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Chapter 02 - The Market System and the Circular Flow

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DISCUSSION QUESTIONS

1. Contrast how a market system and a command economy try to cope with economic scarcity. **LO1**

> **Answer:** A market system allows for the private ownership of resources and coordinates economic activity through market prices. Participants act in their own self-interest and seek to maximize satisfaction or profit through their own decisions regarding consumption or production. Goods and services are produced and resources are supplied by whoever is willing to do so. The result is competition and widely dispersed economic power.
>
> The command economy is characterized by public ownership of nearly all property resources and economic decisions are made through central planning. The planning board, appointed by the government determines production goals for each enterprise. The division of output between capital and consumer goods is centrally decided based on the board's long-term priorities

2. How does self-interest help achieve society's economic goals? Why is there such a wide variety of desired goods and services in a market system? In what way are entrepreneurs and businesses at the helm of the economy, but commanded by consumers? **LO2**

> **Answer:** The motive of self-interest gives direction and consistency to the economy. The primary driving force of the market system is self-interest. Entrepreneurs try to maximize their profits; property owners want the highest price for their resources; workers choose the job with the best wages, fringe benefits and working conditions. Consumers apportion their expenditures to maximize their utility, while seeking the lowest possible prices. As individuals express their free choice, the economy is directed to produce the most wanted goods at the lowest possible cost.
>
> Each individual consumer will choose a variety of goods and services that in combination will maximize his/her satisfaction (utility). There is a wide variety because individual wants are diverse. To maximize profits, producers must respond to the desires of the individual consumer.
>
> Although producers are free to choose what products they will produce, if the producers are to maximize profits, these good and services must be what consumers desire. Entrepreneurs can drive the economic ship where they want (at least for a while), but the ship will run aground (businesses will fail) if entrepreneurs at the helm don't listen to the consumers that command them.

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3. Why is private property, and the protection of property rights, so critical to the success of the market system? How do property rights encourage cooperation? **LO2**

Answer: The ownership of private property and the protection of property rights encourages investment, innovation, and, therefore, economic growth. Property rights encourage the maintaining of the property and they facilitate the exchange of the property. However, the most important consequence of property rights is that they encourage people to cooperate by helping to ensure that only mutually agreeable economic transactions take place.

4. What are the advantages of using capital in the production process? What is meant by the term "division of labor"? What are the advantages of specialization in the use of human and material resources? Explain why exchange is the necessary consequence of specialization. **LO2**

Answer: Capital goods enable producers to operate more efficiently and to produce more output.

"Division of labor" means that workers perform those tasks that are best suited to their individual abilities and skills.

The advantages of specialization for workers are that they can choose work according to their natural aptitudes, have the opportunity to perfect those skills, and save time in not having to shift continually from one task to another. Material resources will be developed and adapted for a specific use. On a regional basis, each region will produce those products for which it is best suited. By specializing in its comparative advantage, each region or set of human and material resources is being used to maximize efficiency.

When resources are specialized, they are no longer self-sufficient. To obtain the goods and services one needs, exchange is necessary. Also, specialization will result in a surplus of a specific good being produced. The surplus of one good will be exchanged for the surplus production of other goods.

5. What problem does barter entail? Indicate the economic significance of money as a medium of exchange. What is meant by the statement "We want money only to part with it"? **LO2**

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Answer: Barter requires the "double coincidence of wants." If someone wants something, he/she will have to find someone who wishes to part with that good and at the same time wishes to exchange the good for something that the first party wishes to part with.

With money as a medium of exchange, one knows the purchase price of the item to be purchased and it relative price to other items. Money is a very convenient common denominator, a common measure of value that is also used as a medium of exchange. Money also encourages specialization. Without money, workers and other resources could not be paid except in the output produced. All those who participated in the production of the good would have to collectively exchange it for all the goods and service desired by the resource owners.

Money itself has value only in relation to the resources, goods, and services that can be obtained with it. When people say that they want money, they really mean that they want the things that money can buy. In this sense, money imparts value only when someone parts with it.

6. Evaluate and explain the following statements: **LO2**
a. The market system is a profit-and-loss system.
b. Competition is the disciplinarian of the market economy.

Answer:

(a) The quotation is accurate. In a market system, producer decisions are motivated by the attempt to earn profits. Those products that enable a firm to earn at least a normal profit (minimum compensation for the entrepreneur for his/her time and talents) will be produced. If the product cannot be produced for a profit—in other words, if losses are involved in production—the capitalist firm will respond by seeking lower cost production methods and may halt the production of goods completely. Because profits and/or losses are the motivation behind the fundamental decisions made in a market system, it could be called a "profit and loss economy."

(b) Competition provides discipline in two ways. First, it forces firms to seek the least-cost production methods or face being driven out of business by their rivals. Second, it prevents successful producers from charging whatever the market will bear. Competition keeps prices at a level where total revenue will just cover the total cost of production including a normal profit, but no more in the long run. If sellers try to charge a price that will earn them economic profits, new firms will enter the industry, increasing supply, and lowering prices until the economic profits are eliminated. Competition is indispensable in this role, because otherwise some other method would have to be found to direct firms to use the least-cost production technique and to charge a price that provides only a normal return. Where competition does not exist, such as in natural monopolies like public utility companies, regulators or publicly owned companies must assume the role of disciplinarian. Experience has shown that this is a difficult process and does not achieve the same results as easily as a competitive market situation.

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7**.** Some large hardware stores such as Home Depot boast of carrying as many as 20,000 different products in each store. What motivated the producers of those individual products to make them and offer them for sale? How did the producers decide on the best combinations of resources to use? Who made those resources available, and why? Who decides whether these particular hardware products should continue to be produced and offered for sale? **LO3**

> **Answer:** The quest for profit led firms to produce these goods. Producers looked for and found the least-cost combination of resources in producing their output. Resource suppliers, seeking income, made these resources available. Consumers, through their dollar votes, ultimately decide on what will continue to be produced.

8. What is meant by the term "creative destruction"? How does the emergence of MP3 (or iPod) technology relate to this idea? **LO3**

> **Answer:** Creative destruction refers to the process by which the creation of new products and production techniques destroys the market positions of firms committed to producing only existing products or using outdated methods. The ability to download and store a large number of songs, and the superior quality of MP3 is causing a decline in the CD industry, just as CDs once replaced cassette tapes, which had previously replaced phonographs (records).

9. In a sentence, describe the meaning of the phrase "invisible hand." **LO4**

> **Answer:** Market prices act as an "invisible hand," coordinating an economy by rationing what is scarce and providing incentives to produce the most desired goods and services.

10. In market economies, firms rarely worry about the availability of inputs to produce their products, whereas in command economies input availability is a constant concern. Why the difference? **LO4**

> **Answer:** In market economies, buyers of inputs know that sellers want to make resources available for sale because that is how they earn their profits. If there aren't enough resources available, prices will rise until suppliers come forth with the desired amounts. In command economies the availability of inputs depends on what was specified in the plan, and how well the plan was executed. There is no opportunity (at least not legally) to offer greater payments to get those resources provided.

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11. Distinguish between the resource market and the product market in the circular flow model. In what way are businesses and households both sellers and buyers in this model? What are the flows in the circular flow model? **LO5**

Answer: The resource markets are where the owners of the resources (the households) sell their resources to the buyers of the resources (businesses). In the product markets, businesses sell the goods and services they have produced to the buyers of the goods and services, the households.

Households (individuals) either own all economic resources directly or own them indirectly through their ownership of business corporations. These households are willing to sell their resources to businesses because attractive prices draw them into specific resource markets. Businesses buy resources because they are necessary for producing goods and services. The interaction of the buyers and sellers establishes the price of each resource.

In the product market, businesses are the sellers and householders are the buyers; their role in the market has been reversed. Each group of economic units both buys and sells.

12. How does shielding employees and suppliers from business risk help to improve economic outcomes? Who is responsible for managing business risks in the market system? **LO6**

Answer: This process allows the owners of a business to attract employees and suppliers. If some of the business risk was put on these groups, most of them would stay away. These groups' pay does not depend on the profitability of the business; and therefore, they should not incur any of the risk associated with it. In the same sense, all the business risk is put on the owners, due to the fact that they are the ones who will enjoy the profits, or suffer the losses, of the business. This gives them an incentive to manage the business wisely.

13. **LAST WORD** What explains why millions of economic resources tend to get arranged logically and productively rather than haphazardly and unproductively?

Answer: The institution of private property is a primary reason why resources are arranged logically and productively. Private property eliminates randomness to the allocation of resources, as property owners act in deliberate ways to protect and maximize the benefits from their property. Owners pursue the greatest possible returns from their property, drawing resources to their most valued uses. Through the interaction of millions of economic agents all trying to use their private property to maximize well-being, a complex, logical, and productive arrangement of resources results.

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REVIEW QUESTIONS

1. Decide whether each of the following descriptions most closely corresponds to being part of a command system, a market system, or a laissez-faire system. **LO1**
a. A woman who wants to start a flower shop finds she cannot do so unless the central government has already decided to allow a flower shop in her area.
b. Shops stock and sell the goods their customers want but the government levies a sales tax on each transaction in order to fund elementary schools, public libraries, and welfare programs for the poor.
c. The only taxes levied by the government are to pay for national defense, law enforcement, and a legal system designed to enforce contracts between private citizens.

> **Answer:**
> a. **command system** because there is central government planning of even minor things like how many flow shops can be in operation;
> b. **market system** because while the government is using its power to tax to promote public schools and welfare, it is mostly leaving markets alone so that they can be the dominant force in deciding what to produce, how to produce it and who will get it;
> c. **laissez-faire system** because the government restricts itself to only engaging in activities that protect private property and the operation of the market system.

2. Match each term with the correct definition. **LO2**

> private property
> freedom of enterprise
> mutually agreeable
> freedom of choice
> self-interest
> competition
> market

a. An institution that brings buyers and sellers together.
b. The right of private persons and firms to obtain, control, employ, dispose of, and bequeath land, capital, and other property.
c. The presence in a market of independent buyers and sellers who compete with one another and who are free to enter and exit the market as they each see fit.
d. The freedom of firms to obtain economic resources, decide what products to produce with those resources, and sell those products in markets of their choice.
e. What each individual or firm believes is best for itself and seeks to obtain.
f. Economic transactions willingly undertaken by both the buyer and the seller because each feels that the transaction will make him or her better off.
g. The freedom of resource owners to dispose of their resources as they think best; of workers to enter any line of work for which they are qualified; and of consumers to spend their incomes in whatever way they feel is most appropriate.

> **Answer:** a. Market; b. Private Property; c. Competition; d. Freedom of Enterprise; e. Self-interest; f. Mutually Agreeable; g. Freedom of Choice

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3. True or False: Money must be issued by a government for people to accept it. **LO2**

Answer: False
Many things have been used as money without having been approved by or produced by governments. Examples included seashells, cattle, and cigarettes. Money is socially defined and whatever a society accepts as a medium of exchange *is* money.

4. Assume that a business firm finds that its profit is greatest when it produces $40 worth of product A. Suppose also that each of the three techniques shown in the table below will produce the desired output. **LO3**

Resource units required

Resource	Price per unit	Technique #1	Technique #2	Technique #3
Labor	$3	5	2	3
Land	$4	2	4	2
Capital	$2	2	4	5
Entrepreneurial ability	$2	4	2	4

a. With the resource prices shown, which technique will the firm choose? Why? Will production using that technique entail profit or loss? What will be the amount of that profit or loss? Will the industry expand or contract? When will that expansion or contraction end?
b. Assume now that a new technique, technique 4, is developed. It combines 2 units of labor, 2 of land, 6 of capital, and 3 of entrepreneurial ability. In view of the resource prices in the table, will the firm adopt the new technique? Explain your answer.
c. Suppose that an increase in the labor supply causes the price of labor to fall to $1.50 per unit, all other resource prices remaining unchanged. Which technique will the producer now choose? Explain.
d. "The market system causes the economy to conserve most in the use of resources that are particularly scarce in supply. Resources that are scarcest relative to the demand for them have the highest prices. As a result, producers use these resources as sparingly as is possible." Evaluate this statement. Does your answer to part *c*, above, bear out this contention? Explain.

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Answer:

a. To calculate the cost of each technique, multiply the price per unit of resource by the amount of the resource employed by the technique and add these together. For example, the cost of technique 1 equals $3 x 5 (labor cost) + $4 x 2 (land cost) + $2 x 2 (capital cost) + $2 x 4 (entrepreneurial cost) = $15 + $8 + $4 + $8 = $35. The same process is applied to Techniques 2 and 3. The firm will choose technique 2 because it produces the output at the least cost ($34 compared to $35 for techniques 1 and 3). Economic profit will be $6 (= $40 - $34), causing the industry to expand. Expansion in this industry will continue until prices decline to where total revenue equals total cost of $34 and no additional firms will want to enter the industry

b. The firm will adopt technique 4 because its cost is now lowest at $32.

c. The firm will choose technique 1 because its cost is now lowest at $27.50.

d. The statement is logical. Increasing scarcity of a resource causes its price to rise. Firms ignoring higher resource prices will become high-cost producers. Firms switching to the less expensive inputs become lower-cost producers and earn higher profits than high-cost producers. The market system, therefore, forces producers to conserve on the use of highly scarce resources. Question 7c confirms this: Technique 1 was adopted because labor had become less expensive.

5. Identify each of the following quotes as being an example of either: the coordination problem, the invisible hand, creative destruction, or the incentive problem. **LO4**

a. "If you compare a list of today's most powerful and profitable companies with a similar list from 30 years ago, you will see lots of new entries."

b. "Managers in the old Soviet Union often sacrificed product quality and variety because they were being awarded bonuses for quantitative, not qualitative, targets."

c. "Each day, central planners in the old Soviet Union were tasked with setting 27 million prices -- correctly."

d. "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest."

Answer:

a. **creative destruction** because this quote is a reflection of how fast new technologies and new products destroy the market positions of even very powerful older firms.

b. **incentive problem** because this quote reflects how the poorly designed financial incentives of the old Soviet Union often led to managers making decisions that were personally beneficial but socially destructive.

c. **coordination problem** because this quote reflects the impossible complexity of centrally coordinating a large economy.

d. **invisible hand** because this quote (from Adam Smith's book *The Wealth of Nations*) reflects the idea that producers end up doing things that their customers want not out of a sense of charity but rather in an attempt to further their own interests. The butcher, the brewer, and the baker do a good job at their respective tasks because they want their customers' money.

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6. True or False: Households sell finished products to businesses. **LO6**

Answer: False. Households sell resources to businesses, which use those resources to produce goods and services that are in turn bought and consumed by households.

7. Franklin, John, Henry, and Harry have decided to pool their financial resources and business skills in order to open up and run a coffee shop. They will share any profits or losses that the business generates and will be personally responsible for making good on any debt that their business undertakes. Their business should be classified as a: **LO6**

Answer:

Partnership. The coffee shop that these guys are starting should be classified as *a partnership* because of the relatively few members involved and because each member is personally liable for any losses that the business generates
Both *sole proprietorships and partnerships* share that same feature—that those who own and run them are *personally* responsible for any losses that their businesses generate and for any debts that their businesses owe.
By contrast, the owners of *a corporation* are not personally responsible for their firm's losses or debts. That is true because a corporation is its own legal entity, completely separate from its owners. Thus, any money that it owes to creditors is money owed by the corporation itself, and not by those who own the corporation.

8. Ted and Fred are the owners of a gas station. They invested $150,000 each and pay an employee named Lawrence $35,000 per year. This year revenues are $900,000, while costs are $940,000. Who is legally responsible for bearing the $40,000 loss? **LO6**
a. Lawrence
b. Ted
c. Fred
d. Ted and Fred
e. Lawrence, Ted, and Fred

Answer:
Ted and Fred. A firm's owners bear the firm's business risk, including the risk of running a loss (rather than breaking even or generating a profit.) So in this case, the loss will be borne by Ted and Fred, since they are the owners. Lawrence, by contrast, is an employee and not legally bound to bear any business risk. So he must be paid his salary on time and in full whether or not the firm is running a profit, a loss, or just breaking even.

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PROBLEMS

1. Table 2.1 contains information on three techniques for producing $15 worth of bar soap. Assume "$15 worth of bar soap" means the selling price of soap is $3 per bar and all three techniques produce 5 bars of soap ($15 = $3 per bar x 5 bars). So you know each technique produces 5 bars of soap. **LO3**
a. What technique will you want to use if the price of a bar of soap falls to $2.75? What if the price of a bar of soap rises to $4? To $5?
b. How many bars of soap will you want to produce if the price of a bar of soap falls to $2.00?
c. Suppose that the price of soap is again $3 per bar but that the prices of all four resources are now $1 per unit. Which is now the least-profitable technique?
d. If the resource prices return to their original levels (the ones shown in the table), but a new technique is invented that can produce 3 bars of soap (yes, 3 bars, not 5 bars!) using 1 unit of each of the four resources, will firms prefer the new technique?

TABLE 2.1 Three Techniques for Producing $15 Worth of Bar Soap

		Units of Resource					
	Price per Unit	Technique 1		Technique 2		Technique 3	
Resource	of Resource	Units	Cost	Units	Cost	Units	Cost
Labor	$2	4	$ 8	2	$ 4	1	$ 2
Land	1	1	1	3	3	4	4
Capital	3	1	3	1	3	2	6
Entrepreneurial ability	3	1	3	1	3	1	3
Total cost of $15 worth of bar soap			$15		$13		$15

Answers: (a) Technique 2, Technique 2, Technique 2; (b) Zero—it is not profitable to produce bars of soap at this selling price; (c) Technique 3; (d) No, they will still prefer technique 2.

Feedback: As stated in the question, also assume that we said "$15 worth of bar soap" because soap cost $3 per bar and all three techniques produce 5 bars of soap ($15 = $3 per bar X 5 bars). So you know each technique produces 5 bars of soap.

Part a: Consider the following values for part a. What technique will you want to use if the price of a bar of soap falls to $2.75? What if the price of a bar of soap rises to $4? To $5?
If the price falls to $2.75 total revenue (price multiplied by units sold) equals $13.75 (= $2.75 x 5). This does not change the total cost of each technique, so the firm will continue to use the lowest cost technique 2. This logic also applies to the increase in the sale price to $4.00 and $5.00 respectively. This does not change the cost of each technique, so the firm will continue to employ the lowest cost technique 2.

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Part b: Consider the following value for part b. How many bars of soap will you want to produce if the price of a bar of soap falls to $2.00?
Here the answer is different (from that in part a) because total revenue equals $10.00 (= $2 x 5). Here it is unprofitable to produce any output because the least cost technique 2 is $13.

Part c: Consider the following values for part c. Suppose that the price of soap is again $3 per bar but that the prices of all four resources are now $1 per unit.
Here we must first calculate the cost incurred by the firm for each technique. Since the price of each input is $1 per unit, the cost for each technique is just the sum of the inputs used. For example, the cost of technique 1 equals $7 (= $4 (labor) + $1 (land) +$1 (capital) + $1 (entrepreneurial ability)) Using the same procedure, the total cost of technique 2 equals $7 (=$2 + $3 + $1 + $1) and the total cost of technique 3 equals $8 (= $1 +$4 + $2 + $1). Thus, the least-profitable technique is technique 3.

Part d. Consider the following values for part d. Assume the resource prices return to their original levels (the ones shown in the table) but a new technique is invented that can produce 3 bars of soap (yes, 3 bars, not 5 bars!) using 1 unit of each of the four resources. The total revenue from this new technique equals $3 (price per bar) multiplied by 3 (units sold and produced), or $9. The total cost of this technique equals the sum of the resource prices, in the table above, because this technique employs one unit of each input. Thus, total cost equals $9 (+ $2 (labor) + $1 (land) + $3 (capital) + $3 (entrepreneurial ability)). Using this new technique economic profit is zero (= $9 (revenue) - $9 (cost)), whereas technique 2 continues to generate $2 of economic profit (= $15 (revenue) -$13 (cost)). Since economic profit is greater using technique 2 the firm will continue to employ this technique.

2. Suppose Natasha currently makes $50,000 per year working as a manager at a cable TV company. She then develops two possible entrepreneurial business opportunities. In one, she will quit her job to start an organic soap company. In the other, she will try to develop an Internet-based competitor to the local cable company. For the soap-making opportunity, she anticipates annual revenue of $465,000 and costs for the necessary land, labor, and capital of $395,000 per year. For the Internet opportunity, she anticipates costs for land, labor, and capital of $3,250,000 per year as compared to revenues of $3,275,000 per year. (a) Should she quit her current job to become an entrepreneur? (b) If she does quit her current job, which opportunity would she pursue? **LO3**

Answers: (a) Yes; (b) She should pursue the soap business.

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Feedback: Natasha should quit her job only if the net revenue from the entrepreneurial business opportunity exceeds that of her current wage (net revenue equals revenue minus cost. This could also be defined as accounting profit).
For example, consider the following values. Suppose Natasha currently makes $50,000 per year working as a manager at a cable TV company. She then develops two possible entrepreneurial business opportunities. In one, she will quit her job to start a hand-made soap company. In the other, she will try to develop an internet-based competitor to the cable company. For the soap-making opportunity, she anticipates annual revenue of $465,000 and costs for the necessary land, labor, and capital of $395,000 per year. For the WiFi opportunity, she anticipates costs for land, labor, and capital of $3,250,000 per year as compared to revenues of $3,275,000 per year.
Net revenue from the hand-made soap company equals $465,000 (revenue) minus $395,000 (cost). This net revenue of $70,000 (= $465,000 - $395,000) exceeds Natasha's current wage of $50,000, thus she should develop this company instead of working for the TV company.
The net revenue from WiFi company equals $3,275,000 (revenue) minus $3,250,000 (cost). This net revenue of $25,000 (= $3,275,000 - $2,250,000) is less than Natasha's current wage of $50,000, thus she should not develop this company and continue working for the TV company.
In summary, Natasha should quit her job and start the hand-made soap company.

3. With current technology, suppose a firm is producing 400 loaves of banana bread daily. Also assume that the least-cost combination of resources in producing those loaves is 5 units of labor, 7 units of land, 2 units of capital, and 1 unit of entrepreneurial ability, selling at prices of $40, $60, $60, and $20, respectively. If the firm can sell these 400 loaves at $2 per unit, what is its total revenue? Its total cost? Its profit or loss? Will it continue to produce banana bread? If this firm's situation is typical for the other makers of banana bread, will resources flow toward or away from this bakery good? **LO3**

Answers: TR = $800; TC = $760; Profit = $40; Yes, it will continue to produce banana bread; Resources will flow toward this bakery good.

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Feedback: Consider the following example. A firm is producing 400 loaves of banana bread daily. The least-cost combination of resources in producing those loaves is 5 units of labor, 7 units of land, 2 units of capital, and 1 unit of entrepreneurial ability, selling at prices of $40, $60, $60, and $20, respectively. The firm can sell these 400 loaves at $2 per unit.
To calculate total profit multiply the selling price by the number of units sold. For our example, total revenue equals $2 (price) multiplied by 400 (loaves of bread sold). So, total revenue equals $800 (= $2 x 400).
To calculate total cost multiply each input usage (number of units employed) by the price of the input and then add these values together. Total cost equals 5 x $40 (cost of labor) + 7 x $60 (cost of land) + 2 x $60 (cost of capital) + 1 x $20 (cost of entrepreneurial ability) = $760.
The profit for this firm equals total revenue minus total cost. Here, profit equals $800 (total revenue) minus $760 (total cost) = $40. If total cost happened to be greater than total revenue this firm would have a loss.
Since the firm in our example is earning positive economic profit it will continue to produce banana bread. However, if the firm were losing money (suffering a loss because total cost exceeds total revenue) the firm will stop producing banana bread.
Since the firm (again in our example) is earning positive economic profit other firms or individuals will want to produce banana bread. Thus, resources will flow toward this bakery good. If the firm had been suffering from an economic loss then resources would flow away from this bakery good as firms or individuals exited the market to avoid the loss.

4. Let's put dollar amounts on the flows in the circular flow diagram of Figure 2.2. **LO5**
a. Suppose that businesses buy a total of $100 billion of the four resources (labor, land, capital, and entrepreneurial ability) from households. If households receive $60 billion in wages, $10 billion in rent, and $20 billion in interest, how much are households paid for providing entrepreneurial ability?
b. If households spend $55 billion on goods and $45 billion on services, how much in revenues do businesses receive in the product market?

Answers: (a) $10 billion for entrepreneurial ability; (b) $100 billion in revenues.

Feedback: (a) $10 billion for entrepreneurial ability (= $100 billion in total factor payments - $60 billion in wages - $10 billion in rent - $20 billion in interest)
(b) $100 billion (= $45 billion + $55 billion) because household expenditures equal business revenues.

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CHAPTER TWO

THE MARKET SYSTEM AND THE CIRCULAR FLOW

CHAPTER OVERVIEW

This chapter begins with a brief comparison of the command and market systems, transitioning quickly to a discussion of the institutional framework of the American market system. Brief explanations are given for these characteristics of the market system: private property, freedom of enterprise and choice, the role of self-interest, competition, markets and prices, the reliance on technology and capital goods, specialization, use of money, and the active, but limited, role of government. The authors then address the Five Fundamental Questions faced by every economy and explain how a market economy answers each one. A discussion of Adam Smith's "invisible hand" leads into an explanation of why command systems have failed. This chapter also introduces the circular flow model as an overview of how resources and goods move through a market system. The final part of the chapter discusses how market systems deal with risk.

WHAT'S NEW

There are only minor changes in wording and updates to the relevant data in this chapter.

INSTRUCTIONAL OBJECTIVES

After completing this chapter, students should be able to:

1. Highlight the main features of a laissez-faire economy and a command economy.
2. Discuss the main features of a mixed economy.
3. List and explain the important characteristics of the American market system.
4. State the Five Fundamental Questions faced by any economic system.
5. Describe how the market system answers each of these five fundamental questions.
6. Explain how the consumer influences the "What goods and services will be produced?" question.
7. Explain how a market system achieves economic efficiency.
8. Explain how markets answer the "Who will get the output?" question.
9. Describe how prices drive the movement of resources in a market system.
10. Describe how the market system promotes technological improvements and capital accumulation.
11. Explain the role of self-interest and "invisible hand" in promoting economic efficiency.
12. Explain why the command systems of the Soviet Union, Eastern Europe, and China failed.
13. Identify the decision makers and the markets in a market system using the circular flow diagram.
14. Identify the two roles each that households and businesses play using the circular flow diagram.
15. Differentiate between product and resource markets.
16. Discuss the role of risk in a market economy and the decision process.

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17. Define and identify terms and concepts listed at the end of the chapter.

COMMENTS AND TEACHING SUGGESTIONS

1. A surprising number of students do not really understand the characteristics of the American market system. Many students have no idea how prices are set and even after the chapter on supply and demand may still believe that most prices are determined by an external government agency or by producers arbitrarily.
2. In discussing the importance of private property, you may want to use the following Concept Illustration.

Concept Illustration – The "Berry Bikes" and Private Property

The following excerpt illustrates the importance of personal property rights to the "care and maintenance" of property. Where no such rights exist, property tends to get overused and abused.

The "Berry Bikes": A Lesson in Private Property[1]

Berry College is a private college located on a large campus adjacent to Rome, Georgia. In March 1998, the Berry College Student Government Association (SGA) used student activity funds to purchase 20 bicycles for student use on campus.

The bright red bicycles, each with an identifying plate reading, "Berry Bike," were available to all students on a "first-come, first-served basis," making them a common property resource. The rationale for spending student fees was that the distance between some buildings on campus made getting to class on time difficult. Several factors would seem to favor the plan. The campus is relatively self-contained; it is unlikely that townspeople would enter college property to use the bikes or that students would ride them off campus where they would be abandoned, lost, or stolen.

Moreover, the student body is relatively small. Anyone who abused a bicycle could be readily identified, and the students harmed by having bicycles mistreated would not be strangers. These factors would presumably deter would-be vandals.

Unfortunately, the results of the Berry bike project were dismal. It took little time for the misuse of the bicycles to become evident. Writing in the April 2, 1998, *Campus Carrier*, student Liz Hill reported that "Chains have been broken, tires punctured, handlebars bent, and seats torn" after "only a couple of weeks." Recognizing the underlying cause of mistreatment, Hill implored students to "treat the bikes as if they were your own property." Evidently, her column spurred little change.

On April 21, SGA President M. Lynsey Morris e-mailed all students that "It has come to our attention here in the SGA office that many students are failing to take care of the Berry Bikes…. These bicycles are top quality and should not be bending and breaking the way they are. The

[1] This anecdote is abridged from Daniel L. Alban and E. Frank Stephenson, "The 'Berry Bikes:' A Lesson in Private Property," *The Freeman*, October 1999, p 8-9. Reprinted with permission.

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[SGA] officers and other students have seen many people riding the bikes at absurd speeds, doing tricks, and just abusing the bicycles in general." She too requested that students "treat [the bikes] as you would your personal property." Morris's appeal [also] apparently met with little success; a survey at the end of the semester revealed that four of the 20 bikes were lost or stolen and 11 were in a state of disrepair.

Undeterred, the SGA had the bicycles repaired over the summer recess and resumed the program in the fall. It soon became apparent that the abuse would continue. The September 10 *Campus Carrier* editorialized about "mangled corpses of twisted red metal that lie about campus" and concluded that "Perhaps SGA put too much trust in human nature and Berry students' respect for property." Was that the problem? Or was it that the SGA did not understand the role of incentives? Only a month into the new semester, the SGA suspended the program with the intention of leasing the remaining bicycles to students on a semester-by-semester basis, thereby alleviating the problems associated with common-property resources.

3. If you haven't already talked about Adam Smith and his role in economics, this may be a good time to introduce the "father of economics." His emphasis on the role of self-interest in motivating economic activity is especially relevant here. You might place copies of the "Wealth of Nations" on reserve at the library to encourage students to sample the original work. You could use short excerpts as the basis for discussion or essays. "Adam Smith and the Wealth of Nations," a 28-minute video/film, is an excellent supplement. Check with your Federal Reserve District Bank's public information office or your nearest Center for Economic Education for availability.
4. Markets coordinate economic activity and changes in prices (products and resources) signal that changes have occurred within particular markets. A simple example of product X and product Y can be used. Assume an increase in the demand for X. This change will lead to an increase in the price of X, an increase in the profitability of X, an increase in the quantity supplied of X, an increase in the demand for the resources used to produce X, and an increase in the prices of the those resources. Because of a limit in consumer income, the demand for Y is assumed to decrease followed by all of the changes that will occur in response to the decrease in the demand of Y. After all of these changes have occurred, explain how the transferable resources will move from Y to X. This illustrates the concepts of the "invisible hand."
5. This is a good time to reintroduce the concept of goods for the future from chapter 1. In discussing the importance of producing goods for the future for the market system, remind the students of the impact upon the production of consumption goods in the present.
6. In discussing the use of money, the following Concept Illustration may be useful.

Concept Illustration – Use of Money

Imagine a worker producing alternators for automobiles. At the end of the week, instead of receiving a piece of paper signed by the company, or a few pieces of paper engraved in green and black, the worker's pay consists of ten alternators. With no desire to hoard alternators, the worker ventures into the business district to spend this income on groceries, clothing, and a movie. Obviously, the worker is faced with some inconvenient and time-consuming trading, and may not be able to negotiate any exchanges at all. Finding an owner of a clothing store who needs an alternator can be a formidable task. And if the clothing does not trade evenly for the alternators, how do the parties "make change"?

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Such an illustration may lead students to conclude that money is one of the great social inventions of civilization.

7. The five fundamental questions must be answered by all types of economic systems. Although the emphasis of this chapter is on the American market system, current economic changes in Russia and China and areas of the developing world can be discussed to illustrate how different types of economics answer these questions differently. Students tend to be fascinated with the contrasts between the former Soviet and American systems; the contrasts seem to make students more aware of aspects of capitalism that may have been taken for granted. In any case the instructor may want to supplement the chapter by assigning students to find current news items on the economies of the transitional economic systems of the former Eastern bloc countries. This helps to point out that the economizing problem and five fundamental questions are common to all societies, not just to capitalist systems. The "Consider This" box on "The Two Koreas" is another example illustrating the contract between command and market economies.
8. The "Consider This" box "McHits and McMisses" on McDonald's product innovations that have thrived or failed is an effective way to reinforce consumer sovereignty and its importance to the question of "What will be produced?"
9. When discussing the first two of the fundamental questions, ask who in the market economy are most responsible for answering each of the questions. Explain that the "Who will get the output?" question is an income distribution question and is determined by the distribution and productivity of the resources and the demand for the resources. Discuss how differing consumer dollar votes in the market for fast food workers and computer system workers determine the differences in the workers' wages and incomes.
10. Discuss how the three types of business entities (sole proprietorship, partnership, and corporation) deal with risk. In particular discuss how corporations offer their shareholders limited liability. Also discuss how insurance transfers risk across individuals as presented in the "Consider This" box "Insurance."

STUDENT STUMBLING BLOCK

This chapter introduces students to many important concepts and terms that will be expanded upon in later chapters. These concepts and terms are vital to the understanding of economics. Current event examples can be helpful.

LECTURE NOTES

I. Learning objectives – After the reading this chapter, students should be able to:

A. Differentiate between laissez-faire capitalism, the command system, and the market system.

B. List the main characteristics of the market system.

C. Explain how the market system answers the five fundamental questions of what to produce, how to produce, who obtains the output, how to adjust to change, and how to promote progress.

D. Explain the operation of the "Invisible Hand" and why market economies usually do a better job than command economies at efficiently transforming economic resources into desirable output.

E. Describe the mechanics of the circular flow model.

F. Explain how the market system deals with risk.

II. Economic Systems

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Economic systems differ in two important ways: Who owns the factors of production and the method used to coordinate economic activity**.**

A. The Laissez-Faire system:
   1. There is private ownership of resources.
   2. Markets and prices coordinate and direct economic activity.
   3. Each participant acts in his or her own self-interest.
   4. In pure capitalism (Laissez-Faire capitalism) the government plays a very limited role.
   5. In the U.S. version of capitalism, the government plays a substantial role. Thus, the U.S. economy is best categorized as a mixed economy.

B. Command economy, socialism or communism:
   1. There is public (state) ownership of resources.
   2. Economic activity is coordinated by central planning

III. Characteristics of the Market System

A. Private individuals and firms own most of the private property (land and capital).
   1. Private property, coupled with the freedom to negotiate binding legal contracts, enables individuals and businesses to obtain, control, use, and dispose of this property.
   2. Private property rights spur mutually agreeable transactions.
   3. Private property rights encourage investment, innovation, exchange of assets, maintenance of property, and economic growth.
   4. Property rights extend to intellectual property through patents, copyrights, and trademarks.

B. Freedom of enterprise and choice exist.
   1. Freedom of enterprise means that entrepreneurs and businesses have the freedom to obtain and use resources, to produce products of their choice, and to sell these products in the markets of their choice.
   2. Freedom of choice means:
      a. Owners of property and money resources can use resources as they choose.
      b. Workers can choose the training, occupations, and job of their choice.
      c. Consumers are free to spend their income in such a way as to best satisfy their wants.

C. Self-interest
   1. Self interest is one of the driving forces in a market system. Entrepreneurs try to maximize profits or minimize losses; resource suppliers try to maximize income; consumers maximize satisfaction.
   2. As each tries to maximize profits, income, satisfaction, the economy will benefit if competition is present.

D. Competition among buyers and sellers is a controlling mechanism.
   1. Large numbers of sellers mean that no single producer or seller can control the price or market supply.
   2. Large number of buyers means that no single consumer or employer can control the price or market demand.
   3. Depending upon market conditions, producers can enter or leave industry easily.

E. Markets and prices
   1. A market system conveys the decisions of the many buyers and sellers of the product and resource markets.

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2. A market is an institution or mechanism that brings buyers and sellers into contact.
3. Individual decisions by buyers and sellers in the market determine the product and resource prices that, in turn, guide further decisions by resource owners, producers, and consumers.
4. Those who respond to the market signals will be rewarded with profits and income.

F. Reliance on technology and capital goods
1. Competition, freedom of choice, self-interest, and the potential of profits provide the incentive for capital accumulation (investment).
2. Advanced technology and capital goods promote efficiency and greater output.

G. Specialization
1. Division of labor allows workers to specialize.
   a. People can take advantage of differences in abilities and skills.
   b. People with identical skills may still benefit from specialization and improving certain skills. (Learning by doing)
   c. Specialization saves time involved in shifting from one task to another.
2. Geographic specialization: Regional and international specialization take advantage of localized resources.

H. Use of money as a medium of exchange
1. Money substitutes for barter, which requires a coincidence of wants. (I may want what you produce but you may not want to exchange for what I have.)
2. Willingness to accept money in place of goods permits 3-way trades (or multilateral trades). See Figure 2.1 and examples in text.
   a. Floridians give money to Nebraskans for wheat, who give money to Idahoans for potatoes, who give money to Florida for oranges.
   b. Foreign exchange markets permit Americans, Japanese, Germans, Britons, and Mexicans to complete international exchanges of goods and services.
   c. Detroit autoworker produces crankshafts for Buicks. If the worker were paid in crankshafts, he would have to find grocers, clothing retailers, etc., who would be willing to exchange their products for a crankshaft. It is much more efficient to use money wages than to accept one's wages in crankshafts!

I. Active, but limited government
1. Although the market system promotes efficiency, it has certain shortcomings (over production of goods with social costs, under production of goods with social benefits, tendency for business to increase monopoly power, macro instability).
2. Chapters 4 and 5 deals with how the government can increase the overall effectiveness of the market system.

IV. Five Fundamental Questions

A. Although the focus of this chapter is on the market system, the five fundamental questions must be answered by all economic systems.
1. What goods and services will to be produced?
2. How will the goods and services be produced?
3. Who will get the output?
4. How will the system accommodate change?
5. How will the system promote progress?

B. What will be produced?

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1. In order to be profitable, businesses must respond to consumers' (individuals, other businesses, and the government) wants and desires.
2. Consumer Sovereignty
   a. Consumer sovereignty is the key to determining the types and quantities of the various products that will be produced. "Dollar votes" for a product when purchases are made and "dollar votes" against a product when products are ignored will determine which industries continue to exist and which individual products survive or fail.
   b. Consider This … McHits and McMisses

      In an effort to stimulate demand and respond to market trends and conditions, McDonald's has introduced a number of new menu items over the years. The success and failure of these new items illustrates the important role of the consumer in determining what will be produced.
   c. Businesses are not really "free" to produce what they wish. They must match their production choices with consumer choices or face losses and eventual bankruptcy. Profit-seeking firms must consider the allocation of the "dollar votes" when they make their production decisions.
3. As with producers of consumer goods and services, decisions of resource suppliers are driven by the desires of consumers for the products produced by the resources they own.

C. How will the goods and services be produced?
1. The market system encourages and rewards those producers who are achieving least-cost production.
2. Least-cost production techniques include: locating firms in the optimum location considering resource prices, resource productivity, and transportation costs, available technology, and resource prices in general.
3. The most efficient technique will be the one that produces a given amount of output with the smallest input of scarce resources when both inputs and outputs are measured in dollars and cents.

D. Who will get the output?
1. The answer to this question is directly related to how the income is distributed among the individuals and the households and the tastes and preferences of consumers.
2. Products go to those who are willing and able to pay for them.
3. The productivity of the resources, the relative supply of particular resources, and the ownership of the resources will determine the income of individuals and households.
4. The resource markets, which determine income, are linked to this decision.

E. How will the system accommodate change?
1. Markets are dynamic – what is efficient today may not be efficient tomorrow as tastes, technology, and resource supplies change. Prices help signal those changes.
2. An increase in demand for some products (fruit juice) will lead to higher prices in those markets; a decrease in demand for other products (milk) will lead to lower prices in those markets.
3. Increased demand leads to higher prices that induce greater quantities of output from suppliers. The opposite is true for a decrease in demand.
4. Higher prices lead to more profits and new firms entering the market; lower prices lead to losses and firms leaving the industry.

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5. The guiding function of prices is essential to a well-functioning market system. In the absence of such signals, government or some similar institution would have to decide where resources are allocated, but without knowing what people in society want.

F. How will the system promote progress?

1. The market system promotes technological improvements and capital accumulation.
2. An entrepreneur or firm that introduces a popular new product will be rewarded with increased revenue and profits.
3. New technologies that reduce production costs, and thus product price, will spread throughout the industry as a result of competition.
4. Creative destruction occurs when new products and production methods destroy the market positions of firms that are not able or willing to adjust.
5. Technological advances often require additional capital. Entrepreneurs cast "dollar votes" for capital, drawing resources to the production of capital goods.

V. Competition and the "Invisible Hand":

A. Competition is the mechanism of control for the market system. It not only guarantees that industry responds to consumer wants, but it also forces firms to adopt the most efficient production techniques.

B. Adam Smith talked of the "invisible hand" which promotes public interest through a market system where the primary motivation is self-interest. By attempting to maximize profits, firms will also be producing the goods and services most wanted by society.

C. Of the many merits of the market system, three stand out:

1. Market systems promote *efficiency* in the allocation of resources.
2. Market systems provide *incentives* for people to be productive through work effort and acquiring skills.
3. Market systems provide a lot of personal *freedom* in making economic decisions.

VI. The Demise of the Command Systems

Command systems in the Soviet Union, Eastern Europe, China eventually gave way to market systems. The failure of command systems can be attributed to two main problems:

A. Coordination problem – it was difficult (if not impossible) for central planners to effectively coordinate the allocation of resources and satisfaction of wants of millions of consumers, resource suppliers, and businesses.

1. If an industry failed to meet production targets it could disrupt production and resource allocation throughout the system.
2. Larger planned economies faced even greater difficulties because the greater number and complexity of allocation decisions to be made.
3. Without market signals (i.e. prices) it was difficult to measure success. Even if quantitative production targets were met, ambiguities in the targets led to perverse outcomes in terms of poor quality, excessive costs, and the wrong mix of goods.

B. Incentive problem – with central planners determining what and how much would be produced, and how much resource suppliers would receive, there was little incentive to innovate, contain costs, or otherwise improve the quantity and quality of goods and services.

C. Consider This … The Two Koreas

1. North Korea, under the influence of the Soviet Union, established a command economy emphasizing government ownership and central government planning.

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2. South Korea, protected by the U.S., established a market economy based on private ownership and profit motive.
3. South Korea has experienced significantly higher GDP, GDP per capital, exports, and imports than North Korea, which maintains an agrarian economy.

VII. The Circular Flow Model for a Market-Oriented System (Key Graph 2.2)

A. There are two groups of decision makers in the private economy (when government has not yet been included): households and businesses.
   1. The market system coordinates these decisions.
   2. What happens in the resource markets?
      a. Households sell resources directly or indirectly (through ownership of corporations).
      b. Businesses buy resources in order to produce goods and services.
      c. Flow of payments from businesses for the resources constitutes business costs and resource owners' incomes.
   3. What happens in the product markets?
      a. Households are on the buying side of these markets, purchasing goods and services.
      b. Businesses are on the selling side of these markets, offering products for sale.
      c. Flow of consumer expenditures constitutes sales receipts for businesses.
   4. Circular flow model illustrates this complex web of decision-making and economic activity that give rise to the real and money flows.

B. Limitations of the model (not in text):
   1. Does not depict transactions between households and between businesses.
   2. Ignores government and the "rest of the world" in the decision-making process.
   3. Does not explain how prices of products and resources are actually determined, but this is explained in Chapter 3.

VIII. How the Market System Deals with Risk

A. The Profit System
   1. It falls to those acting as the firm's entrepreneurs to deal with risk.
   2. The entrepreneurs are guided by the so-called profit system. These individuals bear the risk; they win if there is a gain in profit and lose if there is a loss. Therefore, entrepreneurs must make prudent decisions to avoid unnecessary risks.
   3. Command economies do not manage risk well because the central planners do not face the risk themselves.

B. Shielding Employees and Suppliers from Business Risk
   1. Under the market system, only a firm's owners are subject to business risk and the possibility of losing money.
   2. Because everyone else is legally entitled to get paid before the firm's owners, the firm's owners are referred to as residual claimants in business law.
   A. The firm's employees and suppliers are not subject to profit risk. However, employees may bear employment risk, which depends on the profitability of the firm.

C. Benefits of Restricting Business Risk to Owners
   1. Attracting Inputs: By concentrating risk on the owners of a firm it allows the firm to attract employees and suppliers.
   2. Focusing attention: Profit maximizing behavior by the firm helps achieve prudent risk management.

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D. Consider This…Insurance
   1. Insurance promotes economic growth and investment by transferring risk from those who have a low tolerance for risk to those who have a high tolerance for risk.
   2. Insurance also promotes growth and development by allowing individuals to pool the risk across a number of different individuals.

IX. LAST WORD: Shuffling the Deck

A. If one thoroughly shuffles a deck of cards, there is a virtual 100% chance that the resulting arrangement of cards will be unlike any previous arrangement.
B. Yet, even though there are tens of billions of resources in the world, these resources are arranged in such a way as to produce the products and services that serve human needs.
C. Private property eliminates the possibility that resource arrangements will be random because each resource owner will choose a particular course of action if it promises rewards to the owner that exceed the rewards promised by all other available actions.
D. The result is a complex and productive arrangement of countless resources.

QUIZ

1. Which statement best describes a command economy?
   A. The production of goods and services is determined primarily by markets, but the allocation of goods and services is determined primarily by government.
   B. The production of goods and services is determined primarily by government, but the allocation of goods and services is determined primarily by markets.
   C. The production and allocation of goods and services is determined primarily through markets.
   D. The production and allocation of goods and services is determined primarily through government.

Answer: D

2. Which statement is correct?
   A. Freedom of choice and enterprise are essential elements of the market system.
   B. Producers are "kings" in a market economy because they determine what is produced.
   C. The market system is efficient at allocation of resources, but not consumer goods to their most valued uses.
   D. The operation of a market system eventually results in an equal distribution of income.

Answer: A

3. In a competitive economy, prices:
   A. influence consumers in their purchases of goods and services.
   B. influence businesses in their purchases of economic resources.
   C. influence workers in making occupational choices.
   D. do all of these.

Answer: D

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4. The competitive market system:
   A. encourages innovation because government provides tax breaks and subsidies to those who develop new products or new productive techniques.
   B. discourages innovation because it is difficult to acquire additional capital in the form of new machinery and equipment.
   C. discourages innovation because firms want to get all the profits possible from existing machinery and equipment.
   D. encourages innovation because successful innovators are rewarded with economic profits.

Answer: D

5. Which is *not* one of the Five Fundamental Questions?
   A. How will the goods and services be produced?
   B. How should the system accommodate change?
   C. Who is to receive the output of the system?
   D. What goods and services should be produced by government?

Answer: D

6. The idea that firms and resource suppliers in seeking to further their own self-interests in a competitive market economy also simultaneously promotes the public or social interest is a description of:
   A. The guiding function of prices
   B. Capital accumulation
   C. The "invisible hand"
   D. "Dollar votes"

Answer: C

7. Which of the following is a limitation of the simple circular flow model?
   A. product markets are ignored
   B. resource markets are ignored
   C. the determination of product and resource prices is not explained
   D. households are included, but not businesses

Answer: C

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8. Households and businesses are:
   A. both buyers in the resource market.
   B. both sellers in the product market.
   C. sellers in the resource and product markets respectively.
   D. sellers in the product and resource markets respectively.

Answer: C

9. The influential book written by Adam Smith was:
   A. *The Worldly Philosophers*
   B. *The Wealth of Nations*
   C. *The Age of the Economist*
   D. *The Affluent Society*

Answer: B

10. The circular flow model:
   E. Assumes that central planning is taking place
   F. Illustrates how natural resources are created
   G. Illustrates how money is created by the banking system
   H. Illustrates the interdependence of businesses and consumers

Answer: D

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TABLE 28.1 Selected Socioeconomic Indicators of Development

Country	(1) Per Capita Income, 2014*	(2) Life Expectancy at Birth, 2014	(3) Under-5 Mortality Rate per 1,000, 2014	(4) Adult Illiteracy Rate, Percent, 2015	(5) Internet Users per 100, 2014	(6) Per Capita Energy Consumption, 2013**
United States	$55,230	79	7	1	87.4	6,914
Japan	42,000	84	3	1	90.6	3,570
Brazil	11,790	74	16	7	57.6	1,439
China	7,400	76	11	4	49.3	2,226
India	1,570	68	50	28	18.0	660
Mauritania	1,270	63	86	48	10.7	529
Bangladesh	1,080	72	40	39	9.6	216
Mozambique	600	55	81	41	5.9	407
Ethiopia	550	64	62	51	2.9	507

*Purchasing power parity basis (see World Bank website for definition and methodology).
**Kilograms of oil equivalent.

Source: World Bank, *World Development Indicators 2015* and *World Development Report 2015,* UNESCO Institute of Statistics, **dada.uis.unesco.org**.

Table 28.1 contrasts various socioeconomic indicators for selected DVCs with those for the United States and Japan. These data confirm the major points stressed in the quotation from Todaro.

Obstacles to Economic Development

LO28.2 List some of the obstacles to economic development.

The paths to economic development are essentially the same for developing countries and industrially advanced economies:

- The DVCs must use their existing supplies of resources more efficiently. This means that they must eliminate unemployment and underemployment and also combine labor and capital resources in a way that will achieve lowest-cost production. They must also direct their scarce resources so that they will achieve allocative efficiency.
- The DVCs must expand their available supplies of resources. By achieving greater supplies of raw materials, capital equipment, and productive labor, and by advancing its technological knowledge, a DVC can push its production possibilities curve outward.

All DVCs are aware of these two paths to economic development. Why, then, have some of them traveled those paths while others have lagged far behind? The difference lies in the physical, human, and socioeconomic environments of the various nations.

Natural Resources

No simple generalization is possible as to the role of natural resources in the economic development of DVCs because the distribution of natural resources among them is so uneven. Some DVCs have valuable deposits of bauxite, tin, copper, tungsten, nitrates, and petroleum and have been able to use their natural resource endowments to achieve rapid growth. This is true, for instance, of Kuwait and several other members of the Organization of Petroleum Exporting Countries (OPEC). In other instances, natural resources are owned or controlled by the multinational corporations of industrially advanced countries, with the economic benefits from these resources largely diverted abroad. Furthermore, world markets for many of the farm products and raw materials that the DVCs export are subject to large price fluctuations that contribute to instability in their economies.

Other DVCs lack mineral deposits, have little arable land, and have few sources of power. Moreover, most of the poor countries are situated in Central and South America, Africa, the Indian subcontinent, and southeast Asia, where tropical climates prevail. The heat and humidity hinder productive labor; human, crop, and livestock diseases are widespread; and weed and insect infestations plague agriculture.

A weak resource base can be a serious obstacle to growth. Real capital can be accumulated and the quality of the labor force improved through education and training. But it is not as easy to augment the natural resource base. It may be unrealistic for many of the DVCs to envision an economic destiny comparable with that of, say, the United States or Canada. But we must be careful in generalizing: Japan, for example, has achieved a high standard of living despite limited natural resources. It simply imports the large quantities of natural resources that it needs to produce goods for consumption at home and export abroad.

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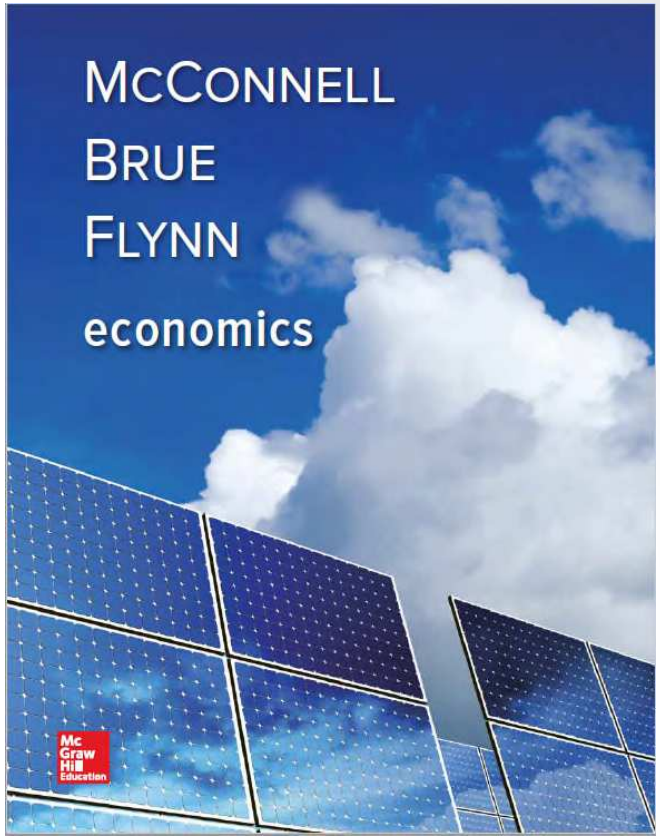

Chapter 2

The Market System and the Circular Flow

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Economic Systems

- **Economic systems**
  - Set of institutionalized arrangements
  - Coordinating mechanism
- Differences in systems exist by
  - Degree of decentralized use of markets and prices in decision-making
  - Degree of centralized government control

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Laissez-Faire Capitalism

- Ideal economy
- "Keep the government from interfering with the economy"
- Power of government just needed to
  - Protect private property from theft
  - Provide a legal environment for contract enforcement
- People interact in markets to buy and sell

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The Command System

- The **command system** is known as socialism or communism
- Government ownership of resources
- Decisions made by a central planning board
- North Korea, Cuba, Myanmar

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The Market System

- The **market system** is a mix of decentralized decision making with some government control
- Systems found in much of the world
- Private markets are dominant force
- Private ownership of resources
- Self-interested behavior

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Characteristics of the Market System

- **Private property**
- **Freedom of enterprise**
- **Freedom of choice**
- **Self-interest**
- **Competition**
- **Market** and **prices**

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Global Perspective

Index of Economic Freedom, Selected Economies

The Index of Economic Freedom measures economic freedom using 10 major groupings such as trade policy, property rights, and government intervention, with each category containing more than 50 specific criteria. The index then ranks 179 economies according to their degree of economic freedom. A few selected rankings for 2015 are listed below.

FREE

1 Hong Kong

3 New Zeland

5 Switzerland

MOSTLY FREE

12 United States

20 Japan

28 Colombia

MOSTLY UNFREE

117 Brazil

128 India

143 Russia

REPRESSED

169 Argentina

171 Iran

178 North Korea

Source: The Heritage Foundation, **www.heritage.org**.

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Technology and Capital Goods

- Advanced technology and capital goods are encouraged
- **Specialization**
  - **Division of labor**
  - Geographic specialization

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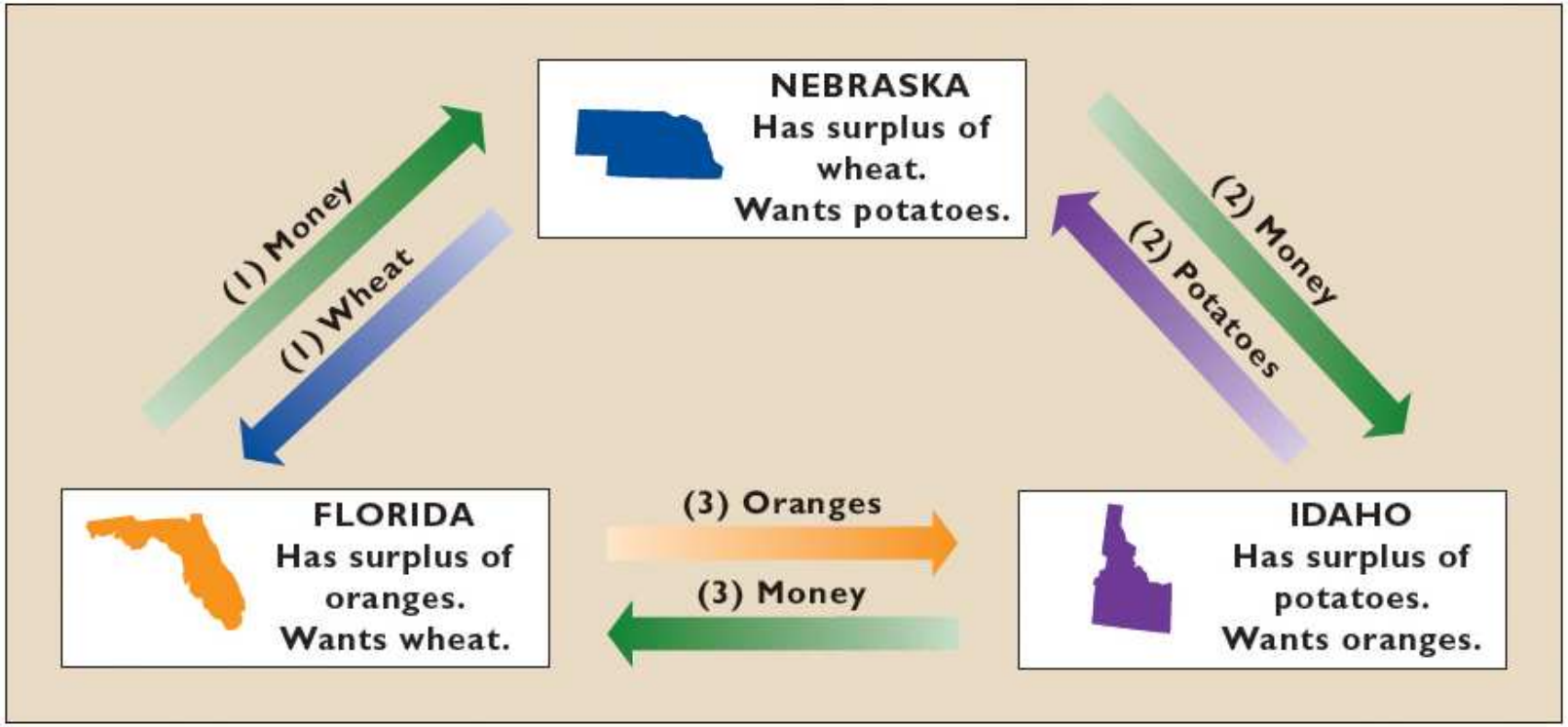
Use of Money

- **Money** makes trade easier
- **Medium of exchange**
- Without money, people would have to **barter**



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Active, but Limited Government

- Government may be needed to alleviate market failures
- Government can increase effectiveness of a market system
- Possible government failure

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The Five Fundamental Questions

- What goods and services will be produced?
- How will the goods and services be produced?
- Who will get the goods and services?
- How will the system accommodate change?
- How will the system promote progress?

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What Will Be Produced?

- Goods and services that create a profit
- **Consumer sovereignty**
- "**Dollar votes**"
  - Method for consumers to determine which goods will be produced
  - Determines which products and industries survive or fail

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How Will the Goods Be Produced?

- Minimize the cost per unit by using the most efficient techniques
  - Technology
  - Prices of the necessary resources

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How Will the Goods Be Produced? Continued

Three Techniques for Producing $15 Worth of Bar Soap

	Price per unit of Resource	Units of Resource					
		Technique 1		Technique 2		Technique 3	
Resource		**Units**	**Cost**	**Units**	**Cost**	**Units**	**Cost**
Labor	$2	4	$ 8	2	$ 4	1	$ 2
Land	$1	1	1	3	3	4	4
Capital	$3	1	3	1	3	2	6
Entrepreneur	$3	1	3	1	3	1	3
			$ 15		$ 13		$ 15

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Who Will Get the Output?

- Consumers with the ability and willingness to pay will get the product
- Ability to pay depends on income

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How Will the System Change?

- Changes in consumer tastes
- Changes in technology
- Changes in resource prices

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How Will the System Progress?

- Technological advance
  - **Creative destruction**
- Capital accumulation

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The Invisible Hand

- The "**invisible hand**"
- 1776 *Wealth of Nations* by Adam Smith
  - Unity of private and social interest
- Virtues of the market system
  - Efficiency
  - Incentives
  - Freedom

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The Demise of Command Systems

- Command system was a failure
- Soviet Union, Eastern Europe, and China
- The coordination problem
  - Set output targets for all goods
- The incentive problem
  - No adjustments for surplus or shortage

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The Circular Flow Model

- The **circular flow diagram**
- **Households**
- **Businesses**
  - **Sole proprietorship**
  - **Partnership**
  - **Corporation**
- **Product market** and the **resource market**
- The real flow and the money flow

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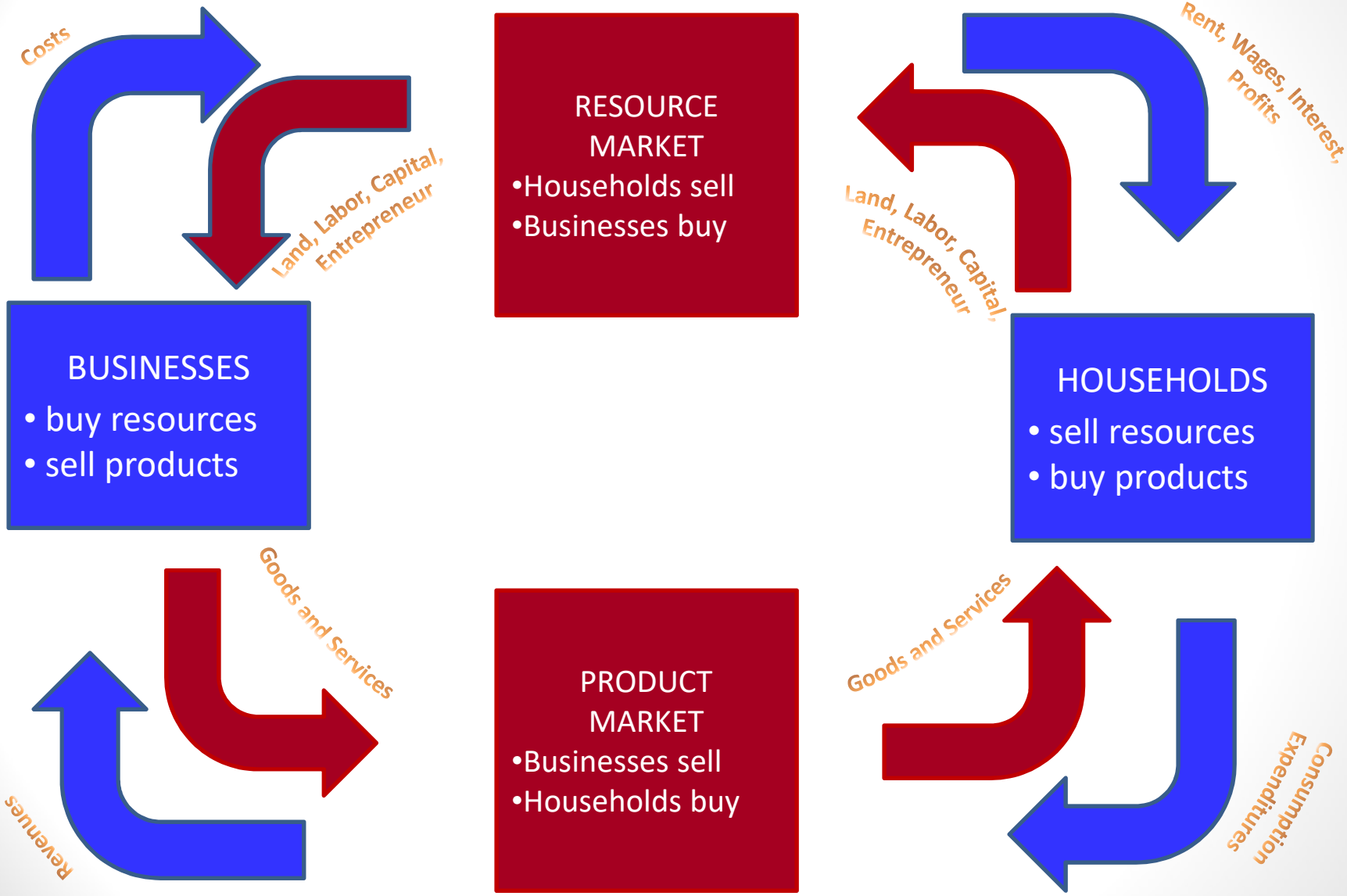
The Circular Flow Diagram



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How the System Deals with Risk

- Business owners and investors face risk
  - Losses due to input shortages
  - Changes in consumer tastes
  - Natural disasters that affect the supply chain
- Employees and suppliers have security
  - Paid whether the firm makes a profit or not

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How the System Deals with Risk Continued

- Business risks are restricted to owners
- Attracts needed inputs
  - Inputs easier to obtain since many dislike risk
- Focuses attention
  - Owners personally responsible for outcome
  - Will encourage prudent decisions
- Manage risk well and the owners will prosper

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Shuffling the Deck

- Extremely large number of ways to arrange a deck of cards
- Arrangement of economy's resources is even larger
- Avoid random outcomes in market due to
  - Private property
  - Rational decisions about property

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