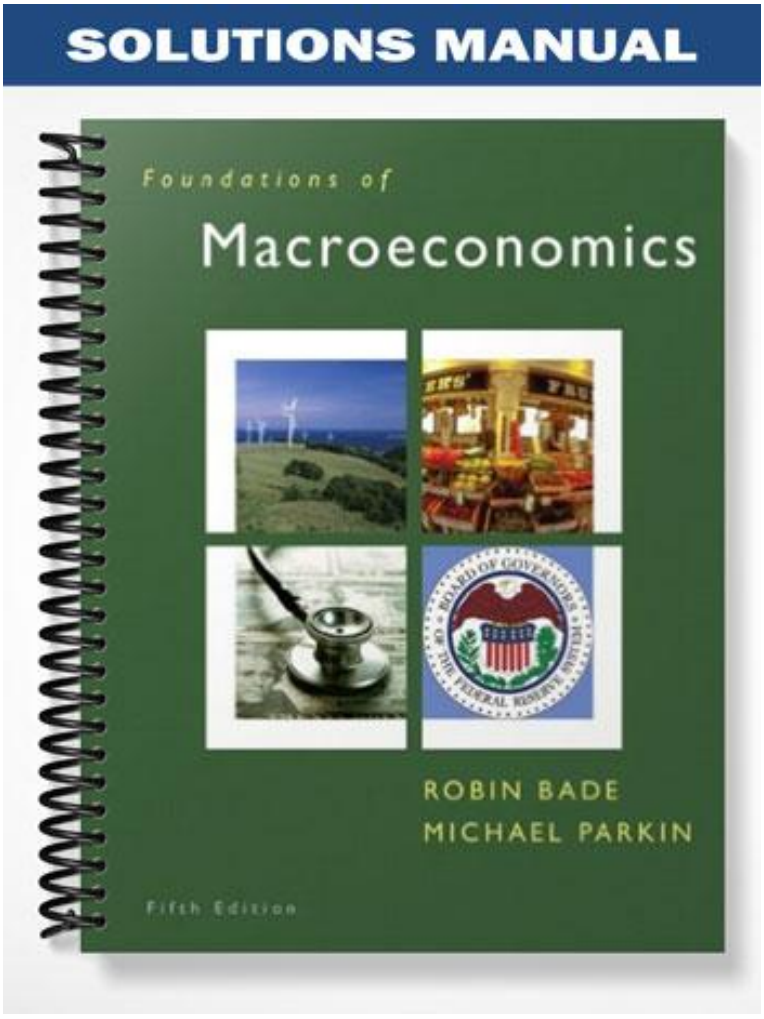
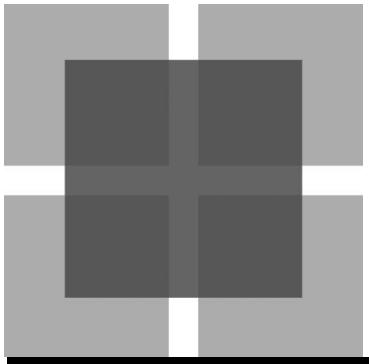
SOLUTIONS MANUAL





Chapter 2

The U.S. and Global Economies

CHAPTER OUTLINE

1. Describe what, how, and for whom goods and services are produced in the United States.

- A. What Do We Produce?
  - 1. Consumption Goods and Services
  - 2. Capital Goods
  - 3. Government Goods and Services
  - 4. Export Goods and Services
- B. How Do We Produce?
  - 1. Land
  - 2. Labor
  - 3. Capital
  - 4. Entrepreneurship
- C. For Whom Do We Produce?
  - 1. Rent
  - 2. Wages
  - 3. Interest
  - 4. Profit (or Loss)

2. Describe what, how, and for whom goods and services are produced in the global economy.

- A. The People
- B. The Countries
  - 1. Advanced Economies
  - 2. Emerging Market and Developing Economies
- C. *What* in the Global Economy?
  - 1. Where Is the Global Pie Baked?
  - 2. Energy
  - 3. Food
  - 4. Other Goods and Services
- D. *How* in the Global Economy?
  - 1. Human Capital Differences
  - 2. Physical Capital Differences

E. *For Whom* in the Global Economy?
   1. Personal Distribution of Income
   2. International Distribution
   3. A Happy Paradox and a Huge Challenge

3. Use the circular flow model to provide a picture of how households, firms, and governments interact in the U.S. economy and how the U.S. and other economies interact in the global economy.
   A. Households and Firms
   B. Markets
      1. Goods Markets
      2. Factor Markets
   C. Real Flows and Money Flows
   D. Governments
      1. Federal Government
      2. State and Local Government
   E. Governments in the Circular Flow
   F. Federal Government Expenditures and Revenue
   F. State and Local Government Expenditures and Revenue
   G. Circular Flows in the Global Economy
      1. International Trade
      2. International Finance

CHAPTER ROADMAP

■ What's New in this Edition?

Chapter 2 is an updated version of Chapter 2 in the fourth edition. Sections 2.2 and 2.3 have been reordered such that students are exposed to the global economy before the circular flow model. New "EYE on…" applications and a section on circular flows in the global economy have been added. Investment goods are now called "capital goods."

■ Where We Are

In Chapter 2, we describe what, how, and for whom goods and services are produced in the United States. Then we examine these same three questions in the global economy. Finally we use the circular flow model to provide a picture of how households and firms interact. We also describe the economic activities of governments in the United States.

■ Where We've Been

In the previous chapter, we covered the definition of eco-

nomics and distinguished between microeconomics and macroeconomics. We described what economists do and some of the problems they encounter. In addition, we explored the four core ideas that define the way economists think about macroeconomic questions. Finally, we explained why economics is worth studying.

■ Where We're Going

In the next chapter, we develop our first economic model, the production possibilities frontier. We use the model to illustrate some of the concepts that have been developed in Chapters 1 and 2, such as the "what" question, the "how" question, and opportunity cost.

IN THE CLASSROOM

■ Class Time Needed

The material in this chapter should be covered in no more than one class session.

An estimate of the time per checklist topic is:

- 2.1 What, How, and for Whom?—15 to 20 minutes
- 2.2 The Global Economy—15 to 20minutes
- 2.3 Circular Flows—20 minutes

Classroom Activity: Part of this chapter focuses on the standard of living that we enjoy. As an icebreaker you might want to poll students by asking them what they believe are some of the most important achievements since 1900 that have helped raise the standard of living of Americans and people around the world. You could give students two minutes in class to compose a list of about ten items. Make sure to tell them that there really are no right or wrong answers. The only requirements are that the items were introduced (not necessarily invented) in the twentieth century and had some impact on our standard of living. When time is up, have students share with you their items and merge them with a list of your own. As an aid, here is a short list that might prove useful:

Electricity, Automobile, Airplane, Radio, Television, Telephone, Air conditioning, Computer, Highways, Spacecraft, Internet, Refrigeration, Laser and fiber optics, Nuclear power

Discussion of this list could center around a number of issues. First, it will allow you the opportunity to get students to question the mainstream view that an increase in the standard of living depends only on the quantities of goods and services produced and the number of people among whom those goods and services are shared. Point out that official measurements of standard of living around the world focus on average income earned per day. As a standard benchmark, these data are extremely useful, but they do hide some very important

information, namely the quality of goods and services. You could pick any number of items on this list and ask students what kinds of advancements have occurred that make the good or service better. The automobile will likely be a favorite. Here is a short list of some of the advancements of the modern automobile: airbags, 5 m.p.h. bumpers, fuel injection (instead of carburetors), safety glass, seat belts, window defrosters, global positioning systems, radio, television, compact disc players, climate control systems, four-wheel drive, anti-lock braking systems, power steering, power brakes, power seats, power locks, daytime running lights, side crash severity sensors, and cruise control. Students will probably have a ball talking about all that has changed with the personal computer.

Classroom Activity: You can generate some discussion by getting the students to think about what life might be like after another 200 years of economic growth. Provide some numbers: In 2009, income per person in the United States was about $100 a day. In 1809 it was about 70¢ a day, and if the past growth rate prevails for another 200 years, in 2209 it will be $14,000 a day. Emphasize the magic of compound growth. If they think that $14,000 a day is a big income, get them to do a ballpark estimate of the daily income of Bill Gates (about $14 *million*!) Encourage a discussion of why scarcity is still present even at these large incomes.

Classroom Activity: After introducing the factors of production, break students into small groups and ask them to select a specific good. Then ask them to brainstorm a detailed list of every factor of production they can identify that was used to produce that good and break this list into the 4 categories. This should help students apply their new understanding of the factors of production and become capable of distinguishing between the 4 categories of factors of production. Moreover, this exercise should also give students a better appreciation of the complexity of the factors of production for each good to which they are exposed. No matter how thorough they believe they are in identifying the factors of production for the good they chose, they will have undoubtedly left off various inputs that you can help them identify. But don't fool yourself – even given a few minutes, you will likely just be scratching the surface of the factors of production for even the most "simple" of goods.

CHAPTER LECTURE

■ 2.1 What, How, and For Whom?

What Do We Produce?

Goods and services produced are divided into four categories:

- **Consumption goods and services** are items that are bought by individuals and used to provide personal enjoyment and contribute to a person's quality of life. Consumption goods and services account for about 62 percent of total production.
- **Capital goods** are goods that are bought by businesses to increase their productive resources. Capital goods account for about 10 percent of total production.
- **Government goods and services** are items bought by governments. Government goods and services account for about 18 percent of total production.
- **Export goods and services** are goods and services produced in one country and sold in other countries. Exported goods account for about 10 percent of total production.

How Do We Produce?

Goods and services are produced using four **factors of production**: land, labor, capital, and entrepreneurship.

- **Land** is the "gifts of nature" or natural resources, which includes not only land in the everyday sense but also minerals, energy, water, air, wild plants, animals, birds and fish.
- **Labor** is the work time and work effort that people devote to producing goods and services. **Human capital** is the knowledge and skills that people obtain from education, on-the-job training, and work experience.
- **Capital** consists of 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 does *not* include financial capital like money, stocks, or bonds.
- **Entrepreneurship** is the human resource that organizes labor, land, and capital to produce goods and services. Entrepreneurs make business decisions and bear the risks that arise from these decisions.

Lecture Launcher: To help make the idea of "factors of production" more tangible, ask the students to think about what home-based business they could start right now. (baking, web site creation, cleaning houses, catering, babysitting, mowing lawns…) They should make a list of the factors of production they currently possess and classify them according to land, labor, capital, and entrepreneurship. For example, one student might suggest that "I could be a caterer." This student could then list for the factors of production:

1. *Land*: I own the land my house is on, I could grow food products on it.
2. *Labor*: I own my own labor power
3. *Capital*: I own a kitchen, sink, refrigerator, phone, etc. I know how to cook (human capital)
4. *Entrepreneurship*: I know how to organize my efforts and promote them.

❑ **Land Mine:** When you write the four productive resources on the board

(land, labor, capital, and entrepreneurship) the greatest challenge is to get students to think "out of the box." Students often take each of the terms too literally. For instance, when economists use the term land, it is important to emphasize that this term encapsulates *all* natural resources, not just the obvious area of land in terms of acres or plots. "Land" also includes water, oil, and other important and strategic minerals.

Labor refers to human labor. There is a natural tendency for students to think of the entire population and the labor force as synonymous. Take care to mention that the labor force includes not only people who are working but also people who are unemployed and actively seeking work. In addition, it is worth mentioning that the size of the labor force can change from increases in population and also from changes in demographics.

Capital is usually not a concept that is difficult for students to grasp. However, it is sometimes confused with financial capital. Point out that unless economists specifically say "financial capital," they are invariably referring to physical capital such as factories, machines, and equipment. Inform them that financial capital is a term that is used in business to refer to cash, loans, stocks, and bonds.

Lastly is the term entrepreneurship. While the obvious icon here is that of a business person who is responsible for bringing together all the other factors of production, it is worth noting that the most important characteristic of an entrepreneur is that of being a risk taker. Explain that risk taking is a trait that is quite scarce in supply. If students ask for proof, merely ask them what most people do for a living. The answer is that they work for someone else. The very act of being an employee involves a certain implicit preference of risk aversion.

For Whom Do We Produce?

- **Rent** is paid for the use of land, **wages** are paid for the services of labor, **interest** is paid for the use of capital, and entrepreneurs receive a **profit** or incur a **loss**.
- The **functional distribution of income** is the distribution of income among the factors of production. In the United States in 2008 labor received 65 percent of total income.
- The **personal distribution of income** is the distribution of income among household. In the United States in 2008 the richest 20 percent of households received 51 percent of total income.
- The distribution of income is constantly changing and is becoming increasingly unequal.

■ 2.2 The Global Economy

- People: The world population was approximately 6.8 billion as of May 14, 2009.
- Countries: The International Monetary Fund classifies the 175 economies into two broad categories:
  - *Advanced economies*. These are the 29 countries (or areas) that have the highest stand-

ard of living. Included in this list are the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada. Also included are the newly industrialized Asian economies. Almost 1 billion people live in advanced economies.

- *Emerging market and developing economies*. The emerging market economies are the 28 countries in Europe and Asia that were, until the early 1990s, part of the Soviet Union or its satellites and today are moving toward market-based economies. The developing economies are the 118 countries in Africa, Asia, the Middle East, Europe, and Central and South America that have not achieved a high standard of living. More than 5 billion people live in these nations.

What in the Global Economy?

- *Total production*: The advanced economies produce 56 percent of the world's total production, including 21 percent in the United States.
- *Energy*: 56 percent of the world's oil reserves and 41 percent of the world's natural gas reserves are located in the Middle East. One quarter of the world's coal deposits are in the United States. At current rates of usage of these non-renewable resources, proven reserves of oil will last about 40 years, gas for about 60 years, and coal for about 200 years. As reserves of these non-renewable energy sources run low and the cost of accessing them rises, we will increase our usage of wind and solar power.
- *Food*: Agriculture accounts for a small percentage of total production within developed nations and a large percentage of total production within developing economies. Even so, advanced economies produce about 33 percent of the world's total agricultural output. The contrast between the share of production of agriculture and the total production results because total production is *much* larger in advanced economies.
- *Other*: Services are the most rapidly growing sector in advanced economies; manufacturing is the most rapidly growing sector in the other economies.

How in the Global Economy?

- In the advanced economies, human capital and physical capital are much greater than in developing economies and so they are more important in the advanced economies.

For Whom in the Global Economy?

- The distribution of income in the global economy is quite unequal—the lowest-paid 20 percent of the world's population receives 2 percent of world income and the highest-paid 20 percent receives 70 percent of world income.
  - The United States has an average income of $128 a day. Canada, Japan, Italy, Germany, France, and the United Kingdom have average incomes that range down to about 80 percent of U.S. income.
  - India has average income of about $3 a day.
- A Happy Paradox: Inequality in the world income has decreased during the past 20 years because incomes in China, a heavily populated and poor nation, have grown rapidly. Lifting Africa from poverty remains one of today's biggest challenges.

Lecture Launcher: Students tend to think in terms of individuals when they think about standards of living. I recommend that you start there and then try to develop a kind of "national average" by making a list. Have students suggest things that they think are considered basic necessities to the "average" American family: air conditioning? Automobile? Electric refrigerator? Hot and cold running water? Indoor plumbing? Cell phone? Internet? From there, you can ask if these goods and services would be necessities in a developing economy.

■ 2.3 The Circular Flows

The **circular flow model** is a model of the economy that shows the circular flow of expenditures and incomes that result from decision makers' choices, and the way those choices interact to determine what, how, and for whom goods and services are produced.

Lecture Launcher: Just as "no man is an island" neither is any economic actor. We are all touched by the actions of another. That's the idea behind the circular flow model. So start by asking them what they've bought today—coffee, gasoline, breakfast sandwich, etc. How did they obtain them? Where did those things come from? How did the vendor get them? How does the vendor pay for them? For his employees?

Another approach is to discuss how students pay their tuition. For example, in Georgia, state income taxes support the system of higher education, in addition to lottery profits which pay for scholarships and grants. Even if a student does not have a scholarship or grant, his or her education is being heavily subsidized. An otherwise unfunded college student in Georgia would have to pay approximately four times more in tuition without state support. That funding comes from all our taxes—so that I, the teacher, am being paid for out of their taxes as well as their tuition and expenses.

Households, Firms, and Markets

- A **household** is a group of people living together. A **firm** is an economic unit that organizes the production of goods and services. A **market** is any arrangement that enables buyers and sellers to get information and to do business with each other. **Goods markets** are the markets in which goods and services are bought and sold; **factor markets** are the markets in which the services of factors of production are bought and sold.

Real Flows and Money Flows Through Markets

- Firms and households interact in markets and it is this interaction that determines what will be produced, how it will be produced, and who will get it. The real flows are the goods and services and the factors of production. The money flows go in the opposite direction to the real flows
- Prices within markets coordinate firms' and households' decisions.

Willingness to pay affects production and production affects willingness to pay. It would appear that we have the classic "which came first, the chicken or the egg" conundrum. However, in the next chapter, we will discuss the most powerful model in economics, Demand and Supply, which allows us to think clearly about the behavior of markets.

Governments in the Circular Flow

- The federal government has three major expenditure categories: public goods and services, social security and welfare payments, and transfers to state and local governments. It collects three main taxes: personal income taxes, corporate (business) income taxes, and social security taxes.
- The state and local governments have two major expenditure categories: goods and services, and welfare benefits. They collect three main taxes: sales taxes, property taxes, and state income taxes.
- In the circular flow, governments buy goods and services from firms. Households and firms pay taxes to, and receive transfers from, governments.
- National debt is the total amount that the federal government has borrowed to make expenditures that exceed tax revenue; that is, to run a government budget deficit.

Circular Flows in the Global Economy

- International Trade
  - **Imports** are the good and services that we buy from households and firms in other countries. **Exports** are the goods and services that we sell to households and firms in other countries.
- International Finance
  - When firms, households, or governments want to borrow or lend money, they can compare interest rates in their economy to interest rates in other economies. They look for the lowest interest rate at which to borrow and the highest at which to lend
  - When the value of our imports exceeds the value of our exports, we must borrow from the rest of the world. When the value of our exports exceeds the value of our imports, we lend to the rest of the world.
- It is international trade and international finance flows that tie nations together in the global economy and through which global booms and slumps are transmitted.

USING EYE ON THE U.S. ECONOMY

■ What We Produce

This Eye provides an overview of production in the U.S. according to the relative magnitudes of the four categories of goods and services and the largest areas of production within those categories. This set of results sets the stage for discussing the U.S. economy as very consumer driven (because consumption goods and services account for nearly two-thirds of all domestic production) and recognizes the significant role that governments play in our economy (as nearly one-fifth of all production is bought by governments). Students often lose sight of the fact that because they don't see "Made in the U.S.A." on everything they purchase, it doesn't mean everything they buy was imported – it's just that the domestically produced services they consume don't have labels printed on them like the imported electronics, clothing, and toys they purchase!

USING EYE ON THE PAST

■ Changes in What We Produce

This Eye provides information every educated student needs to know. Point out to your students that we always hear of job losses in the manufacturing sector and these losses are always presented as "new" and "bad." While the losses may or may not be "bad," your students need to know that they are certainly not new: Manufacturing has shrunk in importance since at least 1950. Point out to your students that most likely they are going to be employed in the service sector—that is where the jobs are because that is what we produce. Indeed, as the figure shows, over 80 percent of employment nowadays is in services!

USING EYE ON THE U.S. ECONOMY

■ Changes in How We Produce in the Information Economy

After presenting students with the graph demonstrating job changes, you might want to ask them what fundamental changes in the economy have been underway in the United States. The likely response is that the goods and services that we produce today and will produce tomorrow are different than in decades past. This answer is basically correct. In the 1970s, manufacturing was a more dominant part of the economy.

Technology has advanced tremendously over the last 40 years. Challenge your students to ask their folks if they used a computer at any point in their high

school or college education. Many of your students' folks will never have seen, much less used, a computer when they were in high school or college. Today, of course, virtually all students have computers. It has been estimated that in 1965 there were 20,000 computers in the world. Today, if your college has more than 20,000 students, it is likely the case there are more than 20,000 computers associated with your college alone! This amazing fact really makes clear that how we produce goods and services has undergone massive changes.

USING EYE ON THE IPHONE

■ Who Makes the iPhone?

Ask your students why Apple chooses to have the components for the iPhone manufactured by more than 30 companies around the world, as opposed to producing everything themselves. For U.S. consumers and producers, what are the pros and cons associated with Apple's decisions to outsource production? It is important to identify here that the specialization of factors of production results in lower production costs, even after factoring in transaction and transportation costs. Also point out that often the least expensive way for domestic production to take place is not to rely solely on domestic producers, but to take advantage of factors of production in the global economy. Through this process, domestic producers become dependent upon foreign producers, just as foreign producers become dependent upon domestic producers. What are the advantages and disadvantages of this interdependence?

USING EYE ON YOUR LIFE

■ The U.S. and Global Economies in Your Life

This Eye discusses how your students will interact with international trade in their careers and as voters. Though not directly related to this topic, you can—and probably should—take the opportunity to explain to students what they can do with an economics major. Many students are interested in economics as a major but hesitate because they do not know about the careers they can follow with economics as their major. Point out to your students that economics is an excellent major for anyone considering advanced degrees in law or in the different public policy arenas. It also is a great background for anyone considering a career in politics.

Additionally, economics is a wonderful major for students who plan to enter the workforce after obtaining their bachelor's degrees. I contrast economics with de-

grees in finance and in marketing. I point out that all three degrees essentially prepare students for entry level management jobs. But they differ in their emphasis. A marketing degree will teach students what factors help sell products and about distribution networks. Marketing majors tend to find jobs in retail, in PR, and in similar areas. Finance majors learn a lot about a very important sector of the economy and very important part of running a firm. Finance majors tend to find jobs with banks, insurance companies, and other similar firms. Economics majors differ insofar as they do not learn so much about important sectors of the economy or important aspects of running firms. Instead they learn how to think quantitatively and logically about issues. In particular, they really learn how to use marginal analysis, introduced in Chapter 1, in *all* decision making processes. This method of thought is extremely powerful and so businesses are willing to pay a lot for students who have acquired it, which is why economics majors are, on the average, paid more than marketing majors and often more than finance majors. The average starting salary for a 2007 college graduate with an economics major was $51,631, which has the highest starting salary for a non-engineering major (finance was $47,905 and the non-economics social sciences and liberal arts majors was $30,502). The jobs economics majors take tend not to be as concentrated as with marketing and finance. For instance, it is uncommon, but still possible, for a marketing major to take a job with a bank and a finance major to take a job with a retail company. Economics majors, however, will take jobs with banks and retailing companies with about equal frequency. So you should reassure your students that if they are thinking of majoring in economics, that decision can be a wise choice.

USING EYE ON THE PAST

■ Growing Government

The fact that the U.S. government accounts for about 20 percent of total production is commonplace for our students. They have likely never lived in an era when the government took much less than 20 percent…or much more than 20 percent. The figure in this "Eye" can be used to good effect to point out to the students that until 1940, the federal government took much less than 20 percent of total production (other than during World War I) and in World War II, the fraction shot up to over 40 percent. You can point out to your students the trend from about 1930 to about 1984 for higher federal outlays as a percentage of total output. Ask them why this trend occurred. Was it good or bad? If the trend had not occurred, what would be different today? You can also use the huge spikes in World War I and World War II to point out that today's War on Terror (as well as the war in Vietnam) had nowhere near the effects on the economy as did the

two world wars. Ask your students what they think would be different if the War on Terror escalated so that the federal government was spending 40 percent of GDP. What trend do they predict for the next 10, 20, and 30 years? Will this percentage continue to hover around 20 percent or deviate appreciably from this level?

USING EYE ON THE GLOBAL ECONOMY

■ The 2009 Slump in International Trade

Ask your students why international trade has expanded so rapidly over the past few decades. How do changes in international trade patterns create winners and losers both in the U.S. and abroad? Do they personally feel like a winner or loser as a result of these changes in international trade? Students often believe that the U.S. is adversely impacted by trade, though they can quickly identify how they benefit tremendously from lower prices and a larger variety of imported goods. In fact, it is likely that they are draped (figuratively and literally) in the gains from international trade – with the clothes they are wearing, with the cell phone in their pocket, with the purse at their side, and with the automobile (and fuel for that automobile) that got them to class. In fact, without a global economy, they would likely not have the privilege of learning economics from this *Foundations* textbook written by Bade & Parkin (who live in Canada).

Why does international trade slow down (or even shrink) during a recession? Does this help an economy during a recession or magnify the problems an economy is experiencing? Does global economic interdependence provide more or less stability for an economy? Will international trade return to its average growth rate of around 7 percent a year after the global economy rebounds, or has the level of international trade reached a plateau for the foreseeable future? *All* of these questions are worthy of discussing with your students!

ADDITIONAL EXERCISES FOR ASSIGNMENT

Questions

Checkpoint 2.1 What, How, and For Whom?

1. Identify each of the goods or services below as belonging to one of the following categories: consumption good (service), capital good (service), government good (service) or export good (service).

1a. Restaurant meals

1b. Video rentals

1c. Computer produced in the United States and purchased by a German company.

1d. Nuclear submarine

1e. Oil rig

1f. Haircut

1g. Factory

1h. Courthouse

2. Identify the payments that are made to each of the four factors of production.

3. Comment on the following assertion: "If the trends in schooling continue, at some point in the future, everyone will have a college degree and no one will be available to work as a janitor or garbage collector." Critically evaluate this statement.

Checkpoint 2.2 The Global Economy

4. Classify the following countries as advanced or developing countries: Australia, Chile, China, France, India, Indonesia, Hong Kong, Mexico, Nigeria, and Peru.

5. Think about the trends in what and how goods and services are produced in the U.S. and global economies. Do you think that at some future time, there will be no jobs in the United States and all the jobs will be in developing economies ? Explain your answers

Checkpoint 2.3 Circular Flows

6. In the goods market, households and firms both have a role to play. In the factor markets these roles are reversed. Why does the reversal occur?

Answers

Checkpoint 2.1 What, How, and For Whom?

1a. consumption good

1b. consumption service

1c. export good

1d. government good

1e. capital good
1f. consumption service
1g. capital good
1h. government good

2. Wages are paid to labor, rent to land, interest to capital, and entrepreneurs receive a profit or incur a loss.

3. This statement exaggerates and is untrue. If the trend toward higher education continued unabated at the current rate, it would be well into 2100 before 100 percent of the population had college degrees. But the trend will not continue because many individuals do not have the necessary talents to graduate from college. And even if everyone possessed a college degree, if the pay offered as a janitor or garbage collector is sufficiently high, college graduates will accept these jobs.

■ Checkpoint 2.2 The Global Economy

4. The advanced economies include Australia, France, and Hong Kong. The developing economies include Chile, China, India, Indonesia, Mexico, Nigeria, and Peru.

5. We would not expect all jobs to move from the United States to other nations. Relative to the rest of the world, workers in the United States will remain highly skilled, and likely will increase their average skills even more. These highly skilled workers will be needed to produce goods and services that must be produced using skilled rather than unskilled labor.

■ Checkpoint 2.3 Circular Flows

6. Households are the buyers in the goods market and firms are the sellers. In this market, households pay firms money in exchange for goods and services. In the factor markets, the roles are reversed. Households are the sellers of labor, land, capital, and entrepreneurship and firms are the buyers. In this market, firms pay households money in exchange for the factors of production.