

# The U.S. and Global Economies

## Chapter 2

### ANSWERS TO CHAPTER CHECKPOINT

#### ■ Study Plan Problems and Applications

1. Which of the following items are *not* consumption goods and services? Explain why not.
  - **A chocolate bar**  
A chocolate bar *is* a consumption good.
  - **A ski lift**  
A ski lift is not a consumption good. It is capital that produces a service for skiers.
  - **A golf ball**  
A golf ball *is* a consumption good.
2. Which of the following items are *not* capital goods? Explain why not.
  - **An auto assembly line**  
An auto assembly line *is* a capital good.
  - **A shopping mall**  
A shopping mall *is* a capital good.
  - **A golf ball**  
A golf ball is not a capital good. It is a consumption good.
3. Which of the following items are *not* factors of production? Explain why not.
  - **Vans used by a baker to deliver bread**  
Vans used to deliver bread are capital, so they are factors of production.
  - **1,000 shares of Amazon.com stock**  
1,000 shares of Amazon.com stock are not a factor of production. The shares represent partial ownership of Amazon.com and therefore are financial capital.
  - **Undiscovered oil in the Arctic Ocean**  
Undiscovered oil is not a factor of production because it is not used to

produce goods or services. Once it is discovered, it will become a factor of production.

4. **Which factor of production earns the highest percentage of total U.S. income? Define that factor of production. What is the income earned by this factor of production called?**

Labor earns by far the largest percentage of total U.S. income, 63 percent of total income in 2014. Labor consists of the work time and the work effort that people devote to producing goods and services. The income earned by labor is a wage.

5. **With more job training and more scholarships to poor American students, which special factor of production is likely to grow faster than in the past?**

As more people go to school and/or receive job training, the nation's human capital will grow more rapidly. Human capital is the knowledge and skills people obtain from education, on-the-job training, and work experience. With more job training and more scholarships, human capital will grow more rapidly.

6. **Define the factor of production called capital. Give three examples of capital, different from those in the chapter. Distinguish between the factor of production capital and financial capital.**

Capital is the tools, instruments, machines, buildings, and other items that have been produced in the past and that businesses now use to produce goods and services. Capital includes railroad engines and cars, servers, and ATMs. The factor of production "capital" is the actual good itself; "financial capital," such as stocks and bonds, are the funds that provide businesses with their financial resources which can be used to acquire capital goods.

7. **The pace at which new businesses are created in the U.S. economy and the percentage of U.S. jobs in young firms has fallen.**

Ryan Decker and others, "The Role of Entrepreneurship in U.S. Job Creation and Economic Dynamism." *Journal of Economic Perspectives*, 2014.

**Explain how you would expect these facts to influence what, how, and for whom goods and services are produced in the United States**

The answer to the *what* question changes if, as is probably the case, new and young business produce different goods and services than more established business. For example, new and young firms are more likely to create apps than older and more established firms. If these groups of producers produced their goods and services using different technologies than the rest of the producers, then the question of *how* goods and services would change. *For whom* goods and services are produced would

change if some groups of consumers prefer the goods and services produced by the new and young firms while other groups do not.

8. In the circular flow model, explain the real flow and/or the money flow in which each item below belongs. Illustrate your answers on a circular flow diagram.

- **You buy a coffee at Starbucks.**

In Figure 2.1 the dark arrows represent money flows and the grey arrows represent flows of goods and services and factors of production. If you buy a coffee at Starbucks, your expenditure is a money flow from households to the goods market, labeled *a* in the figure.

- **The government buys some Dell computers.**

The purchase of computers by the government represents a flow of computers from the goods market to the government, labeled *b* in the figure.

- **A student works at a FedEx office.**

The student working at FedEx is a factor of production, so the flow is a flow of the services of factor of production from households to the factor markets, labeled *c* in the figure.

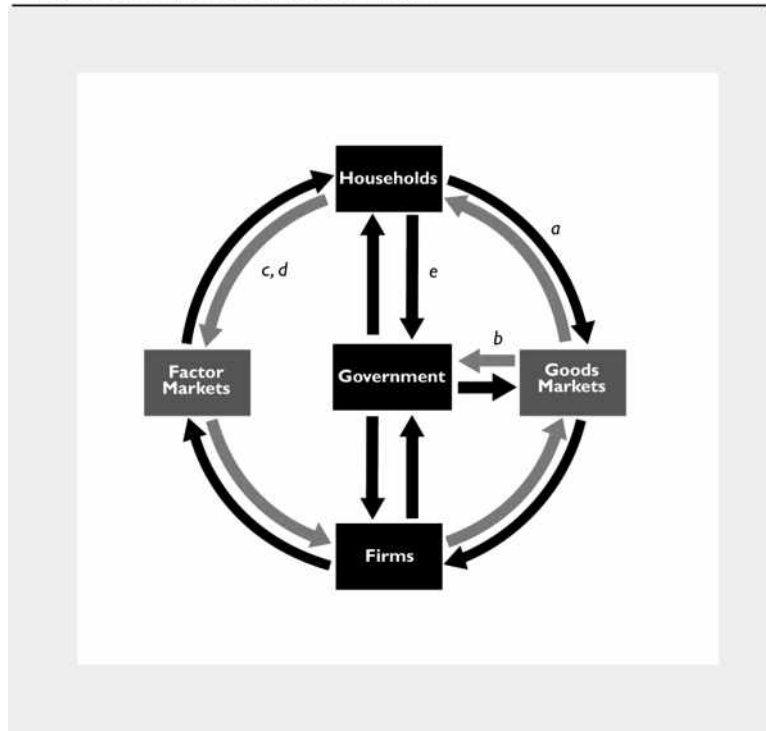
- **Donald Trump rents a Manhattan building to a hotel.**

Donald Trump's building in Manhattan is a factor of production, so the flow is the services from this factor of production from households to the factor markets, labeled *d* in the figure.

- **You pay your income tax.**

Your income tax payment is a money flow from households to the government and is labeled *e* in the figure.

**FIGURE 2.1**  
Chapter Checkpoint Study Plan Problem 8



9. **Why you can get a free college education in Germany but not in California** Even American students can get a free college degree in Germany, where high taxes pay for colleges. Despite college being free, fewer students in Germany earn college degrees than in the United States and more enter vocational apprenticeships.

Source: *Los Angeles Times*, October 29, 2015

**If California adopted the German model of higher education, how would that change for whom goods and services are produced?**

The students in California who otherwise would not have gone to college but who take advantage of the “free” college education will have higher incomes than otherwise. Consequently, more goods and services will be produced for them. The taxpayers who must pay the taxes necessary to fund these college educations will have less income to spend on goods and services, so fewer goods and services will be produced for them.

10. **Read *Eye on the Dreamliner* on p. 43 and then answer the following questions:**

- **How many firms are involved in the production of the Dreamliner and how many are identified in the figure on p. 43?**

Over 400 firms are involved in the production of the Dreamliner. Only 15 of them are identified in the figure.

- **Is the Dreamliner a capital good or a consumption good? Explain why?**

The Dreamliner is a capital good because it will be used to produce services (airline travel) throughout many future years.

- **State the factors of production that make the Dreamliner and provide an example of each.**

All the factors of production—land, labor, capital, and entrepreneurship—are used to make the Dreamliner. The copper used for wiring is an example of the land used; the engineer who helped design the landing gear is an example of labor; the huge cranes that lift the various pieces of the Dreamliner to assemble them is an example of capital; and the creative and imaginative input of Boeing’s top managers who organize the resources used to produce the Dreamliner exemplify entrepreneurship.

- **Explain how the production of the Dreamliner influences *what, how, and for whom, goods and services are produced.***

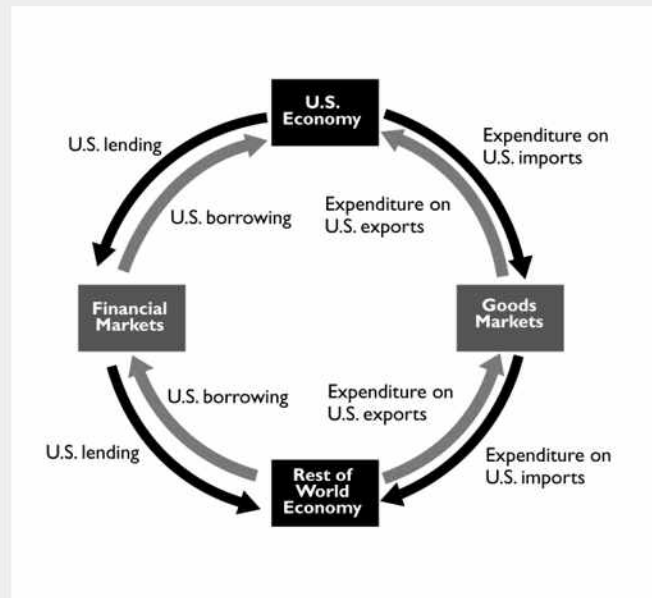
Dreamliner influences “what” goods and services are produced by creating a demand for components manufactured around the world. It influences “how: goods are produced because Boeing and the other 400 firms all determine the best way to produce each particular part

of the Dreamliner. It influences “for whom” because factors of production employed to make the Dreamliner receive income from this production, thereby increasing the quantity of goods and services they can purchase.

- Use a graph to show where in the circular flow model of the global economy the flows of the components listed on p. 43 appear and where the sales of Dreamliners appear.

Except for the components built in the United States, spending on the other components appear in the flow of expenditure on U.S. imports. Sales of Dreamliners appear in the flow of expenditure on U.S. exports.

**FIGURE 2.2**  
Chapter Checkpoint Study Plan Problem 10



## ■ Instructor Assignable Problems and Applications

### 1. Boeing's Dreamliner has had a rocky start.

- **Why doesn't Boeing manufacture all the components of the Dreamliner at its own factory in the United States?**

Boeing wants to manufacture the Dreamliner at the lowest possible cost. It would be more expensive for Boeing to manufacture Dreamliners at its own factory in the United States because Boeing does not have the expertise possessed by its subcontractors and because the wages Boeing pays U.S. workers exceed the wages its subcontractors pays their workers.

- **Describe some of the changes in *what, how, and for whom*, that would occur if Boeing manufactured all the components of the Dreamliner at its own factories in the United States.**

If Boeing manufactured all the components of the Dreamliner at its own factories in the United States, more components would be produced in the United States and more capital would have been used in their production.

U.S. workers and investors would have received higher incomes but the Dreamliner would cost more to produce so Boeing would have earned a lower profit.

- **State some of the tradeoffs that Boeing faces in making the Dreamliner.**

Boeing faced a huge number of tradeoffs. For example, when designing the plane, Boeing's engineers had to make decisions about fuel economy and passenger load. Increasing the passenger load decreased fuel economy, so the engineers traded passenger load for fuel economy. Another example revolves around the construction of the Dreamliner. Boeing could have constructed the plane using just a few companies but instead it used over 400. Boeing was trading off the simplicity of dealing with just a handful of companies for the increased specialization by dealing with many specialized companies.

- **Why might Boeing's decisions in making the Dreamliner be in the social interest?**

Building the Dreamliner itself advances the social interest because it increases the quantity of comfortable, rapid transportation. The amount of high-quality transportation available in the economy increases, which benefits society. The decisions in making the Dreamliner advance the social interest because they were designed to make the Dreamliner at low cost and thereby avoid wasting resources.

### 2. The global economy has seen a fall in the number of landlines and rapid growth in the number of smartphones. In the United States, 41 percent of

households have no landline and 90 percent have a smartphone. In Africa, 33 percent have a smartphone. Describe the changes in *what, how, and for whom* telecommunication services are produced in the global economy.

*What:* As the number of cell phone users increases, the global economy has been producing more cell phone telecommunication services. More cell phones are produced, fewer land phones are produced, and presumably more cell phone frequencies are used.

*How:* More telecommunication services are being produced using cell phones rather than fixed-line phones.

*For whom:* While the amount of telecommunication services has been rising throughout the world, it has been increasing most rapidly in Africa. So more telecommunication services are being produced for residents of Africa as well as for residents in the rest of the world.

3. Which of the entries in the list are consumption goods and services? Explain your choice.

A pack of bubble gum and a movie are consumption goods. They are purchased by consumers.

4. Which of the entries in the list are capital goods? Explain your choice.

An airplane, a garbage truck, and an ATM are capital goods. All provide services to produce other goods and services. The interstate highway and the stealth bomber also are capital goods. They also provide services (transportation and defense) that help produce other goods and services.

5. Which of the entries in the list are factors of production? Explain your choice.

An interstate highway, an airplane, a school teacher, a stealth bomber, a garbage truck, the President of the United States, a strawberry field, and an ATM are factors of production. A school teacher and the President are labor; an interstate highway, an airplane, a stealth bomber, a garbage truck, and an ATM are capital; and, a strawberry field is land.

6. In the African nation of Senegal, to enroll in school a child needs a Birth Certificate that costs \$25. This price is several weeks' income for many families. Explain how this requirement is likely to affect the growth of human capital in Senegal.

Human capital growth depends, in part, on the extent of schooling: More schooling means more human capital. Because of Senegal's hefty fee for a

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**List**

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- An interstate highway
  - An airplane
  - A school teacher
  - A stealth bomber
  - A garbage truck
  - A pack of bubble gum
  - President of the United States
  - A strawberry field
  - A movie
  - An ATM
-

required Birth Certificate, fewer children will enroll in school, thereby decreasing Senegal's human capital growth.

**7. China's income gap widens**

**The income gap has widened in China. In 2014, the pay of workers in the coastal regions increased by 9.7 percent while that of workers in the inland regions grew by 9 percent.**

*Source: South China Morning Post, May 28, 2015*

**Explain how the distribution of personal income in China can be getting more unequal even though the poorest are getting richer.**

The distribution of income in China can be getting more unequal even when the poorest are getting richer if the richest are getting richer even faster. If the rich are getting richer faster, the fraction of the nation's total income received by the poorest 20 percent falls, which makes the personal distribution of income more unequal.

**8. Compare the scale of agricultural production in the advanced and developing economies. In which is the percentage higher? In which is the total amount produced greater?**

Agriculture is a small part of total production in advanced economies. It is a much larger part in developing economies. Even though advanced economies devote only a small part of their total production to agriculture, they still produce about one third of the world's total production of food. The remaining two thirds is produced in the developing nations.

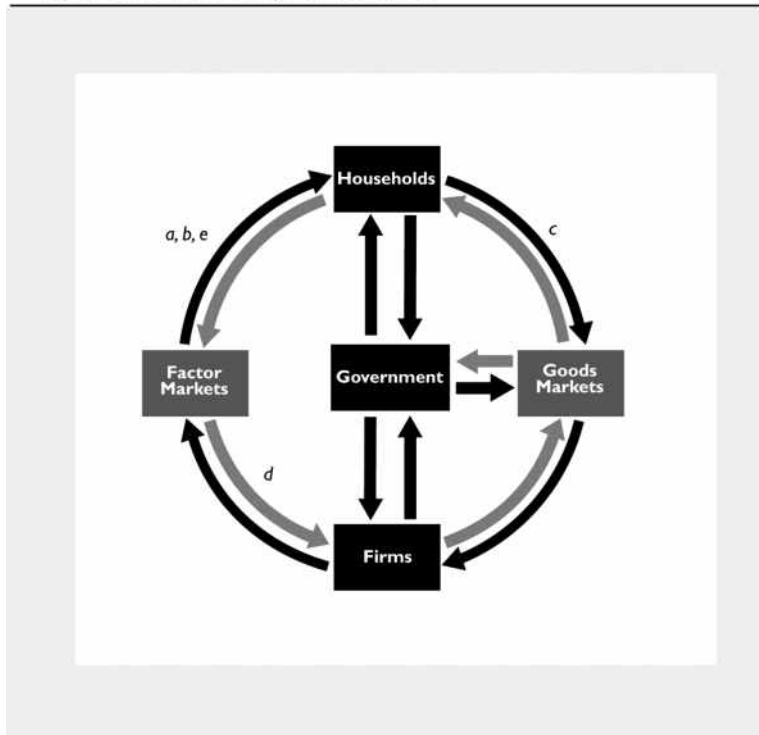


9. On a diagram of the circular flow model, indicate in which real or money flow each entry in the list belongs.

- **General Motors' pays its workers wages.**

General Motors wage payment is a money flow that is a payment for use of the services of a factor of production and so flows out of the factor market to households (it flowed into the factor market from General Motors, a firm). In Figure 2.3 the dark arrows represent money flows and the grey arrows represent flows of

**FIGURE 2.3**  
Chapter Checkpoint Assignable Problem 9



goods and services and factors. The flow of wage payments to households is labeled *a* in the figure in Figure 2.3.

- **IBM pays a dividend to its stockholders.**

IBM's dividend payment is a money flow that is a payment for use of the services of a factor of production and so flows out of the factor market to households (it flowed into the factor market from IBM, a firm). The flow to households is labeled *b* in the figure.

- **You buy your groceries.**

Your purchase of groceries represents a money flow from households to the goods market, labeled *c* in the figure.

- **Southwest rents some aircraft.**

The aircraft are factors of production, so the flow is the services from these factors of production from the factor markets to firms, labeled *d* in the figure.

- **Nike pays Serena Williams for promoting its sports shoes.**

Serena Williams is a factor of production, so the flow is a money flow

from the factor markets to households in exchange for Ms. Williams' services of promoting the sports shoes. The flow is labeled  $e$  in the figure.

Use the following information to work Problems 10 and 11.

**Poor India makes millionaires at fastest pace**

**India, with the world's largest population of poor people, also paradoxically created millionaires at the fastest pace in the world. Millionaires increased by 22.7 percent to 123,000. In contrast, the number of Indians living on less than a dollar a day is 350 million and those living on less than \$2 a day is 700 million. In other words, there are 7,000 very poor Indians for every millionaire.**

Source: *The Times of India*, June 25, 2008

**10. How is the personal distribution of income in India changing?**

If the number of millionaires is growing more rapidly than the number of other income groups, it will be the case that the personal distribution of income in India is becoming less equally distributed.

**11. Why might incomes of \$1 a day and \$2 a day underestimate the value of the goods and services that these households actually consume?**

The people living on \$1 and \$2 a day probably grow a lot of their food and produce a lot of their clothing and shelter. If these goods and services are not taken into account, their share of goods and services is understated. Including them raises the value of the goods and services these households actually consume.

## ■ Multiple Choice Quiz

1. Which of the following classifications is correct?
  - A. City streets are consumption goods because they wear out with use.
  - B. Stocks are capital goods because when people buy and sell them they make a profit.
  - C. The coffee maker in the coffee shop at an airport is a consumption good because people buy the coffee it produces.
  - D. White House security is a government service because it is paid for by the government.

Answer: D      Answer D is correct.

2. Which of the following statements about U.S. production is correct?
  - A. Construction accounts for a larger percentage of total production than does manufacturing.
  - B. Real estate services account for 14.5 percent of the value of total production, larger than any other item of services or goods.
  - C. Consumption goods and services represent 78.5 percent of U.S. production by value and that percentage doesn't fluctuate much.
  - D. The manufacture of goods represents more than 50 percent of total production.

Answer: C      Answer C is correct as the data on page 34 show.

3. Which of the following items is *not* a factor of production?
  - A. An oil rig in the Gulf of Mexico
  - B. A ski jump in Utah
  - C. A bank loan to a farmer
  - D. An orange grove in Florida

Answer: C      Answer C is not a factor of production because it is financial capital; see page 37.

4. What is human capital?
  - A. A fruit picker
  - B. Unskilled labor
  - C. Your professor's knowledge of the economy
  - D. An auto assembly line robot

Answer: C      Answer C uses the definition of human capital on page 37.

5. Which of the following statements is correct?
- A. Labor earns wages and entrepreneurship earns bonuses.
  - B. Land earns interest and capital earns rent.
  - C. Entrepreneurship earns interest and capital earns profit.
  - D. Capital earns interest and labor earns wages.

**Answer: D** Page 39 shows that answer D is correct.

6. How are goods and services produced in the global economy?
- A. Developing countries use less human capital but just as much physical capital as advanced economies.
  - B. Emerging economies use more capital-intensive technology than do developing economies.
  - C. Human capital in all economies is similar.
  - D. Advanced economies use less capital than developing economies.

**Answer: B** Developing countries have less capital than emerging economies.

7. In the circular flow model, which of the following items is a real flow?
- A. The flow of government expenditures to firms for the goods bought
  - B. The flow of income from firms to households for the services of the factors of production hired
  - C. The flow of U.S. borrowing from the rest of the world
  - D. The flow of labor services from households to firms

**Answer: D** Answer D is a real flow because it is a labor service.