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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. **LO 2.1**

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? **LO 2.2**

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? **LO 2.2**

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. Also property rights encourage owners to maintain or improve their property so as to preserve or increase its value.

4. What are the advantages of using capital goods in the production process? What is meant by the term "division of labour"? What are the advantages of specialization in the use of human and material resources? Explain why exchange is the necessary consequence of specialization. **LO 2.2**

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

"Division of labour" 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"? **LO 2.2**

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

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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: **LO 2.2**
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.

7**.** Some large hardware stores such as Canadian Tire 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? **LO 2.3**

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.

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8. What is meant by the term "creative destruction"? How does the emergence of MP3 (or iPod) technology relate to this idea? **LO 2.3**

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." **LO 2.3**

Answer: Market prices act as an "invisible hand," coordinating an economy by rationing what are 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? **LO 2.4**

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.

11. Distinguish between the factor 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? **LO 2.5**

Answer: The factor, or 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 factor 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 factor market has been reversed. Each group of economic units both buys and sells.

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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? **LO2.6**

> **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.

The 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.

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. **LO2.1**
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.

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

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

3. True or False: Money must be issued by a government for people to accept it. **LO2.2**

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. **LO2.3**

Resource units required

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

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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.

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 4c 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. **LO2.4**
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."

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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.

6. True or False: Households sell finished products to businesses. **LO2.6**

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: **LO2.6**

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.

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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? **LO2.6**
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.

PROBLEMS

1. 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 local cable company. For the soap-making opportunity, she anticipates annual revenue of $465,000 and costs for the necessary land, labour, and capital of $395,000 per year. For the WiFi opportunity, she anticipates costs for land, labour, 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? **LO 2.3**

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

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, labour, and capital of $395,000 per year. For the WiFi opportunity, she anticipates costs for land, labour, and capital of $3,250,000 per year as compared to revenues of $3,275,000 per year.

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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 - $3,250,000) 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.

2. 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 labour, 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? **LO 2.3**

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

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 labour, 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 labour) + 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.

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3. Let's put dollar amounts on the flows in the circular flow diagram of Figure 2.2. **LO 2.5**
a. Suppose that businesses buy a total of $100 billion of the four resources (labour, 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 THREE
DEMAND, SUPPLY, AND MARKET EQUILIBRIUM

CHAPTER OVERVIEW

This chapter provides an introduction to demand and supply concepts. Both demand and supply are defined and illustrated; determinants of demand and supply are listed and explained. The concept of equilibrium and the effects of changes in demand and supply on equilibrium price and quantity are explained and illustrated. The chapter also includes brief discussions of efficiency (productive and allocative), and price controls (floors and ceilings).

WHAT'S NEW?

This chapter is almost identical to the version in 13e.

There is a new learning objective for the chapter, "Characterize and give examples of markets".

There is a new section in the appendix that introduces students to vertical supply curves and which makes the point that in any market in which the supply curve is vertical, any shifts in demand will lead to only changes in the equilibrium price.

There is a new appendix question related to this new section in the appendix.

INSTRUCTIONAL OBJECTIVES

After completing this chapter, students should be able to:

1. Explain who and what demand and supply represent.
2. Differentiate between demand and quantity demanded; and supply and quantity supplied.
3. Graph demand and supply curves when given demand and supply schedules.
4. State the Law of Demand and the Law of Supply, and explain why price and quantity demanded are inversely related, and why price and quantity supplied are directly related.
5. List the major determinants of demand, and explain how a change in each will affect the demand curve.
6. List the major determinants of supply, and explain how a change in each will affect the supply curve.
7. Explain the concept of equilibrium price and quantity.
8. Illustrate graphically equilibrium price and quantity.
9. Explain the rationing function of prices.
10. Define productive and allocative efficiency, and explain how competitive markets achieve them.
11. Explain and graph the effects of changes in demand and supply on equilibrium price and quantity, including simultaneous changes in demand and supply.
12. Define price ceilings and price floors, and provide examples.

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13. Graph and explain the consequences of government-set prices.
14. Define and identify terms and concepts listed at the end of the chapter.

COMMENTS AND TEACHING SUGGESTIONS

1. Emphasis in this chapter should be placed on: (a) The fact that demand and supply are schedules; (b) the intuitive understanding of the downward slope of demand and upward slope of supply curves; (c) the determinants of demand and supply; and (d) the distinction between a shift or change in demand (supply) and a change in quantity demanded (supplied).
2. Walk through the definition of supply and demand. Emphasize the distinction between a reaction to price and the influence of other variables. Point out that finding the equilibrium price and quantity is not the end of the process: It is only the beginning. The market model is powerful because it can be used to forecast what the likely outcome will be if one of the determinants of demand or the determinants of supply is changed. Provide examples that use actual numbers on the axis of the graphs. Most students who have not used graphs extensively will get lost without specific examples. Approach the process systematically, and offer an example of each type of shift. Spend extra time on examples of substitute and complementary goods.
3. The concepts introduced in Chapter 3 are extremely important for an understanding of a market system. In later chapters more sophisticated explanations are introduced. Most instructors will want to wait until that point to discuss marginal utility, elasticity, and other related ideas. The discussion of government price controls will help students understand how powerful market forces are. For example, attempts to control the price of gasoline below its equilibrium level in the 1970's led to shortages and long lines at the gas pumps. On the other hand, attempts to support the price of farm products above equilibrium prices has led to large surpluses in the markets for many agricultural products in Canada, the U.S. and Europe. Usually attempts to control prices are a response to the view that market prices are not always "fair." Therefore, government regulation of prices is based on equity issues. Students may discuss the dilemma: markets may not be always "fair," but attempts to interfere with its operation may lead to other problems. More discussion of these policies occurs in Micro Chapters 5 (on elasticities).
4. Emphasize that the students are already very experienced demanders, and what the instructor is doing is analyzing their behaviour and using the vocabulary of economics when describing this behaviour. Whereas the demand discussion can use real-world examples that are familiar to the students, the supply discussion is more theoretical. With caution, however, one can use the example of the labour supply decision to help reify the concept of supply for students. In goods markets, students can use on-line auctions such as e-bay to sell, for example, old baseball cards. If a student has a collection and card prices rise, she may be persuaded to offer her own cards for sale.
5. Emphasize that the separate demand and supply discussions are lacking in reality because only one side of the market is being examined, i.e., demand or supply. Particularly with the changes in the determinants of supply (the imposition of a tax), students are going to conclude that the market price will change (increase). Explain that their intuitive conclusion will be correct once demand and supply are discussed together. Use Alfred Marshall's scissors analogy to emphasize their interdependence. Introduce each determinant systematically, offering an example of each type. Discuss the difference between determinants "change in price of a related good" when it is a demand determinant as opposed to a supply determinant. There are some products (cars and pickup trucks) that can be both demand and supply-related products.

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6. When graphically showing a "change in demand" and simultaneously a "change in supply," show these changes separately on two graphs and ask the students to compare the changes in price and quantity exchanges.
7. It is useful to point out that in the real world it may be hard to pinpoint the equilibrium price and quantity exactly, but it is easy to establish when the price is too high because surpluses will develop, or too low because shortages will result.
8. Depending upon how the material in the micro course is organized, Chapter 3 could be followed immediately by Micro Chapter 4 (elasticity) and Micro Chapter 5 (consumer behaviour, utility maximization).
9. The "Consider This" box on ticket scalping illustrates the fact that equilibrium price may not be what many would consider a "fair" price. This is a good opportunity for a discussion of the fairness of market prices.
10. The Last Word on the market for organs may provide for a lively debate, and is also an opportunity to tread into the potentially contentious "value of a human life" discussion.

STUDENT STUMBLING BLOCKS

1. Vocabulary in this chapter is extremely important. The word "market" sounds familiar to students and they have already assigned another "everyday" meaning to the word. The competitive process described in this chapter does not fit the common experience of most students as they shop at the mall or at the grocery store. They are accustomed to prices that are "set" by a few producers. Careful definition of terms is not enough. Repetition and reinforcement with classroom exercises, homework, assignments from the study guide or computer software are essential in this chapter.

2. Change in quantity demanded (supplied) versus change in demand (supply) are concepts that students will need to master to be successful in the class and future economic classes. It is also very easy for the instructor to misstate these changes. We often say "change in demand" when what we mean is "change in the quantity demanded." Be careful not to further confuse students by making this mistake! End-of-chapter study questions 2, 5 and 7 help clarify the difference. For both instructor and student this distinction may seem like "nit-picking," but if the distinction is not made, more than the usual confusion may result. Whereas the discussion of demand fits the common experiences of most students, the discussion of supply is more theoretical and does not.

3. The discussion of price changes of substitutes is potentially problematic for both instructors and students. The standard argument is that as the price of a good (beef) rises, the demand for its substitute (chicken) rises. Although we invoke the "all other things equal" assumption to get this result, there is still the question of why the price of the original good (beef) rose in the first place. If it rose because of a supply change, then our original conclusion stands. If, however, the original price rose because of an increase in demand, the total quantity demanded would not fall. The case can be made that some buyers would substitute, but overall the quantity demanded of the original good would still rise.

4. Supply shifts often confuse students. When discussing increases or decreases in supply, it is important to talk about the curves shifting rightward or leftward, as opposed to downward or upward. Students have enough difficulty with the concepts in this chapter without having to think about an upward curve shift as a decrease in supply.

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5. Exercise caution in demonstrating and discussing the outcome of simultaneous shifts in supply and demand. When students start by graphing it (or observing a graph you've produced), they see an unambiguous effect on both equilibrium price and quantity. Unless the magnitude of the shifts is known, the effect on either price or quantity will be indeterminate, but if students see a particular result they will tend to internalize it. This problem can be mitigated by discussing simultaneous changes conceptually, so that students can begin to develop an intuitive sense that something will be uncertain. For example, if both supply and demand increase, it is easy to convince students that the quantity exchanged will increase. By getting them to acknowledge (without the graph) that one shift will tend to decrease price, and the other will tend to increase it, the realization sets in that the final effect on price is indeterminate. This situation presents a wonderful opportunity to show students why economists often can't give clear cut answers to many economic situations.

6. Some students may struggle with the fact that the placement of the price and quantity variables is inconsistent with the mathematical convention of the independent variable appearing on the horizontal axis. If you see otherwise intelligent, mathematically inclined students making errors on their curve shifts, this may be a reason why. Although supply and demand analysis is not the original source for this expression, you may want to tell them to "mind their Ps and Qs." You can also refer them to the "Origin of the Idea" piece on demand and supply on the website so they can see who to blame.

LECTURE NOTES

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

1. Characterize and give examples of markets.
2. Describe *demand* and explain how it can change.
3. Describe *supply* and explain how it can change.
4. Relate how supply and demand interact to determine market equilibrium.
5. Explain how changes in supply and demand affect equilibrium prices and quantities.
6. Identify what government-set prices are and how they can cause product surpluses and shortages.
7. (Appendix) Illustrate how supply and demand analysis can provide insights on actual economy situations

II. Markets

A. A market, as introduced in Chapter 2, is an institution or mechanism that brings together buyers (demanders) and sellers (suppliers) of particular goods and services.

B. This chapter focuses on competitive markets with:

1. a large number of independent buyers and sellers.
2. standardized goods.
3. prices that are "discovered" through the interaction of buyers and sellers. No individual can dictate the market price.

C. The goal of the chapter is to explain the way in which markets adjust to changes and the role of prices in bringing the markets toward equilibrium.

III. Demand

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A. Demand is a schedule that shows the various amounts of a product that consumers are willing and able to buy at each specific price in a series of possible prices during a specified time period.
   1. Example of demand schedule for corn is Figure 3.1.
   2. The schedule shows how much buyers are willing and able to purchase at five possible prices.
   3. The market price depends on demand and supply.
   4. To be meaningful, the demand schedule must have a period of time associated with it.

B. Law of demand is a fundamental characteristic of demand behaviour.
   1. Other things being equal, as price increases, the corresponding quantity demanded falls.
   2. Restated, there is an inverse relationship between price and quantity demanded.
   3. Note the "other-things-equal" assumption refers to consumer income and tastes, prices of related goods, and other things besides the price of the product being discussed.
   4. Explanation of the law of demand:
      a. Diminishing marginal utility: The decrease in added satisfaction that results as one consumes additional units of a good or service, i.e., the second "Big Mac" yields less extra satisfaction (or utility) than the first.
      b. Income effect: A lower price increases the purchasing power of money income enabling the consumer to buy more at lower price (or less at a higher price) *without having to reduce consumption of other goods*.
      c. Substitution effect: A lower price gives an incentive to substitute the lower-priced good for now relatively higher-priced goods.

C. The demand curve:
   1. Illustrates the inverse relationship between price and quantity (see corn example, Figure 3.1).
   2. The downward slope indicates lower quantity (horizontal axis) at higher price (vertical axis), higher quantity at lower price, reflecting the Law of Demand.

D. Individual vs. market demand:
   1. Transition from an individual to a market demand schedule is accomplished by summing individual quantities at various price levels.
   2. Market curve is horizontal sum of individual curves (see corn example, Tables 3.1, 3.2 and Figure 3.2).

E. Class example: This is a good place to involve the class if your classroom setting allows. Select an item that students typically buy, such as a can of soft drink or donuts. It works especially well if one student already has the item, and you can use that student for your individual demand schedule. Select five to ten representative prices for the item and create a demand schedule based on this student's responses. It is usually interesting to include the zero price to see how many the student would want if the item were free. You can then construct an individual demand schedule on board or overhead transparency. Don't worry if it isn't a straight line, it will undoubtedly still represent the law of demand. If your class isn't too large, you could then construct a class market schedule using a show of fingers to indicate amounts students would purchase at each price level.

F. There are several determinants of demand or the "other things," besides price, which affect demand. Changes in determinants cause changes in demand.
   1. Table 3.3 provides additional illustrations.

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a. Tastes—-favourable change leads to increase in demand; unfavourable change to decrease.
b. Number of buyers—more buyers lead to an increase in demand; fewer buyers lead to a decrease.
c. Income—more leads to an increase in demand; less leads to decrease in demand for normal goods. (The rare case of goods whose demand varies inversely with income is called inferior goods).
d. Prices of related goods also affect demand.
1. i. Substitute goods (those that can be used in place of each other): The price of the substitute good and demand for the other good are directly related. If the price of Coke rises (because of a supply decrease), demand for Pepsi should increase.
2. ii. Complementary goods (those that are used together like tennis balls and rackets): When goods are complements, there is an inverse relationship between the price of one and the demand for the other.
e. Consumer expectations—consumer views about future prices and income can shift demand.

2. A summary of what can cause an increase in demand:
a. Favourable change in consumer tastes.
b. Increase in the number of buyers.
c. Rising income if product is a normal good.
d. Falling incomes if product is an inferior good.
e. Increase in the price of a substitute good.
f. Decrease in the price of a complementary good.
g. Consumers expect higher prices or incomes in the future.

3. A summary of what can cause a decrease in demand:
a. Unfavourable change in consumer tastes,
b. Decrease in number of buyers,
c. Falling income if product is a normal good,
d. Rising income if product is an inferior good,
e. Decrease in price of a substitute good,
f. Increase in price of a complementary good,
g. Consumers' expectations of lower prices or incomes in the future.

G. Review the distinction between a change in quantity demanded caused by price change and a change in demand caused by change in determinants.

IV. Supply

A. Supply is a schedule that shows amounts of a product a producer is willing and able to produce and sell at each specific price in a series of possible prices during a specified time period.
1. A supply schedule portrays this such as the corn example in Figure 3.4.
2. Schedule shows what quantities will be offered at various prices or what price will be required to induce various quantities to be offered.

B. Law of supply:
1. Producers will produce and sell more of their product at a high price than at a low price.
2. Restated: There is a direct relationship between price and quantity supplied.

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3. Explanation: Given product costs, a higher price means greater profits and thus an incentive to increase the quantity supplied.
4. Beyond some production quantity producers usually encounter increasing costs per added unit of output.

   Note: A detailed explanation of diminishing returns is probably not necessary at this point and can be delayed until a later consideration of the costs of production.

C. The supply curve:
   1. The graph of supply schedule appears in Figure 3.5, which graphs data from Table 3.4.
   2. It shows a direct relationship in an upward sloping curve.

D. Determinants of supply:
   1. A change in any of the supply determinants causes a change in supply and a shift in the supply curve. An increase in supply involves a rightward shift, and a decrease in supply involves a leftward shift.
   2. Six basic determinants of supply, other than price. (See examples of curve shifts in Figure 3.5 and summary Table 3.2)
      a. Resource prices—a rise in resource prices will cause a decrease in supply or leftward shift in supply curve; a decrease in resource prices will cause an increase in supply or rightward shift in the supply curve.
      b. Technology—a technological improvement means more efficient production and lower costs, so an increase in supply, or rightward shift in the curve results.
      c. Taxes and subsidies—a business tax is treated as a cost, so decreases supply; a subsidy lowers cost of production, so increases supply.
      d. Prices of related goods—if price of substitute production good rises, producers might shift production toward the higher priced good, causing a decrease in supply of the original good.
      e. Producer expectations—expectations about the future price of a product can cause producers to increase or decrease current supply.
      f. Number of sellers—generally, the larger the number of sellers the greater the supply.

E. Review the distinction between a change in quantity supplied due to price changes and a change or shift in supply due to change in determinants of supply.

V. Market Equilibrium

A. Review the text example, Table 3.6, which combines data from supply and demand schedules for corn.

B. Have students find the point where *quantity supplied equals the quantity demanded,* and note this equilibrium price and quantity. Emphasize the correct terminology!
   1. At prices above this equilibrium, note that there is an excess quantity or surplus.
   2. At prices below this equilibrium, note that there is an excess quantity demanded or shortage.

C. Market clearing or market price is another name for equilibrium price.

D. Graphically, note that the equilibrium price and quantity are where the supply and demand curves intersect (See Figure 3.6). This is an IMPORTANT point for students to recognize and remember. Note that it is NOT correct to say supply equals demand!

E. Rationing function of prices is the ability of competitive forces of supply and demand to establish a price where buying and selling decisions are coordinated.

F. **Consider This … Ticket Scalping: Unfair Criticism!**

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1. "Scalping" refers to the practice of reselling tickets at a higher-than-original price, which happens often with athletic and artistic events. Is this "ripping off" justified?
2. Ticket re-sales are voluntary—both buyer and seller must feel that they gain or they would not agree to the transaction.
3. "Scalping" market simply redistributes assets (tickets) from those who value them less than money to those who value them more than the money they're willing to pay.
4. Sponsors may be injured, but if that is the case, they should have priced the tickets higher.
5. Spectators are not damaged, according to economic theory, because those who want to go the most are getting the tickets.
6. Conclusion: Both seller and buyer benefit and event sponsors are the only ones who may lose, but that is due to their own error in pricing and they would have lost from this error whether or not the scalping took place.

G. Efficient allocation – productive and allocative efficiency
1. Competitive markets generate *productive efficiency* – the production of any particular good in the least costly way. Sellers that don't achieve the least-cost combination of inputs will be unprofitable and have difficulty competing in the market.
2. The competitive process also generates *allocative efficiency* – producing the combination of goods and services most valued by society.
3. Allocative efficiency requires that there be productive efficiency. Productive efficiency can occur without allocative efficiency. Goods can be produced in the least costly method without being the most wanted by society.
4. Allocative and productive efficiency occur at the equilibrium price and quantity in a competitive market. Resources are neither over- nor underallocated based on society's wants.

VI. Changes in Supply and Demand, and Equilibrium

A. Changing demand with supply held constant:
1. Increase in demand will have effect of increasing equilibrium price and quantity (Figure 3.7a).
2. Decrease in demand will have effect of decreasing equilibrium price and quantity (Figure 3.7b).

B. Changing supply with demand held constant:
1. Increase in supply will have effect of decreasing equilibrium price and increasing quantity (Fig 3.7c).
2. Decrease in supply will have effect of increasing equilibrium price and decreasing quantity (Fig 3.7d).

C. Complex cases—when both supply and demand shift (see Table 3.7):
1. If supply increases and demand decreases, price declines, but new equilibrium quantity depends on relative sizes of shifts in demand and supply.
2. If supply decreases and demand increases, price rises, but new equilibrium quantity depends again on relative sizes of shifts in demand and supply.
3. If supply and demand change in the same direction (both increase or both decrease), the change in equilibrium quantity will be in the direction of the shift but the change in equilibrium price now depends on the relative shifts in demand and supply.

D. **CONSIDER THIS … Salsa and Coffee Beans**

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1. Demand is an inverse relationship between price and quantity demanded, other things equal (unchanged). Supply is a direct relationship showing the relationship between price and quantity supplied, other things equal (unchanged). It can appear that these rules have been violated over time, when tracking the price and the quantity sold of a product such as salsa or coffee.
2. Many factors *other* than price determine the outcome.
3. If neither the buyers nor the sellers have changed, the equilibrium price will remain the same.
4. The most important distinction to make is to determine if a change has occurred because of something that has affected the buyers or something that is influencing the sellers.
5. A change in any of the determinants of demand will shift the demand curve and cause a change in quantity supplied. (See Figure 3.7 a & b)
6. A change in any of the determinants of supply will shift the supply curve and cause a change in the quantity demanded. (See Figure 3.7 c & d)
7. Confusion results if "other things" (determinants) change and one does not take this into account. For example, sometimes more is demanded at higher prices because incomes rise, but if that fact is ignored, the law of demand seems to be violated. If income changes, however, there is a shift or increase in demand that could cause more to be purchased at a higher price. In this example, "other things" did not remain constant.

VII. Application: Government-Set Prices (Ceilings and Floors)

A. Government-set prices prevent the market from reaching the equilibrium price and quantity.

B. Price ceilings (gasoline).
   1. The maximum legal price a seller may charge, typically placed below equilibrium.
   2. Shortages result as quantity demanded exceeds quantity supplied (Figure 3.8).
   3. Alternative methods of rationing must emerge to take the places of the price mechanism. These may be formal (rationing coupons) or informal (lines at the pump).
   4. Black markets may emerge to satisfy the unmet consumer demand.
   5. Another example: Rent controls in large cities – intended to keep housing affordable but resulting in housing shortages.

C. Price floors (wheat)
   1. The minimum legal price a seller may charge, typically placed above equilibrium.
   2. Surpluses result as quantity supplied exceeds quantity demanded (Figure 3.9).
   3. Resources are over-allocated to the production of wheat and consumers pay higher than efficient prices for wheat-based goods.
   4. Another example: Minimum wage

      Note: The federal minimum wage, for example, will be below equilibrium in some labour markets (large cities). In that case the price floor has no effect.

VIII. LAST WORD: A Legal Market for Human Organs?

A. Organ transplants have become increasingly common, but not everyone who needs a transplant can get one. It is estimated that there are 400 deaths per year in Canada because not enough organs are available.

B. Why shortages?
   1. No market exists for human organs.
   2. The demand curve for human organs would resemble others in that a greater quantity would be demanded at low prices than at higher prices.

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3. Donated organs that are rationed by a waiting list have a zero price. The existing supply is perfectly inelastic and is the fixed quantity offered by willing donors.
4. There is a shortage of human organs because at a zero price the quantity demanded exceeds the quantity supplied.

C. Using a market.

1. A market for human organs would increase the incentive to donate organs. The higher the expected price of an organ, the greater would be the number of people willing to have their organs sold at death.
2. The shortage of organs would be eliminated, and the number of organs available for transplanting would rise.

D. Objections.

1. The first is a moral objection that turning human organs into commodities commercializes human beings and diminishes the special nature of human life.
2. An analytical critique based on the elasticity of supply, suggests that the likely increase in the actual number of usable organs for transplants would not be great.
3. A health-cost concern suggests that a market for body organs would greatly increase the cost of health care.

E. Prohibitions on a human organ market have been rise to a worldwide, $1 billion-per-year illegal market. There is concern that those willing to participate in an illegal market such as this may also be willing to take extreme measures to solicit organs from unwilling donors.

F. Supporters of legalizing the market for organs argue that it would increase the supply of legal organs, drive down the price of organs, and reduce the harvesting of organs from unwilling sellers (the lower price would make it less profitable).

QUIZ

1. The law of demand is illustrated by a demand curve that is:
   A. Vertical
   B. Horizontal
   C. Upward sloping
   D. Downward sloping

   Answer: D

2. Which would cause a decrease in the quantity of computers supplied?
   A. An increase in the demand for computers
   B. A decrease in the demand for computers
   C. An increase in the incomes of consumers
   D. A decrease in the price of parts for making computers

   Answer: B

3. When the price of oil declines significantly, the price of gasoline also declines. The latter occurs because of a(n):
   A. increase in the demand for gasoline.
   B. decrease in the demand for gasoline.
   C. increase in the supply of gasoline.

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D. decrease in the supply of gasoline.
Answer: C

4. A schedule which shows the various amounts of a product producers are willing and able to produce at each price in a series of possible prices during a specified period of time is called:
   A. Quantity supplied
   B. Quantity demanded
   C. Supply
   D. Demand
   Answer: C

5. If the quantity supplied of a product is less than the quantity demanded, then:
   A. There is a shortage of the product
   B. There is a surplus of the product
   C. The product is a normal good
   D. The product is an inferior good
   Answer: A

6. If the market price is above the equilibrium price:
   A. A shortage will occur and producers will produce more and lower prices
   B. A surplus will occur and producers will produce less and lower prices
   C. A surplus will result and consumers will bid prices up
   D. Producers will make extremely high profits
   Answer: B

7. A competitive market will:
   A. achieve an equilibrium price.
   B. produce shortages.
   C. produce surpluses.
   D. create disorder.
   Answer: A

8. A product market is in equilibrium:
   A. when there is no surplus of the product.
   B. when there is no shortage of the product.
   C. when consumers want to buy more of the product than producers offer for sale.
   D. where the demand and supply curves intersect.
   Answer: D

9. A headline reads "Storms destroy half of the lettuce crop." This situation would lead to a(n):
   A. Increase in the price of lettuce and quantity purchased
   B. Decrease in the price of lettuce and quantity purchased

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C. Increase in the price of lettuce and decrease in quantity purchased
D. Decrease in the price of lettuce and increase in quantity purchased
Answer: C

10. Government-set price floors and price ceilings:
A. Do not affect the rationing function of price in a free market
B. Interfere with the rationing function of price in a free market
C. Result in surpluses of products in markets where they are used
D. Result in shortages of products in markets where they are used
Answer: B

APPENDIX TO CHAPTER 3: ADDITIONAL EXAMPLES OF SUPPLY AND DEMAND

I. Changes in Supply and Demand

A. Lettuce (Figure A3.1)
1. Weather events affect agricultural markets, usually on the supply side.
2. Extreme weather that destroys crops will reduce the supply, raising equilibrium price and lowering equilibrium quantity.

B. Exchange Rates (Figure A3.2)
1. One of the largest foreign exchange markets is the euro-dollar market.
2. The price of a euro is expressed in dollars and is determined by demand and supply of euros.
3. Canadian firms require euros to buy goods from European countries and this is reflected by the demand for euros.
4. When European countries buy goods from Canada they must convert euros to dollars thereby creating the supply of euros.
5. Increased popularity of European goods in Canada increases the demand for euros, causing equilibrium price to increase and the dollar depreciates while the euro appreciates.

C. Pink Salmon (Figure A3.3)
1. This is an example of simultaneous changes in both supply and demand.
2. An increase in supply occurs because of more efficient fishing boats, the development of fish farms, and new entrants to the industry.
3. There is a decrease in demand because of changes in consumer preference, and an increase in income shows pink salmon to be an inferior good.
4. Both changes put downward pressure on the price of pink salmon. Because we know that the increase in supply of pink salmon exceeded the decrease in demand, we can also determine that the quantity purchased increased.

D. Gasoline (Figure A3.4)
1. There have been tremendous fluctuations of Canadian gas prices over the past few years, resulting from both market and traditionally noneconomic forces.
2. Middle East politics and military conflicts (both real and anticipated) have disrupted supply, tending to drive gas prices up.
3. Increased popularity of SUVs and other low-gas-mileage vehicles has increased the demand for gas, also tending to drive the price up.

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4. While theoretically the affect on quantity is indeterminate, in reality the quantity purchased has increased, suggesting that the increase in demand exceeded the decrease in supply.

E. Sushi (Figure A3.5)

1. Despite fast-growing popularity of sushi bars in Canada, prices have remained relatively constant.
2. The increase in demand can be attributed to an increased taste for sushi.
3. The opening of sushi bars in response to expected and realized demand has increased the supply of sushi, helping to keep the price stable.

II. Upsloping versus Vertical Supply Curves

A. The supply schedule for a typical good or service will slope upward because a higher market price will cause producers to increase the quantity supplied. There are, however, some goods and services whose quantities supplied are fixed and unresponsive to a change in price.

B. Reactions to Demand Shifts:

1. Upsloping Supply Curves: When a market's supply curve slopes upward, any shift in demand will cause both the equilibrium price and equilibrium quantity to adjust. This was the case discussed in the chapter (See figureA3. 2 for reference).
2. Vertical Supply Curves: When a market has a vertical supply curve, any shift in demand will cause only the equilibrium price to change. The equilibrium quantity will not change because it is fixed and cannot adjust.
3. The Market for land in San Francisco (FigureA3. 6): Because the quantity of land is fixed the supply curve is vertical. If demand increases from D_1 to D_2 only the price will change. We see the price rising from P_1 to P_2.

III. Preset Prices

A. Preset prices are similar to price floors and ceilings in that they tend to result in shortages or surpluses. They differ from floors and ceilings in that they are set by sellers, not by government policy.

B. Olympic Figure Skating Finals (Figure A3.6)

1. Prices for sporting events are commonly preset.
2. Despite the high preset prices for events such as the figure skating finals, shortages often result as people are willing to buy more tickets at that price than are available.
3. Shortages tend to result in legal or illegal secondary markets (e.g., ticket scalping).

C. Olympic Curling Preliminaries (Figure A3.7)

1. Less popular sporting events (for which prices are still preset) tend to result in surpluses (empty seats at the arena).

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Macroeconomics

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The Market System and the Circular Flow



CHAPTER 2

LEARNING OBJECTIVES

LO2.1 Differentiate between laissez-faire capitalism, the command system, and a market system.

LO2.2 List the main characteristics of the market system.

LO2.3 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.

LO2.4 Explain the operation of the Invisible Hand and why market economies usually do a better job than command economies at transforming economic resources into desirable output.

LO2.5 Describe the mechanics of the circular flow model.

LO2.6 Explain how the market system deals with risk.

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2.1 Economic Systems

Laissez-Faire Capitalism

A.K.A. pure capitalism.

The government's role is limited to protecting private property, and establishing a legal environment.

The Command System

Most property resources are owned by the government.

Economic decisions are made by a central government body.

The Market System

Property resources are privately owned.

Markets and prices are used to direct and coordinate economic activities.

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2.2 Characteristics of the Market System

Private Property

The right of private persons and firms to obtain, own, control, employ, dispose of, and bequeath land, capital, and other property.

Property rights encourage people to cooperate by helping to ensure that only *mutually agreeable* economic transactions take place.

Property rights extend to intellectual property through patents, copyrights, and trademarks.

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2.2 Characteristics of the Market System

Freedom of Enterprise and Choice

- **Freedom of enterprise:** businesses can buy and sell as they choose
- **Freedom of choice:**
  - owners can use or sell property as they choose
  - workers can work where they like
  - consumers can buy what they want

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2.2 Characteristics of the Market System

Self-Interest

Is the *motivating force* of economic units.

- Entrepreneurs try to maximize profit or minimize loss.
- Property owners try to get the highest price for the sale or rent of their resources.
- Workers try to maximize their utility (satisfaction) by finding jobs that offer the best combination of wages, hours, fringe benefits, and working conditions.
- Consumers try to obtain the products they want at the lowest possible price and apportion their expenditures to maximize their utility.

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2.2 Characteristics of the Market System

Competition

- Independently acting sellers and buyers operating in a particular product or factor market.
  - No single buyer or seller is able to dictate the price of the product or factor.
- Freedom of sellers and buyers to enter or leave markets, on the basis of their economic self-interest.
  - Helps the economy to remain efficient over time.
  - Enables the economy to adjust to changes in consumer tastes, technology, and factor availability.

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2.1 GLOBAL PERSPECTIVE

Index of Economic Freedom, Selected Nations



The Index of Economic Freedom measures economic freedom using 10 broad categories, such as trade policy, property rights, and government interventions, with each category containing more than 50 specific criteria. The Index then ranks 184 nations according to the degree of economic freedom. A few selected rankings for 2015 are listed here.

Source: Heritage Foundation (http://www.heritage.org/index/ranking, accessed April 14, 2015) and the Wall Street Journal.

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2.2 Characteristics of the Market System

Markets and Prices

- A market is an institution or mechanism that brings buyers (demanders) and sellers (suppliers) into contact.
- The coordinating mechanism of capitalism is a system of markets and prices.

  Through this mechanism society decides *what the economy should produce*, *how production can be organized efficiently*, and *how the productions are to be distributed* among the various economic units.

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2.2 Characteristics of the Market System

Technology and Capital Goods

- In the market system, competition, freedom of choice, self-interest, and personal reward provide the opportunity and motivation for technological advance.
- Extensive use of technologically advanced capital goods helps market economies achieve greater efficiency in production.

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2.2 Characteristics of the Market System

Specialization

Use of economic resources to produce a few goods and services instead of many, to achieve higher efficiency.

DIVISION OF LABOUR

- ability differences
- learning by doing
- saving time, avoiding switching tasks

GEOGRAPHIC SPECIALIZATION

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2.2 Characteristics of the Market System

Use of Money

Acts as Medium of Exchange.

Barter requires coincidence of wants.

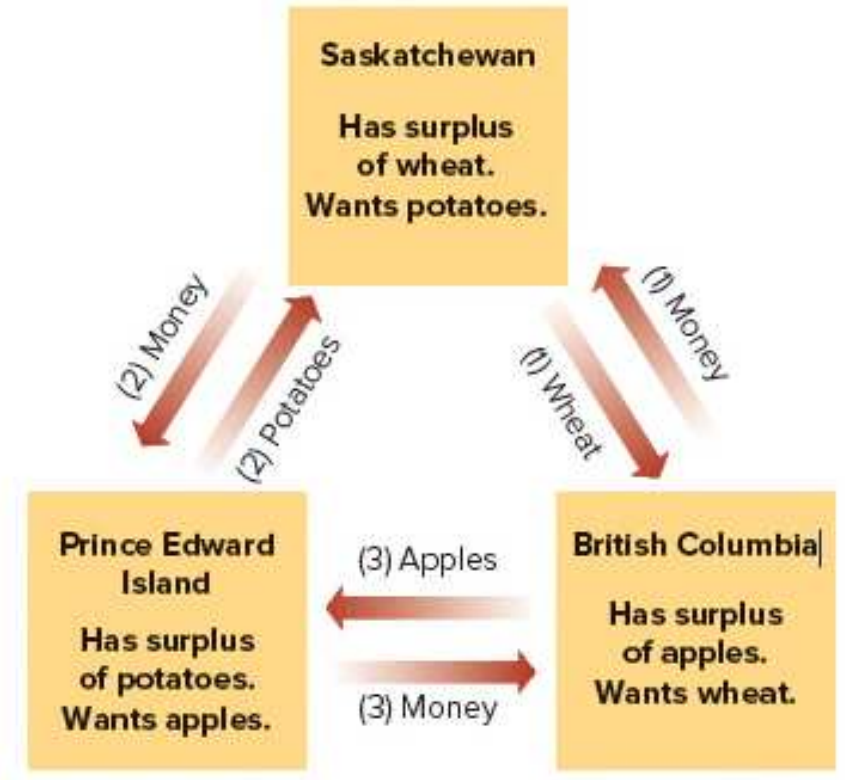


FIGURE 2-1

Money Facilitates Trade When Wants Do Not Coincide.

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2.2 Characteristics of the Market System

Active but Limited Government

Market failures

- Government can increase the overall efficiency of the economic system if the market system fails.
- The central government, along with the central bank, needs to take action if a market economy is experiencing recession or inflation.

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2.3 Five Fundamental Questions

1. What Will Be Produced?

- The goods and services that can be produced at a continuing profit (TR > TC).
- **Consumer sovereignty** determines the types and quantities.
- **Dollar votes** reflect wants.
- The employment of resources derives from the sale of the goods and services they help produce.

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2.3 Five Fundamental Questions

2. How Will the Goods and Services Be Produced?

- Minimize the cost per unit by using the most efficient techniques
  - The right mix of labour and capital
  - Optimal location of production facilities
- Technology
- Prices of the necessary resources

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2.3 Five Fundamental Questions

3. Who Will Get the Output?

Consumers with the ability and willingness to pay will get the product.

- Ability to pay depends on income.
  - Income depends on *(a)* property and human resources and *(b)* resources price in the factor market.
- Willingness depends on preference.

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2.3 Five Fundamental Questions

4. How Will the System Accommodate Change?

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

The *directing or guiding function of prices and profits* is a core element of the market system.

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2.3 Five Fundamental Questions

5. How Will the System Promote Progress?

- Technological advance
  - Innovation in product (income increasing)
  - Innovation in process (cost reducing)
    - **Creative destruction**
- Capital accumulation
  - Entrepreneurs and business owners use part of profit to purchase capital goods to receive higher profit in the future.

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2.4 The Invisible Hand

Under a highly competitive market system, private interest and social interest coincide.

- Prices communicate information about scarcity and value.
- Competition forces producers and resource suppliers to respond.
- Firms, acting in their own best interest, also promote society's interests in terms of efficiency.

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2.4 The Invisible Hand

Three special merits of the market system:

- ***Efficiency***
  - In use of resources
  - In use of techniques of production
  - In development of new and more efficient techniques
- ***Incentives***
  - The market system encourages skill acquisition, hard work, and innovation.
- ***Freedom***
  - Rewards and penalties are imposed by the market system.

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2.4 The Invisible Hand

The Demise of the Command System

- THE COORDINATION PROBLEM
- THE INCENTIVE PROBLEM

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2.5 The Circular Flow Model

Households



- One or more persons occupying a housing unit.
- Buy the goods and services provided by businesses in the product market.
- Obtain the income needed to buy the products by selling resources in the factor market.
  - *Wages*, *rents*, *interest*, and *profits* flows to households for their *labour*, *land*, *capital*, and *entrepreneurial ability*.

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2.5 The Circular Flow Model

Businesses



Economic entities that purchase factors of production in the resource market and sell goods and services in the product market.

- **Sole Proprietorship:** an unincorporated business owned and operated by a single person.
- **Partnership:** two or more individuals pool their financial resources and business skills to operate the business and share the profits/losses.
- **Corporation:** an independent legal entity that can acquire resources, own assets, produce, sell, incur debts, extend **credit**, etc.

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2.5 The Circular Flow Model

Product Market



- Where the goods and services produced by businesses are bought and sold.
- Households use the income they receive from the sale of resources to buy goods and services.
- The money spent on goods and services flows to businesses as revenue.

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2.5 The Circular Flow Model

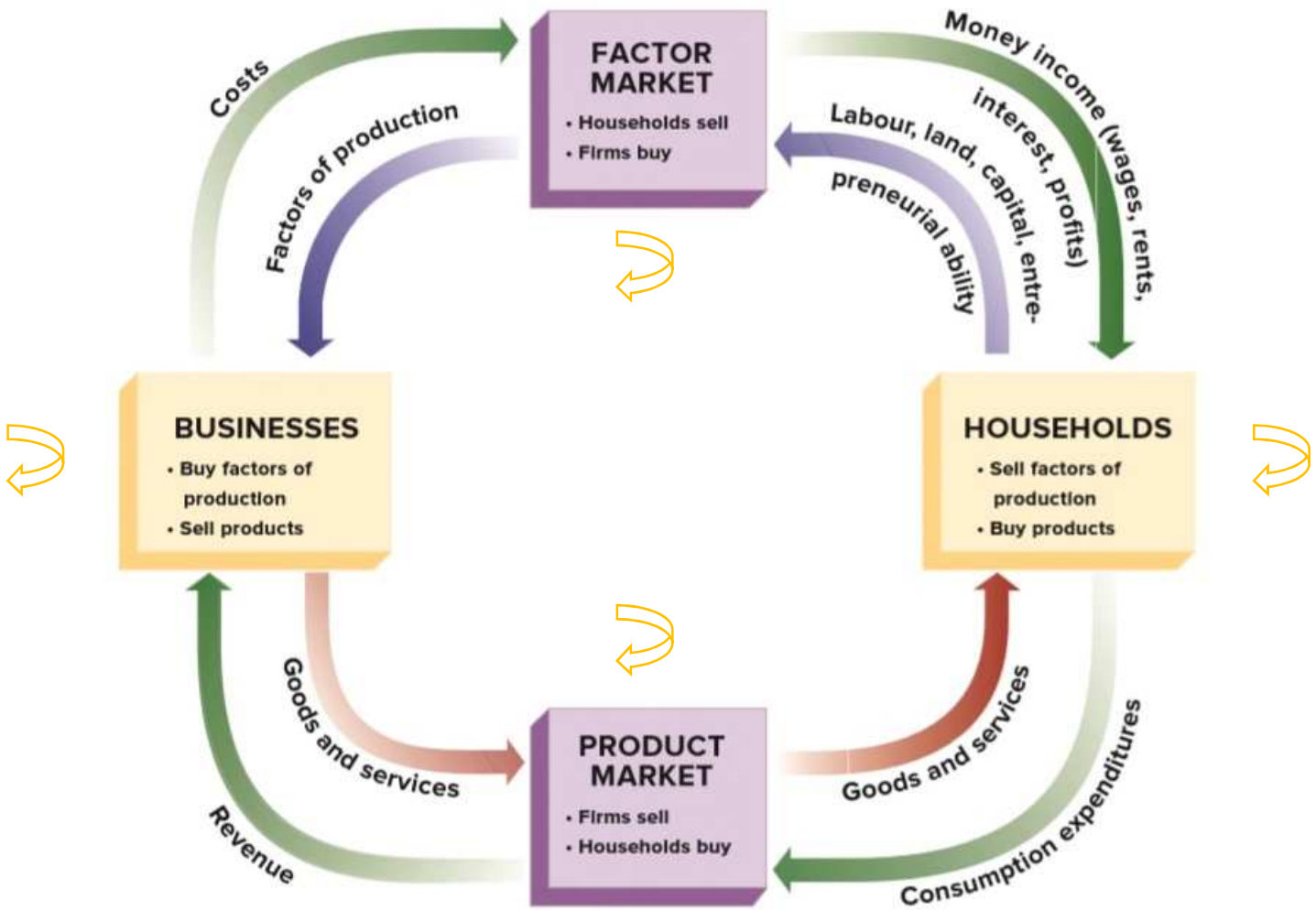
Factor Market



- Where households sell resources to businesses.
  - Households sell resources to generate income.
  - Businesses buy resources to produce goods and services.
- Productive resources flow from households to businesses.
- The money flows from businesses to households as wages, rents, interest, and profits.

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2.5 The Circular Flow Model



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2.6 How the Market System Deals with Risk

The Profit System

- Entrepreneurial ability organizes the other three resources of land, labour, and capital toward productive uses.
- The system is a profit-and-loss system.
  - The entrepreneurs gain profits if they choose wisely, but suffer losses if they choose poorly.
- Poor risk management in command economies.
  - The central planners do not face the possibility of losing money if they make bad decisions.

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2.6 How the Market System Deals with Risk

Shielding Employees and Suppliers from Business Risk

- **DEALING WITH LOSSES**
- Only a firm's owners are subject to business risk and losing money.
- The firm's employees and suppliers receive their contracted wages and payments whether the firm is earning a profit or generating a loss.

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2.6 How the Market System Deals with Risk

Benefits of Restricting Business Risk to Owners

- **ATTRACTING INPUTS**
- Input suppliers dislike risk.
- The security makes it easier for firms to attract labour and other inputs.
- **FOCUSING ATTENTION**
- The profit system helps to achieve prudent risk management.
- In a command system, the responsibility for managing risk is spread out over several layers of government and nobody is responsible for bad outcomes.

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The LAST WORD Shuffling the Deck

- 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.
- 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.

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The LAST WORD Shuffling the Deck

- 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.
- The result is a complex and productive arrangement of countless resources.

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Chapter Summary

LO2.1 Differences between laissez-faire capitalism, the command system and a market system.

LO2.2 The main characteristics of the market system.

LO2.3 The five fundamental questions any economy faces.

LO2.4 The operation of the invisible hand.

LO2.5 The mechanism of the Circular Flow model.

LO2.6 How the market system deals with risk.

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