2. Economic Problems

Lecture Notes

1. The economizing problem involves the allocation of resources among competing wants. There is an economizing problem because there are:

    d. unlimited wants

    e. limited resources

2. Resources and factor payments:

    d. land - includes space (i.e., location), natural resources, and what is commonly thought of as land.

        1. land is paid rent

    e. capital - are the physical assets used in production - i.e., plant and equipment.

        2. capital is paid interest

    f. labor - is the skills, abilities, knowledge (called human capital) and the effort exerted by people in production.

        3. labor is paid wages

    d. entrepreneurial talent - (risk taker) the economic agent who creates the enterprise.

        4. entrepreneurial talent is paid profits

3. Full employment includes the natural rate of unemployment and down time for normal maintenance (both capital & labor). However, full production or 100% capacity utilization cannot be maintained for a prolonged period without labor and capital breaking-down:

a. underemployment - utilization of a resource in a manner, which is less than what is consistent with full employment - using an M.D. as a practical nurse.

4. Economic Efficiency consists of the following three components:

    a. **allocative efficiency** - is measured using a concept known as Pareto Superiority (or Optimality)

        1. Pareto Optimal - is that allocation where no person could be made better off without inflicting harm on another.

        2. Pareto Superior - is that allocation where the benefit received by one person is more than the harm inflicted on another. [cost - benefit approach]

    b. **technical efficiency** - for a given level of output, you minimize cost or (alternatively) for a given level of cost you maximize output.

    c. **full employment** - for a system to be economically efficient then full employment is also required.

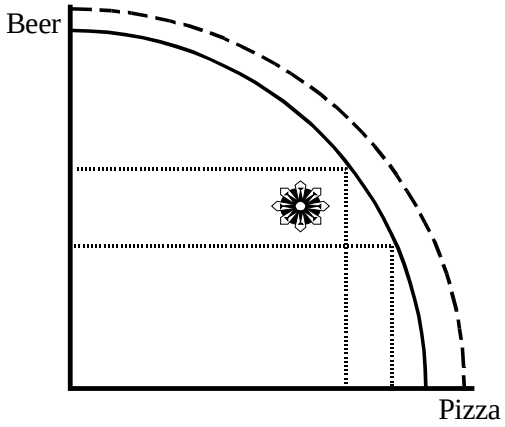
5. Allocations of resources imply that decisions must be made, which in turn involves choice. Every choice is costly; there is always the lost alternative -- the opportunity cost:

    a. opportunity cost - the next best alternative that must be foregone as a result of a particular decision.

6. The production possibilities curve is a simple model that can be used to show choices:

    a. assumptions necessary to represent production possibilities in a simple production possibilities curve model:

1. efficiency
2. fixed resources
3. fixed technology
4. two products



7. Law of Increasing Opportunity Costs is illustrated in the above production possibilities curve. Notice - as we obtain more pizza (shift to the right along the pizza axis) we have to give up large amounts of beer (downward shift along beer axis).

8. Inefficiency, unemployment and underemployment are illustrated by a point inside the production possibilities curve, as shown above. (identified by this symbol):

    a. Inefficiency is a violation of the assumptions behind the model, but do not change the potential output of the system.

9. Economic Growth can also be illustrated with a production possibilities curve. The dashed line in the above model shows a shift to the right of the of the curve which is called economic growth.

a. The only way this can happen is for there to be more resources or better technology.

b. Growth will change the potential output of the economy, hence the shift of the entire curve.

10. Economic Systems rarely exist in a pure form. The following classification of systems is based on the dominant characteristics of those systems:

    a. pure capitalism - private ownership of productive capacity, very limited government, and motivated by self-interest.

        1. laissez faire - government hands-off; markets relied-upon to perform allocations.

        2. costs of freedom - poverty, inequity and several social ills are associated with the lack of protection afforded by government.

    b. command - government makes the decisions - with force of law (and sometimes martial force)

        1. Often associated with dictatorships

    c. traditional - based on social mores or ethics or other non-market, non-legislative bases

        1. Christmas gift giving is tradition

    d. socialism - maximizes individual welfare based on perceived needs, not contributions; generally concerned more with perceived equity than efficiency.

    e. communism - everyone shares equally in the output of society (according to their needs), generally no private holdings of productive resources

        1. The former Soviet Union espoused communism, but also was mostly

command

2. Utopian movement in the U.S.

f. mixed system - contains elements of more than one system - U.S. economy is a mixed system (capitalism, command, and socialism are the major elements, with some communism and tradition)

1. All of the high income, industrialized economies are mixed economies

e. Even with mixed systems there are substantial variations in the amounts of socialism, capitalism, tradition, and command exist in each example.

3. Interdependence and the Global Economy

Lecture Notes

1. The modern economic system is no longer the closed (i.e., U.S. only) system upon which the debates surrounding isolationalism occurred prior to World War II.

    a. Imports and Exports are increasingly important

    b. Foreign investment versus U.S. investment abroad

        1. Outsourcing

        2. Technological transfers

    c. Balance of trade issues.

        1. Current accounts (import v. exports)

        2. Capital accounts (foreign investment)

2. Capitalist Ideology - The characteristics of a capitalist economy and the ideology that has developed concerning this paradigm are not necessarily the same thing. The elements of a capitalist ideology are:

    a. freedom of enterprise

    b. self-interest

    c. competition

    d. markets and prices

e. a very limited role for government

f. different countries with different views of these matters – i.e., equity v. efficiency again.

3. Market System Characteristics - the following characteristics are typical of a system that relies substantially on markets for allocation of resources. These characteristics are:

a. division of labor & specialization

b. capital goods

c. comparative advantage - is concerned with cost advantages.

1. Comparative advantage is the motivation for trade among nations and persons.

2. Terms of trade are those upon which the parties may agree and depends on the respective cost advantages and bargaining power.

4. Trade among nations

a. the reliance upon comparative advantage to motivate trade – assuming barter:

	Belgium	Holland
Tulips	400	4000
Wine	4000	400

The data above show what each country could produce if all of their resources were put into each commodity. For example, if Holland put all

their resources in tulip production they could produce 4000 tons of tulips but no wine. Assuming the data give the rate at which the commodities can be substituted, if both countries equally divided their resources between the two commodities, Belgium can produce 200 tons of tulips and 2000 barrels of wine and Holland can produce 200 barrels of wine and 2000 tons of tulips (for a total of 2200 units of each commodity produced by the two countries by splitting their resources among the two commodities). If Belgium produced nothing but wine it would produce 4000, and if Holland produced nothing but tulips it would produce 4000 tons). If the countries traded on terms where one barrel of wine was worth one ton of tulips then both countries would have 2000 units of each commodity and obviously benefit from specialization and trade.

b. absolute advantage for one trading partner results in no advantage to trade.

1. LDCs often have no comparative advantage and hence the developed countries, possessing absolute advantage have no incentive to trade (.

2. LDC– Less Developed Country - Low-income countries – 60 – (per capita GDP of $800), middle-income countries – 75 – (per capital GDP of $8000).

3. High income countries and developed countries (19 countries)

4. High income countries without economic development (Hong Kong, Israel, Kuwait, Singapore, and UAE)

5. Money facilitates market activities and is necessary in complex market systems:

a. barter economy - is where commodities are directly traded without the use of money.

1. Direct trade requires a coincidence of wants.

2. Prices become complicated by not having a method to easily measure worth.

b. functions of money:

1. medium of exchange

2. store of value

3. measure of worth

c. Fiat money

1. European Gold & Silver smith receipts 15th century

2. Genghis Kahn in the 12th century in Asia – paper money

6. Foreign exchange – value of one currency versus another

a. Hard currency – U.S. dollar, British Pound, Canadian dollar, Japanese Yen, and the Euro – general acceptability of the currency and it being demanded as reserves by central banks

1. G-7 nations, hard currency nations; Euro predecessors France, Germany, Italy

b. Exchange rates affect both imports and exports; and foreign investment here, U.S. investment abroad.

1. Dollar gains strength, Imports cheaper here, exports more expensive abroad

2. Dollar gains strength, foreign investment in U.S. more attractive

because dollar buys more foreigners' home currency when investment repatriated

c. Strong dollar policy in exchange – based on interest rates, growth, and relative strength of economy and stability of political system etc.

1. Debt and supply of currency an important factor in economic development

7. The Circular Flow Diagram is used to show the interdependence that exists among sectors of the economy:

a. sectors [private-domestic]

1. households

2. resource markets

3. businesses

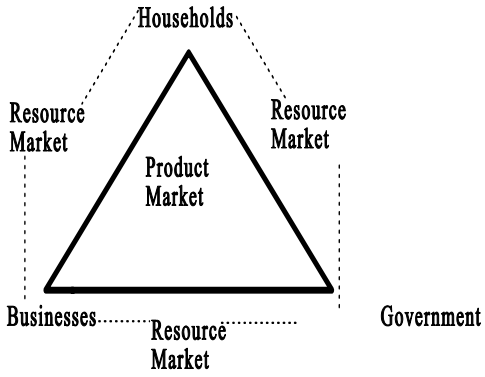
4. product markets

b. complications

1. government

2. foreign sector

c. Model of interdependence:



FOREIGN SECTOR

Product markets are where the domestic parties obtain and sell commodities [inside the pyramid], and the factor markets [shown with the dotted lines] are where the domestic parties obtain and supply productive resources. The base reads “FOREIGN SECTOR”, which indicates that the same buying and selling of commodities and resources is not limited to just domestic parties, but can include foreign businesses and resources as well. The circular flow diagram shows that each of the sectors relies on the others for resources and supplies the others commodities and resources.

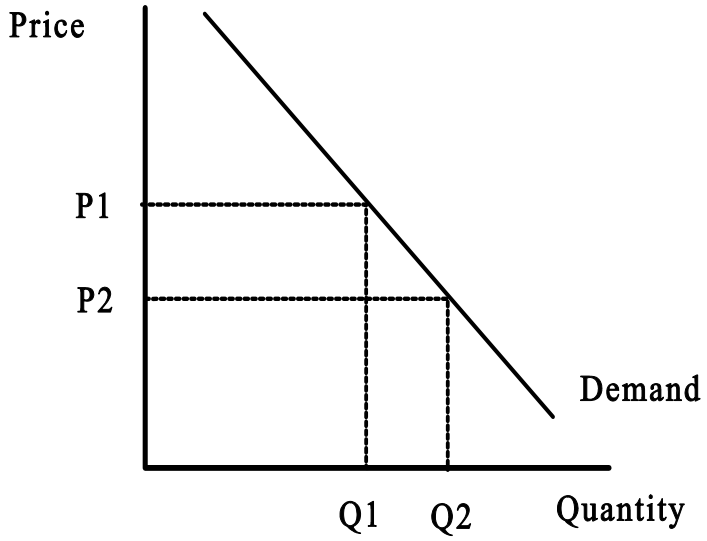
4. Basics of Supply and Demand

Lecture Notes

1. A market is nothing more or less than the locus of exchange; it is not necessarily a place, but simply buyers and sellers coming together for transactions.

2. The law of demand states that as price increases (decreases) consumers will purchase less (more) of the specific commodity.

    a. The demand schedule (demand curve) reflects the law of demand it is a downward sloping function and is a schedule of the quantity demanded at each and every price.



As price falls from P1 to P2 the quantity demanded increases from Q1 to Q2. This is a negative relation between price and quantity, hence the negative slope of the demand schedule; as predicted by the law of demand.

1. utility (use, pleasure, jollies) from the consumption of commodities.

2. The change in utility derived from the consumption of one more unit of a commodity is called marginal utility.

3. Diminishing marginal utility is the fact that at some point further consumption of a commodity adds smaller and smaller increments to the total utility received from the consumption of that commodity.

b. The income effect is the fact that as a person's income increases (or the price of item goes down [which effectively increases command over goods] more of everything will be demanded.

c. The substitution effect is the fact that as the price of a commodity increases, consumers will buy less of it and more of other commodities.

3. Demand Curve

a. Price and quantity - again the demand curve shows the negative relation between price and quantity.

b. Individual versus market demand - a market demand curve is simply an aggregation of all individual demand curves for a particular commodity.

c. Nonprice determinants of demand; and a shift to the left (right) of the demand curve is called a decrease (increase) in demand. The nonprice determinants of demand are:

1. tastes and preferences of consumers,

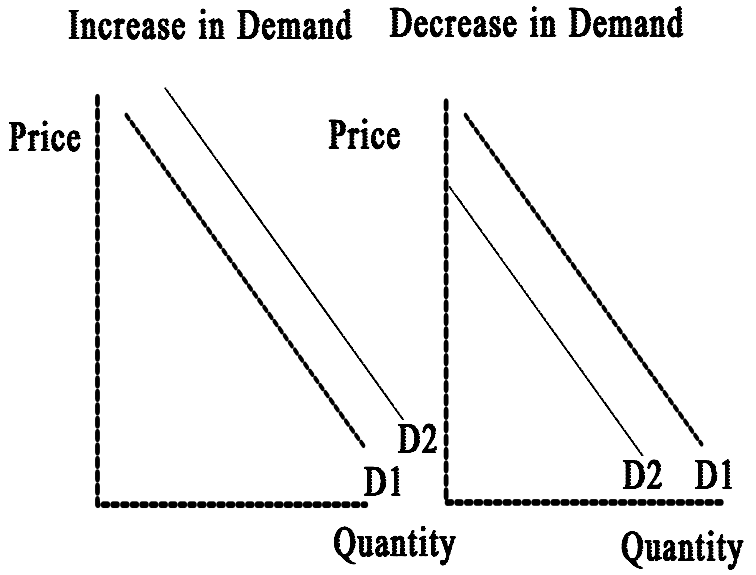
2. the number of consumers,

3. the money incomes of consumers,

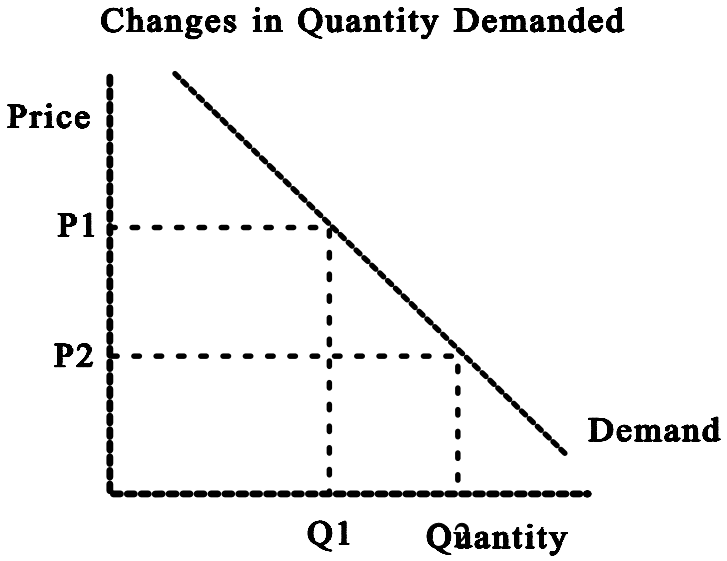
4. the prices of related goods, and

5. consumers' expectations concerning future availability or prices of the commodity.

d. Changes in demand versus in quantity demanded



An increase in demand is shown in the first panel, notice that at each price there is a greater quantity demanded along D2 (the dotted line) than was demanded with D1 (the solid line). The second panel shows a decrease in demand, notice that there is a lower quantity demanded at each price along D2 (the dotted line) than was demanded with D1 (the solid line).



Movement along a demand curve is called a change in the quantity demanded. Changes in quantities demanded are caused by changes in price. When price decreases from P1 to P2, the quantity demanded increases from Q1 to Q2; when price increases from P2 to P1 the quantity demanded decreases from Q2 to Q1.

4. The law of supply is that producers will supply more the higher the price of the commodity.

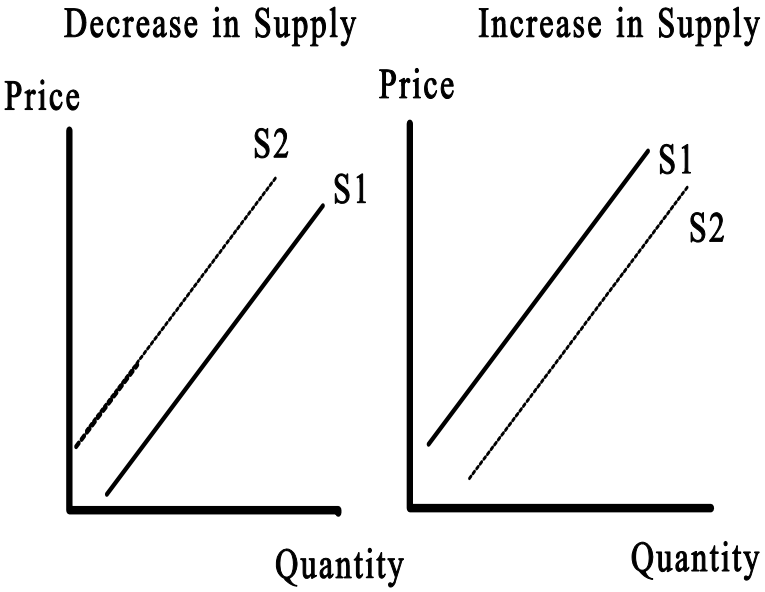
    a. Supply schedule - are the quantities supplied at each and every price.

5. Supply curve - is nothing more than a schedule of the quantities at each and every price.

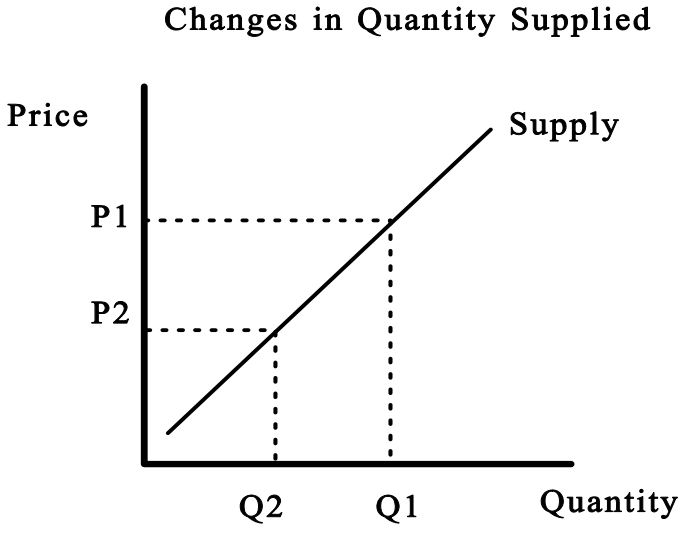
    a. There is a positive relation between price and quantity on a supply curve.

    b. Changes in one or more of the nonprice determinants of supply cause the supply curve to shift. A shift to the left of the supply curve is called a decrease in supply; a shift to the right is called an increase in supply. The nonprice determinants of supply are:

        1. resource prices,
        2. technology,
        3. taxes and subsidies,
        4. prices of other goods,
        5. expectations concerning future prices, and
        6. the number of sellers.



A decrease in supply is shown in the first panel, notice that there is a lower quantity supplied at each price with S2 (dotted line) than with S1 (solid line). The second panel shows an increase in supply, notice that there is a larger quantity supplied at each price with S2 (dotted line) than with S1 (solid line).



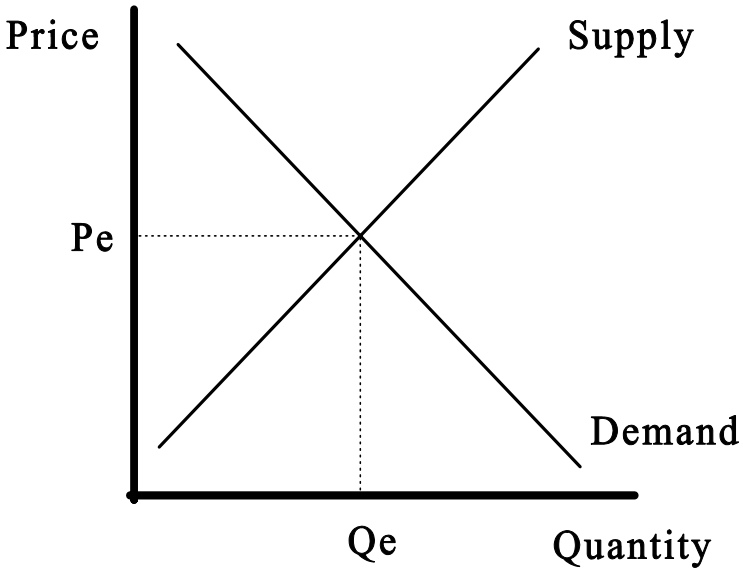
Changes in price cause changes in quantity supplied, an increase in price from P2 to P1 causes an increase in the quantity supplied from Q2 to Q1; a decrease in price from P1

to P2 causes a decrease in the quantity supplied from Q1 to Q2.

6. Market equilibrium occurs where supply equals demand (supply curve intersects demand curve).

    a. An equilibrium implies that there is no force that will cause further changes in price, hence quantity exchanged in the market. This is analogous to a cherry rolling down the side of a glass; the cherry falls due to gravity and rolls past the bottom because of momentum, and continues rolling back and forth past the bottom until all of its' energy is expended and it comes to rest at the bottom - this is equilibrium [a rotten cherry in the bottom of a glass].

The following graphical analysis portrays a market in equilibrium. Where the supply and demand curves intersect, equilibrium price is determined (Pe) and equilibrium quantity is determined (Qe)



a. The graph of a market in equilibrium can also be expressed using a series of equations. Both the demand and supply curve can be expressed as equations.

Demand Curve is Qd = 22 - P

Supply Curve is Qs = 10 + P

The equilibrium condition is Qd = Qs

Therefore:

22 - P = 10 + P

adding P to both sides of the equation yields:

22 = 10 + 2P

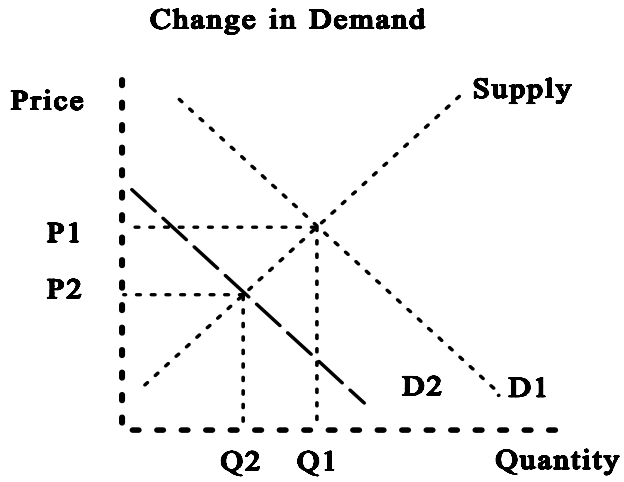
subtracting 10 from both sides of the equation yields:

12 = 2P or P = 6

To find the equilibrium quantity, we plug 6 (for P) into either the supply or the demand curve and get:

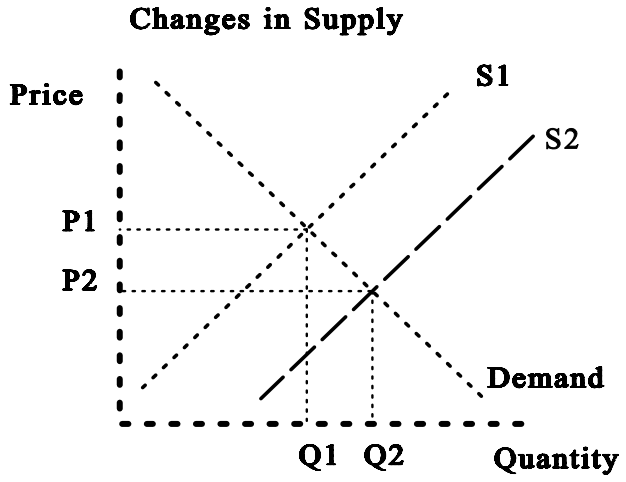
22 - 6 = 16 (Demand side) & 10 + 6 = 16 (Supply side)

7. Changes in supply and demand in a market result in new equilibria. The following graphs demonstrate what happens in a market when there are changes in nonprice determinants of supply and demand.



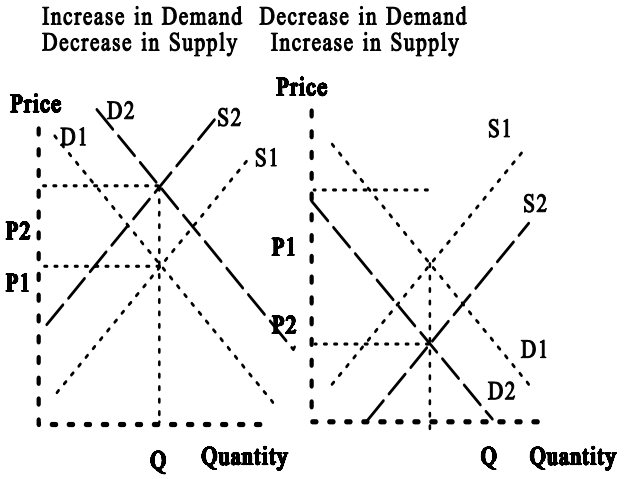
Movement of the demand curve from D1 (solid line) to D2 (dashed line) is a decrease in demand (as demonstrated in the above graph). Such decreases are caused by a change in a nonprice determinant of demand (for example, the number of consumers in the market declined or the price of a substitute declined). With a decrease in demand there is a shift of the demand curve to the left along the supply curve, therefore both equilibrium price and quantity decline. If we move from D2 to D1 that is called an increase in demand, possibly due to an increase in the price of a substitute good or an increase in the number of consumers in the market. When demand increases both equilibrium price and quantity increase as a result.

Considering the following graph, movement of the supply curve from S1 (solid line) to S2 (dashed line) is an increase in supply. Such increases are caused by a change in a nonprice determinant (for example, the number of suppliers in the market increased or the cost of capital decreased). With an increase in supply there is a shift of the supply curve to the right along the demand curve, therefore equilibrium price and quantity move in opposite directions (price decreases, quantity increases). If we move from S2 to S1 that is called an decrease in supply, possibly due to an increase in the price of a productive resource (capital) or the number of suppliers decreased. When supply decreases, equilibrium price increases and the quantity decreases as a result. That is the result of the supply curve moving up along the negatively sloped demand curve (which remains unchanged).



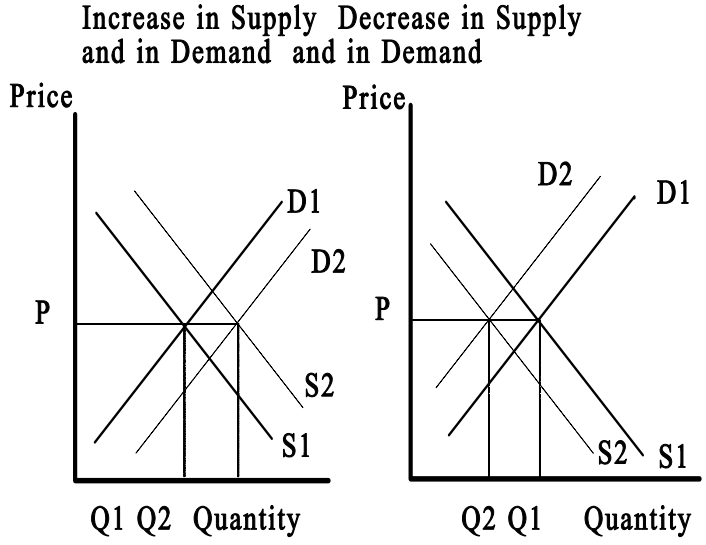
If both the demand curve and supply curve change at the same time the analysis becomes more complicated.

Consider the following graphs:



Notice that the quantity remains the same in both graphs. Therefore, the change in the equilibrium quantity is indeterminant and its direction and size depends on the relative strength of the changes between supply and demand. In both cases, the equilibrium price changes. In the first case where demand increases, but supply decreases the equilibrium price increases. In the second panel where demand decreases and supply increases, the equilibrium price decreases.

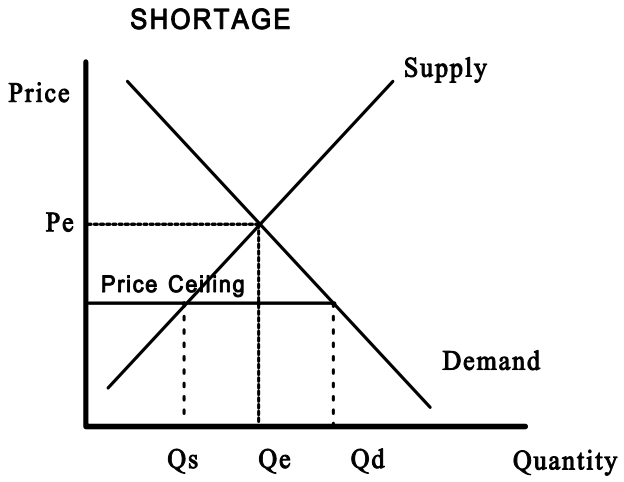
In the event that demand and supply both increase then price remains the same (is indeterminant) and quantity increases, and if both decrease then price is indeterminant and quantity decreases. These results are illustrated in the following diagrams.



The graphs show that price remains the same (is indeterminant) but when supply and demand both increase quantity increases to Q2. When both supply and demand decrease quantity decreases to Q2.

8. Shortages and surpluses occur because of effective government intervention in the market.

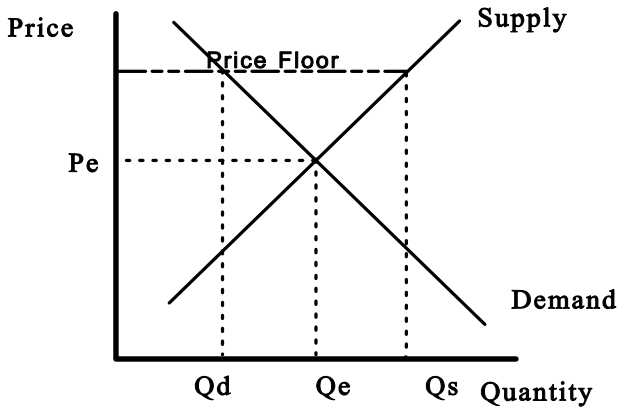
    a. Shortage is caused by an effective price ceiling (the maximum price you can charge for the product). Consider the following diagram that demonstrates the effect of a price ceiling in an otherwise purely competitive industry.



        1. For a price ceiling to be effective it must be imposed below the competitive equilibrium price. Note that the Qs is below the Qd, which means that there is an excess demand for this commodity that is not being satisfied by suppliers at this artificially low price. The distance between Qs and Qd is called a shortage.

    b. Surplus is caused by an effective price floor (i.e., the minimum you can charge):

SURPLUS



For a price floor to be effective, it must be above the competitive equilibrium price. Notice that at the floor price Qd is less than Qs, the distance between Qd and Qs is the amount of the surplus. Minimum wages are the best-known examples of price floors and will be discussed in greater detail in Chapter 11.

9. Supply and Demand is rudimentary, and does not exist in the real world. In most respects the supply and demand model is the beginning point for understanding markets. Monopoly, monopolistic competition and oligopoly are, in some important respects, refinements from the purely competitive market. Therefore, the basic supply and demand model may accurately be thought of as the beginning point from which we will explore more realistic market structures.