Chapter 4
The Market Forces of Supply and Demand

Review Questions

What characteristics or requirements must be met for a market to be considered as each of the following?

1. perfectly competitive
2. a monopoly
3. an oligopoly
4. monopolistic competition

ANSWER: (1) The goods being offered for sale must all be the same. The buyers and sellers must be so numerous that no single buyer or seller influences the market price.

(2) A monopoly is a market in which there is only one seller.

(3) An oligopoly is a market in which there are only a few sellers, and the sellers do not always compete aggressively.

(4) Monopolistic competition is a market containing many sellers offering slightly different products.

When we list the determinants of demand, we do not include supply as one of the determinants. Why is that?

ANSWER: Supply is not a determinant of demand because changes in supply per se do not directly cause or shifts of the demand curve. Changes in supply affect price, and changes in price affect quantity demanded.

For each of the following industries, determine whether the market structure is perfect competition, monopolistic competition, oligopoly, or monopoly.

a. the broadcast television networks
b. local telephone service
c. fast food in a city
d. soft drinks
e. municipal water
f. existing (previously issued) U.S. Treasury bonds
g. the automobile industry
h. the textbook industry

ANSWER: a. Since there are only a few large broadcast television networks, the industry is an oligopoly.

b. Local telephone service is usually a monopoly, with only one seller.
c. The fast food industry in a city is monopolistically competitive, with many sellers and differentiated products.
d. The soft drink industry is best described as an oligopoly, with just a few producers.
e. Municipal water is usually a monopoly, with only one seller.
f. The U.S. Treasury bond market is close to perfectly competitive, with a large number of participants buying and selling the same product.
g. The automobile industry is best described as an oligopoly, with just a few large producers.
h. The textbook industry is best described as monopolistically competitive, with many producers selling differentiated products. Recently, however, mergers and acquisitions have moved the industry toward oligopoly.

For each of the following situations in the wheat market, determine whether the quantity demanded changes, or the demand curve shifts, and determine the direction of the change.

a. consumer income increases
b. the price of wheat increases
c. science determines that eating wheat causes high blood pressure
d. the price of oats increases
e. in June, insects destroy part of the wheat crop in North Dakota

ANSWER: a. An increase in consumer income will cause a rightward shift in the demand curve, assuming that wheat is a normal good.
b. An increase in the price of wheat will cause a decrease in the quantity demanded.
c. Consumers' tastes will shift away from wheat, causing the demand curve to shift to the left.
d. Since oats and wheat are substitute goods, an increase in the price of oats will cause a rightward shift in the demand for wheat.
e. Destruction of part of the growing wheat crop will cause consumers to expect higher prices in the future. They will demand more wheat now and the demand curve will shift to the right.

What are the determinants of individual demand and individual supply?

ANSWER: The determinants of individual demand are price, income, prices of related goods, tastes, and expectations. The determinants of individual supply are price, input prices, technology, and expectations. Many more are possiple!

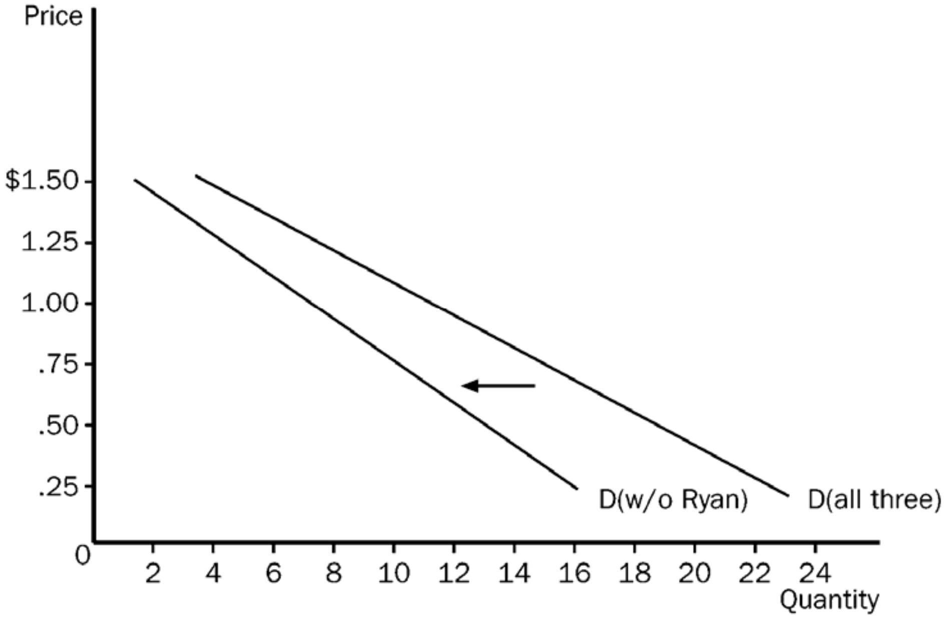
Explain the meaning of the following terms: normal good, inferior good, substitutes, complements.

ANSWER: If a good is a normal good, the demand for it falls when income falls. If a good is an inferior good, the demand for it rises when income falls. Two goods are substitutes if a fall in the price of one of them reduces the demand for the other. Two goods are complements if a fall in the price of one of them increases the demand for the other.

Given the following information about three consumers' monthly demand, construct a market demand curve for potato chips. What would happen to demand if Ryan decided to buy popcorn and not buy chips? Show this change on your graph.

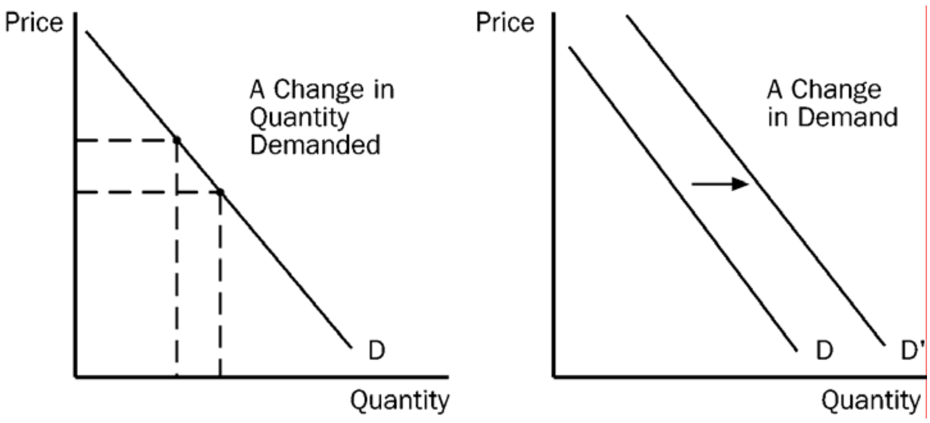
Price per bag	Ryan's Demand	Rusty's Demand	Regan's Demand
$.25	7	10	6
.50	6	8	5
.75	5	6	4
1.00	4	4	3
1.25	3	2	2
1.50	2	0	1

ANSWER:



Why is the *ceteris paribus* assumption so important when constructing a demand or supply curve?
ANSWER: *Ceteris paribus* means "other things being equal." When we draw a demand (or supply) curve, we show the relationship between quantity demanded (or quantity supplied) and price, and hold all other factors which might affect demand (or supply), other than price, constant.

What is the difference between a "change in demand" and a "change in quantity demanded"? Graph your answer.
ANSWER: A change in demand refers to a shift in the demand curve. A change in quantity demanded refers to a movement along a fixed demand curve.



For each of the following situations in the wheat market, determine whether the quantity supplied of wheat changes, or whether the supply curve shifts, and determine the direction of the change:

a. the number of wheat farmers falls, ceteris paribus
b. Professor Dewey develops a more productive variety of wheat seed and markets it at the same price as existing seed.
c. the cost of fertilizer increases
d. Japan signs a trade agreement, promising to buy large quantities of U.S. wheat in the future.

ANSWER: a. A reduction in the number of sellers will cause the supply curve to shift to the left.
b. This technological improvement will cause the supply curve to shift to the right.
c. An increase in the price of an input will cause the supply curve to shift to the left.
d. U.S. farmers will expect the price of wheat to rise in the future, so the supply curve will shift to the left.

What will happen to supply or quantity supplied under each of the following situations?

a. the price of the product falls
b. technology improves
c. input prices rise
d. expectations change - you expect the price of your product to rise next month

ANSWER: a. A change in price will cause a movement along the supply curve, or a decrease in quantity supplied.
b. The supply curve will shift to the right.
c. The supply curve will shift to the left.
d. The supply curve will shift to the left.

What does the term “equilibrium” mean when applied to a market?

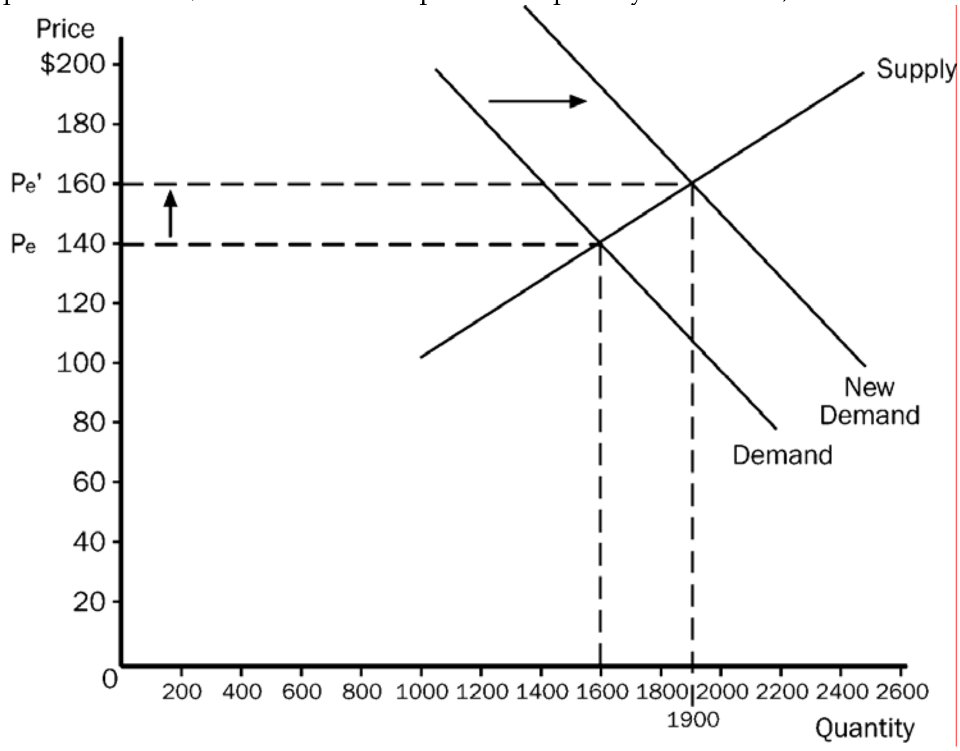
ANSWER: The equilibrium in a market is the point at which the supply and demand curves intersect. At the equilibrium price, quantity supplied is equal to quantity demanded.

Suppose that the equilibrium price in a market is $10, but the existing market price is $8. What will happen in the market? What if the existing market price is $15?

ANSWER: If the existing market price is below the equilibrium price, there will be a shortage of the good and the market price will rise until it reaches equilibrium. If the existing market price is above the equilibrium price, there will be a surplus of the good and the market price will fall until it reaches equilibrium.

Price of TVs	Quantity Demanded/month	Quantity Supplied/month
$200	1,000	2,500
180	1,200	2,200
160	1,400	1,900
140	1,600	1,600
120	1,800	1,300
100	2,000	1,000

ANSWER: The equilibrium price would originally be $140 and the equilibrium quantity would be 1,600. When demand increases by 500 due to an increase in income, the new equilibrium price would be $160 and the new equilibrium quantity would be 1,900.



Other things being equal, explain the effect each of the following will have on either the demand or supply of corn. Explain also what the effect will be on equilibrium price and quantity.

1. Corn is now considered by doctors to be the most healthy vegetable.
2. There is a decline in the amount of land used to grow corn.
3. Producers expect the price of corn to fall in the future.
4. The price of peas, a substitute for corn, goes up.
5. Corn is a normal good and incomes fall.
6. The price of fertilizer rises.

ANSWER:
1. Demand increases - Equilibrium price increases - Equilibrium quantity increases
2. Supply decreases - Equilibrium price increases - Equilibrium quantity decreases
3. Supply increases - Equilibrium price decreases - Equilibrium quantity increases
4. Demand increases - Equilibrium price increases - Equilibrium quantity increases
5. Demand decreases - Equilibrium price decreases - Equilibrium quantity decreases
6. Supply decreases - Equilibrium price increases - Equilibrium quantity decreases

In the former Soviet Union, prices were set by a group of planners, and usually remained unchanged for several years. If a price system like this were introduced in the U.S. economy, what effect would it have on buyers, sellers, and market equilibrium?

ANSWER: If prices were fixed by planners, and could not adjust to eliminate excess supply or excess demand, it would only be by accident that the market would ever reach an equilibrium. Instead, there would be persistent excess demand or excess supply, and either buyers would be unable to buy the quantities they were able and willing to buy at the legal price, or sellers would be unable to sell the quantities they were able and willing to sell at the legal price. This would create incentives for buyers and sellers to find ways to buy and sell at prices higher or lower than the legal price, probably leading to illegal or “black “ markets.

Suppose we are analyzing the market for hot chocolate. What will be the impact on the equilibrium price and quantity of each of the following events affecting the hot chocolate market?

a. winter starts and the weather turns sharply colder
b. the price of coffee falls
c. the price of whipped cream falls
d. the price of cocoa beans increases
e. consumer income falls because of a recession
f. the Surgeon General of the U.S. announces that hot chocolate cures acne
g. population increases
h. a better method of harvesting cocoa beans is introduced

ANSWER: a. People demand more hot chocolate in colder weather. The demand curve will shift to the right, and equilibrium market price and quantity will both increase.
b. Coffee and hot chocolate are substitutes. A decrease in the price of coffee will cause the demand curve for hot chocolate to shift to the left. Equilibrium price and quantity of hot chocolate will fall.
c. For many people, whipped cream and hot chocolate are complements. If the price of whipped cream falls, the demand curve for hot chocolate will shift to the right, and the equilibrium price and quantity of hot chocolate will increase.
d. Since cocoa beans are an important input in making hot chocolate, an increase in the price of cocoa beans will cause the supply curve of hot chocolate to shift to the left. Equilibrium price will increase and equilibrium quantity will decrease.
e. Assuming that hot chocolate is a normal good, when consumer income falls, the demand curve for hot chocolate will shift to the left. Equilibrium price and quantity will fall.
f. The announcement from the Surgeon General will cause consumers to prefer more hot chocolate and the demand curve will shift to the right. Equilibrium price and quantity will increase.
g. When population increases, the number of buyers of hot chocolate increases, causing the demand curve to shift to the right. Equilibrium price and quantity will increase.
h. This technological improvement will cause the supply curve for cocoa beans to shift to the right, lowering the equilibrium price of cocoa beans, an input in hot chocolate. The supply curve of hot chocolate will shift to the right, lowering equilibrium price and raising equilibrium quantity.

How important are prices in allocating resources in a market economy?

ANSWER: Prices play the key role in the allocation of resources in a market economy, providing the signals to which buyers and sellers respond. In turn, the combined actions of buyers and sellers determine the forces of supply and demand which move prices toward equilibrium in the market. In the end, the buyers who are willing to pay the most obtain the scarce goods and services, and the sellers who are able to produce the goods and services at the lowest cost obtain the sales. Prices play a similar role in the allocation of resources to the production of alternative goods and services, with those producers who are willing to pay the most obtaining the scarce resources. Without the allocative role of prices in rationing scarce goods and services, there would be no automatic mechanism to guide the allocation of resources.