\_\_\_

curve.

10. If income were perfectly equally distributed within a country, the value of the Gini ratio for that country would be \_\_\_\_\_.

*True or False*

11. Watching a movie is an example of “consumption.”
12. In a sustainable socioeconomic system, flows of goods and services come largely from judicious use of renewable capital stocks.
13. The number of fish sold per day at Big City Fish Shop is an example of a stock.
14. Planting new trees in a forest is an example of making an investment.
15. The distribution of wealth in the U.S. tends to be more equal than the distribution of income.
16. Cooking a family dinner at home is an activity of the core sphere of economics.

*Short Answer*

17. Identify the four essential economic activities.
18. Name the five types of capital.
19. What are the two main forms of economic distribution? What is the difference between them?
20. Explain the difference between a stock and a flow.

21. How does the approach of someone who has adopted the precautionary principle differ from someone with a blind faith in substitutability, when it comes to a non-renewable resource like fossil fuels?
22. What are the two types of government cash transfer programs in the U.S., used to help households achieve income security? Provide examples of each.
23. What distinguishes a progressive income tax, from a proportional income tax, or a regressive income tax?
24. What is a Lorenz curve? Explain how the Gini ratio uses the Lorenz curve to measure the level of inequality in a nation's income distribution.
25. The US Census Bureau has experimented with a variety of possible definitions of personal income. The Gini ratio in the US varies somewhat, depending which definition of personal income is used. If the Census Bureau starts with a measure of pre-tax money income and then adds the value of health insurance fringe benefits paid by businesses for their employees, as well as the value of net capital gains, how does the Gini ratio change?
26. What is the distinguishing characteristic of institutions in the public purpose sphere?

### Problems

1. Match the following items from column 1 with the appropriate examples from column 2:

Column 1:

- a) natural capital
- b) human capital
- c) social capital
- d) equity finance

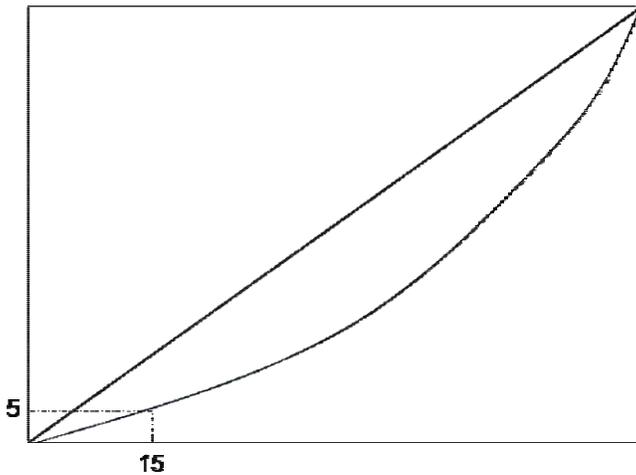
Column 2:

- 1) clean water
- 2) a company's good reputation
- 3) a company uses its own funds to pay for new machinery
- 4) literate workers

2. Identify which of the following resources are renewable vs. non-renewable resources. Explain how their stock/flow diagrams would be different, assuming that when the renewable resources are being renewed at the same rate as they are used up.

- a. A forest
- b. Reserves of petroleum and natural gas
- c. Reserves of uranium
- d. Fish in the seas
- e. Wind energy

Problem #3 refers to following graph.



The graph above shows a Lorenz curve for income distribution in the country of Utopia.

- a. Label the horizontal and vertical axes on this graph.
- b. In words, explain what information is communicated by the numbers shown on this graph.
- c. Suppose that the pattern of employment and wages in Utopia changes, so that now the distribution of income is less unequal. On the graph, draw an example of a Lorenz curve that could illustrate this result.

## Self Test

1. Enjoying art at a museum is an example of
  - a. production
  - b. consumption
  - c. exchange
  - d. transfer
  - e. resource maintenance
  
2. Which of the following is an example of the economic activity of resource maintenance?
  - a. Cooking dinner
  - b. Operating a factory
  - c. Providing worker education
  - d. Drilling for oil
  - e. Buying a bicycle
  
3. Which of the following is an example of the economic activity of distribution?
  - a. A baker makes 10 loaves of bread.
  - b. A plumber fixes a leak.
  - c. The legal speed limit is raised from 65 to 75 mph.
  - d. A couple enjoys a walk in the forest.
  - e. A retired worker receives Social Security benefits.
  
4. Which of the following is an example of the economic activity of consumption?
  - a. A baker makes 10 loaves of bread.
  - b. A plumber fixes a leak.
  - c. The legal speed limit is raised from 65 to 75 mph.
  - d. A couple enjoys a walk in the forest.
  - e. A retired worker receives Social Security benefits.
  
5. Which of the following is an example of a stock?
  - a. The number of haircuts you got last year
  - b. The amount of water that passes over a waterfall per second
  - c. The number of screwdrivers sold by a hardware store each week
  - d. The number of fish produced at a hatchery each day
  - e. The number of goldfish in the pet store's aquarium

6. Which of the following activities would be described as a resource maintenance effort?
- Limiting the use of fossil fuels in an effort to limit global warming
  - Harvesting fish at a high rate
  - Extracting oil from known oil reserves
  - Using a well-designed machine to process leather for shoes
  - Selling seeds on the international market
7. Many public health and environmental policy experts believe that when an activity poses a threat to human health or the environment, action should be taken to address that threat even when there is some scientific uncertainty about the issue. This approach is known as
- substitutability
  - the renewable resource rule
  - the precautionary principle
  - the sustainability principle
  - the fixed capital principle
8. A city government builds a new road. After five years the road develops some potholes, making it less useful. This decline in the value of the road over time is an example of
- fixed inventory
  - flows of capital services
  - depreciation
  - substitutability
  - a renewable resource
9. Which of the following is an example of a stock of natural capital?
- The number of trucks owned by a company.
  - The new growth in a forest over a year.
  - The knowledge you have gained from your past education.
  - The amount of oil in an underground reserve.
  - Efforts to remove the effects of pollution from a river.
10. A diagram that shows how flows change the level of a stock over time is known as a(n)
- flow chart
  - flow diagram
  - stock-flow diagram
  - input-output model
  - capital stock diagram

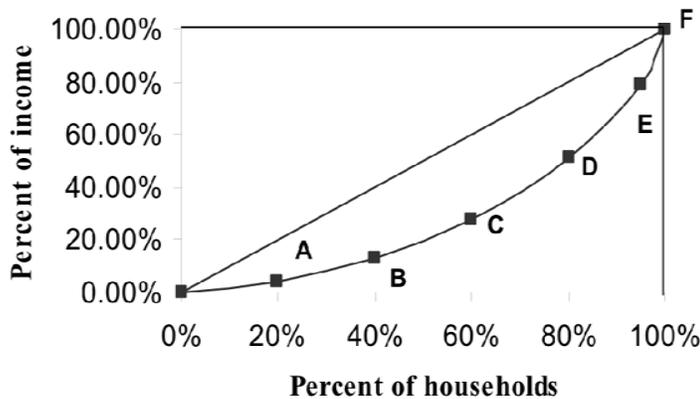
11. Which of the following is an example of a transfer?

- a. You get a new job.
- b. You trade violin lessons for foot massages.
- c. You buy a bag of groceries.
- d. You make a donation to a local soccer team.
- e. You buy stock in a start-up firm.

12. Which of the following statements is false?

- a. Rules about what can be owned vary across time and across cultures.
- b. If you have a use right to a good, you cannot necessarily sell that good.
- c. Transfers are distinguished by being one-way.
- d. Transfers are distinguished by being voluntary.
- e. Controversy exists over what sorts of things may be privately owned.

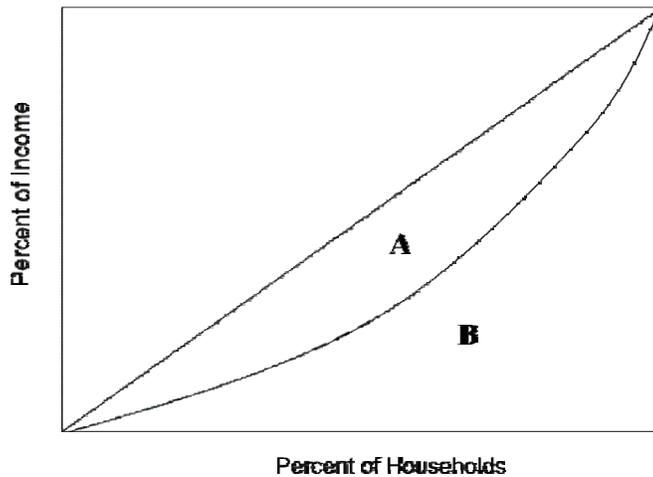
Question #13 refers to the following graph:



13. According to the Lorenz curve above, which of the following statements is true?

- a. The bottom 40% of households earn less than 20% of all income
- b. The bottom 20% of households earn 20% of all income
- c. The society shown here has complete income equality
- d. The more the curve sags downward, the greater income equality
- e. Both a and d are true

Question #14 refers to the following graph:



14. Referring to the graph shown above, the Gini ratio is equal to:

- a.  $A/(A+B)$
- b.  $(A+B)/A$
- c.  $B/(A+B)$
- d.  $A/B$
- e.  $B/A$

15. In the year 2010, suppose the Gini ratio for Canada is 0.3 and the Gini ratio for the US is 0.5. In the year 2015, the Gini ratio for Canada rises to 0.35. Which of the following statements is true?

- a. Canada has greater inequality than the US.
- b. Canada has greater inequality in 2015 than it did in 2010.
- c. The US has greater equality than Canada.
- d. Between 2010 and 2015, Canada's Lorenz curve has become straighter (closer to the diagonal line).
- e. All of the above are false.

16. Which of the following statements is true?

- a. The US has the lowest Gini ratio of all major industrialized countries
- b. The US has the highest Gini ratio of all major industrialized countries
- c. The UK has a higher Gini ratio than the US.
- d. Countries with high levels of equality have high Gini ratios.
- e. The US has a straighter Lorenz curve than any other major industrialized country.

17. Which of the following statements about income inequality in the US is true?
- a. Income distribution was most equal in 1968.
  - b. Income distribution was most equal in 1947.
  - c. Income inequality has declined steadily from 1947 to the present.
  - d. Income inequality has risen steadily from 1947 to the present.
  - e. The US has greater income equality than most industrialized countries.
18. Which of the following is an example of a core sphere activity?
- a. James plays a game of catch with his nephew.
  - b. Martha works at a bank.
  - c. A local fire department responds to local emergencies.
  - d. A national government purchases weapons.
  - e. A publicly funded state college provides education.
19. The activities of the U.S. Environmental Protection Agency would be characterized as part of
- a. The core sphere
  - b. The free rider sphere
  - c. The public purpose sphere
  - d. The business sphere
  - e. The informal sphere
20. Which of the following is *not* one of the main legal forms of enterprises in the business sphere?
- a. Proprietorships
  - b. Partnerships
  - c. Corporations
  - d. Non-profit organizations
  - e. Cooperatives

## Answers to Active Review Questions

1. resource maintenance
2. social (capital)
3. production
4. transfer
5. precautionary (principle)
6. substitutability
7. saving
8. net (investment)
9. Lorenz
10. zero
11. True
12. True
13. False, it's a flow.
14. True.
15. False, wealth is more unequally distributed than income is in the U.S.
16. True
17. The four essential economic activities are: resource maintenance, production, distribution, and consumption.
18. The five types of capital are: natural capital, manufactured capital, human capital, social capital, and financial capital.
19. The two main forms of economic distribution are exchange and transfer. Exchange involves a two-way distribution, trading one thing for another, whereas a transfer involves a one-way distribution, giving something with nothing specific expected in return.
20. A stock is something whose quantity is measured at a point in time, whereas a flow measures the quantity of something over a period of time.
21. Someone with a blind faith in substitutability will think that the depletion of a non-renewable resource like fossil fuels is not such a serious problem, since they have faith that in the future other resources can cheaply be substituted for it. While someone who has adopted the precautionary principle will think that we should err on the cautions side and not simply assume that other resources can be cheaply substituted for the non- renewable resource.
22. The two types of government cash transfer programs in the U.S., used to help households achieve income security are social insurance programs (like Social Security and Medicare) and means-tested programs (like welfare, food stamps, housing subsidies).
23. A proportional income tax takes the same percentage of a person's income, whether they are rich or poor. A progressive income tax takes a larger percentage of income from the rich, while a regressive income tax takes a larger percentage from the poor.
24. A Lorenz curve is a line that portrays a nation's income distribution, by dividing up households by into quintiles from poor to rich, and then plotting the cumulative percent of income flowing each quintile of households. The Gini ratio measures the level of income inequality by taking the area between the Lorenz curve and line of perfect equality (A), divided by the total area under the line of perfect equality (A+B). The higher the Gini, the more inequality there is in the income distribution.

25. It rises, since these benefits are enjoyed primarily by the middle class and the relatively wealthy.
26. The distinguishing characteristic of institutions in the public purpose sphere is that they exist to serve the common good for a group larger than an individual or family, and do not have the goal of making a profit.

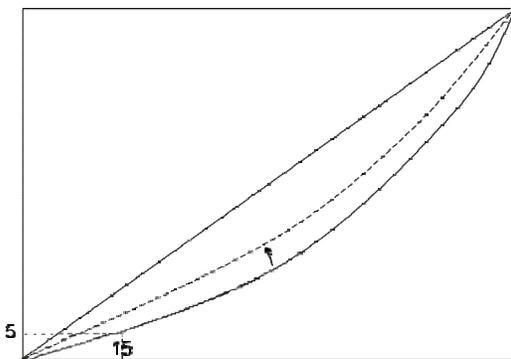
### Answers to Problems

1. a) 1; b) 4; c) 2; d) 3

2. a) renewable; b) non-renewable; c) non-renewable; d) renewable; e) renewable.  
 For the renewable resources, if the incoming flows equal the outgoing flows, the size of the stock will remain the same. For the non-renewable flows, there is no incoming flow, thus the size of the stock will continually diminish as it is used.

3.

- a. The horizontal axis should be labeled as “Percent of Households,” and the vertical axis should be labeled as “(Cumulative) Percent of Income.”
- b. Based on this graph, we can see that the poorest 15% of households in Utopia receive 5% of total household income.
- c. The curve will shift upward, toward the diagonal:



### Answers to Self Test Questions

1. B
2. C
3. E
4. D
5. E
6. A
7. C
8. C
9. D

10. C

11. D

12. D

13. A

14. A

15. B

16. B

17. A

- 18. A
- 19. C
- 20. D