King Saud University
College of Business Administration
Department of Health Administration - Masters` Program

HHA 524 Health Economics
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Demand and Supply

Learning Objectives

- ***Distinguish** among types of markets;*
- ***Explain** the principles of demand and supply;*
- ***Describe** causes of shifts in and movements along demand and supply curves;*
- ***Describe** the concept of equilibrium, and mechanisms by which markets achieve equilibrium;*
- ***Describe** how government regulation and intervention affect demand and supply;*
- ***Interpret** price elasticities of demand and describe factors that affect elasticities of demand.*

Demand and Supply

Demand and Supply

- ***Supply and demand** analysis is as basic to an economist's toolbox as saws and hammers are to a carpenter.*
- ***Supply and demand** are the most fundamental tools of economic analysis.*
- ***Most applications of economic reasoning** involve supply and demand in one form or another.*
- ***Models of supply and demand** yield profound insights into why prices are what they are, and why prices or sale of good move in particular directions.*

Demand and Supply

Demand and Supply

- ***Your objective in this chapter is to learn how demand and supply interact in markets to determine prices and outputs.***
- ***We first discuss markets and prices a bit, then look at some fundamentals of demand and supply, and finally, show how these two concepts are linked in markets.***

Demand and Supply

Markets and Prices

- ***A Market is a social institution that enables buyers and sellers to strike bargains and transact business.***
- ***Every market is somewhat unique, but all share certain characteristics:***

a. Buyers who demand goods or the resources that produce them and

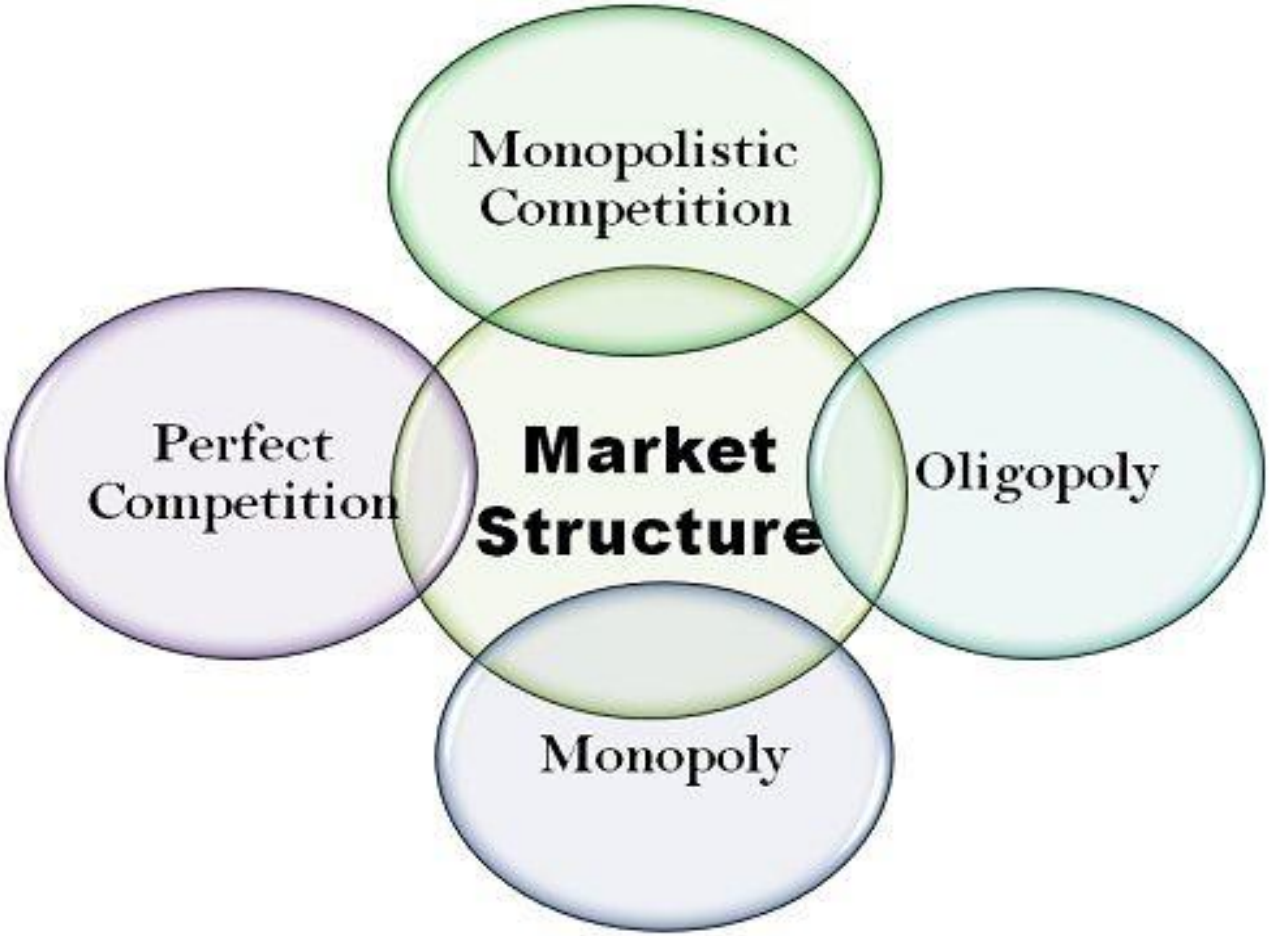
b. Suppliers who will make products or resources available if the price is right.

Demand and Supply

Types of Market Structures

- ***A variety of market structures will characterize an economy.***
- ***Such market structures essentially refer to the degree of competition in a market.***
- ***There are other determinants of market structures such as the nature of the goods and products, the number of sellers, number of consumers, the nature of the product or service, economies of scale etc.***

Figure 1. there are four basic types of market structures in any economy



Demand and Supply

Markets and Prices

- ***When we talk about markets it is important to distinguish the relative price of a good from its monetary or absolute price.***
- ***Whether we use riyals, dollar, francs, or sold gold to measure absolute prices is largely irrelevant for the market decisions of buyers and sellers.***

Demand and Supply

Markets and Prices

- ***The relative prices of goods or resources are their prices in terms of one another, and so reflect opportunity costs and guide our market decisions.***
- ***The relative prices reflect the consumers' demand (subjective) prices, which must be in accord with market prices before people will purchase goods.***

Demand and Supply

Demand Needs, Wants, and Economics

- ***Demands are the quantities of various goods that people are willing and able to buy during some period, given the choices available to them.***
- ***The concepts of need, want, and demand are overlapping but sufficiently different for each to require consideration.***
- ***This is important specially in healthcare.***

Demand and Supply

Demand Needs, Wants, and Economics

- ***Needs*** *quite simply, the economic definition of a need is something needed to survive.*
- ***In economics****, the idea of survival is real, meaning someone would die without their needs being met.*
- ***This includes things like*** *food, water, and shelter.*
- *If we extend this further, other needs are* ***education****,* ***healthcare*** *or even a* ***social thing****, for example, belonging to a certain society or self-expression.*

Demand and Supply

Demand Needs, Wants, and Economics

- ***In health care, the term need is most often used in reference to professionally determined indications of biologic deviation from the normal state of health.***
- ***Thus, the presence of worms may be considered a "need," even though the individual or family involved may consider this to be a usual condition.***

Demand and Supply

Demand Needs, Wants, and Economics

- ***Wants** are a step ahead of needs.*
- ***Wants** aren't essential for humans to survive, but it's associated with **needs**.*
- ***Simply put**, a **want** is a product desired by a customer that is not required for us to survive.*

Demand and Supply

Demand Needs, Wants, and Economics

- ***So, want is the complete opposite of need, which is essential for our survival.***
- ***Wants aren't permanent and it regularly changes. As time passes, people and location change, wants change accordingly.***

Demand and Supply

Demand Needs, Wants, and Economics

- ***In Health Care** the public may express certain **wants** that have no recognized medical basis.*
- ***Some products are sought** for their cosmetic value: certain tonics are used for the sense of well-being they create, regardless of whether they produce any discernible physiologic benefit.*
- ***Demand** represents the subsets of wants those individuals are willing to act upon.*

Demand and Supply

Demand Needs, Wants, and Economics

- ***Demand** therefore, requires a willingness to sacrifice time, money, or goods in exchange for the product or service.*
- ***Economists concentrate** on consumer demands because "needs" is very normative and ambiguous concept.*

Demand and Supply

Demand Needs, Wants, and Economics

- ***Consumer decisions** are based on two sets of **relative prices--market prices** and **demand prices**.*
- ***Market prices** are the prices sellers charge for goods whether we buy or not;*

Demand and Supply

Demand Needs, Wants, and Economics

- ***Demand prices** are the relative values that individuals subjectively place on having a bit more or less of a good.*
- ***Thus, demand price** is the highest price that buyers are **willing** and **able** to pay for a specific amount of a good or resource.*

Demand and Supply

The Law of Demand and Substitution

The Ceteris Paribus Assumption

- ***All else assumed equal**, consumers purchase more of a good during a given time interval the lower its opportunity cost (relative price) and vice versa.*
- ***Simply put** people buy less of a good per period at higher prices than at lower prices.*

Demand and Supply

Application of Ceteris Paribus

Suppose that you wanted to explain the price of milk. With a little thought, it becomes apparent that milk costs are influenced by numerous things: the availability of cows, their health, the costs of feeding cows, the amount of useful land, the costs of possible milk substitutes, the number of milk suppliers, the level of inflation in the economy, consumer preferences, transportation, and many other variables.

Demand and Supply

Application of Ceteris Paribus

So, an economist instead applies ceteris paribus, which essentially says if all other factors remain constant, a reduction in the supply of milk-producing cows, for example, causes the price of milk to rise.

Ceteris paribus is an extension of scientific modeling. The scientific method is built on identifying, isolating, and testing the impact of an independent variable on a dependent variable.

Ceteris paribus

Demand and Supply

The Law of Demand and Substitution

- ***We can also say** that the quantity demanded of an economic good varies inversely with its price.*
- ***From this we can gather** that there is a negative relationship between the price of a good and the quantity that consumers demand or purchase.*

Demand and Supply

The Law of Demand and Substitution

- ***This relationship occurs primarily because as the relative price of a good falls, you will find it advantageous to substitute it for others where possible.***
- ***Conversely, when a good becomes more expensive, you find substitutes for it.***
- ***This is known as the substitution effect of a change in relative prices.***

Demand and Supply

The Law of Demand and Substitution

- ***Substitution occurs for several reasons,*** ***including the facet of the law of diminishing returns known as the principle of diminishing marginal utility (satisfaction)***
- ***The more you have of any good relative to others, the less you desire and are willing to pay for additional units of that good.***

Demand and Supply

The Law of Demand and Substitution

- ***A second reason** that purchases of a good rise when its price falls is that the purchasing power of your limited income increases, and you can buy more of the good while maintaining or even increasing your other purchases.*
- ***This is known as income effect of a price change**, but it is far less important than the substitution effect.*

Demand and Supply

The Demand Curve

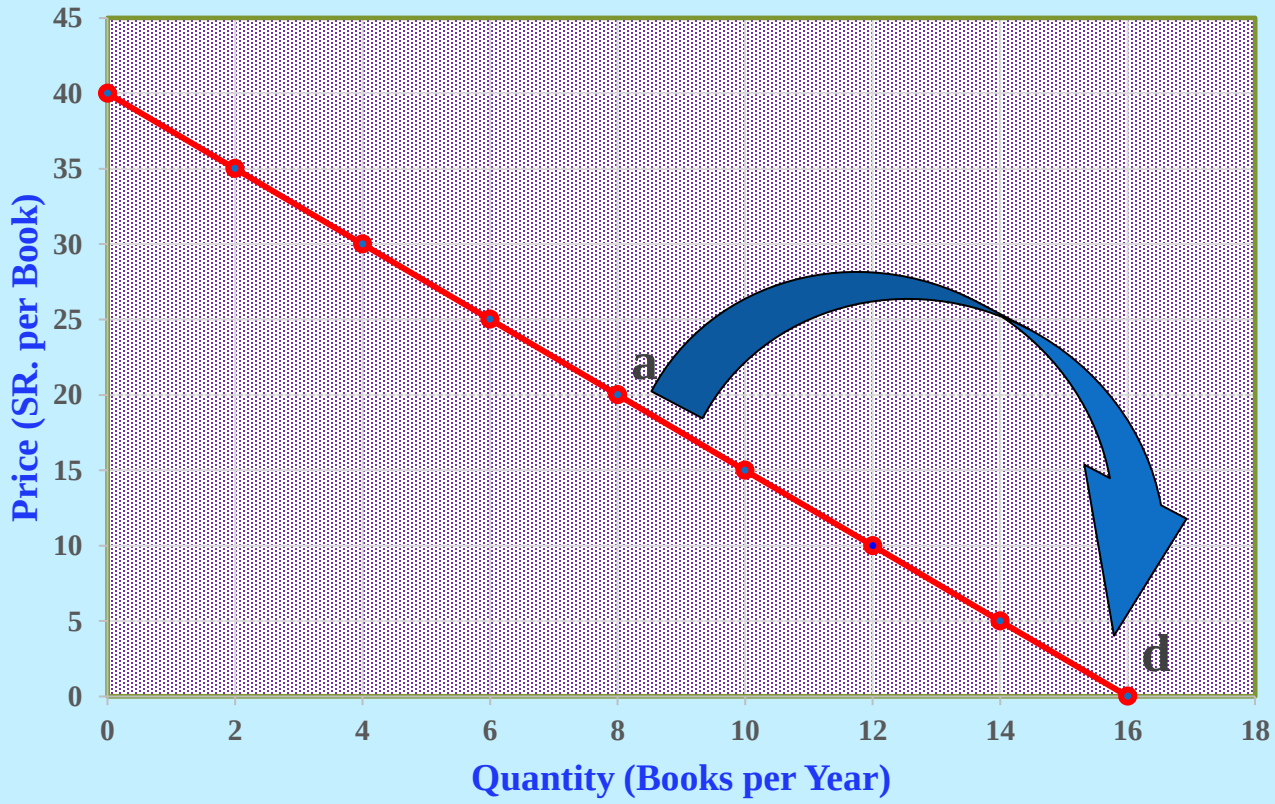
- ***The negative relationship between the price of any good and the quantity demanded*** ***asserted by the law of demand generates a negative sloped demand curve that, all else assumed equal, depicts the maximum quantities of a good that given individuals will purchase at various prices during a given period.***

Demand and Supply

The Demand Curve

- ***We can say that the demand curve represents the maximum price that people are willing to pay for an additional unit of a good, given their current consumption. (Figure 2)***
- ***A demand schedule is a table listing the maximum quantities of a good that will be purchased by a consumer at various prices during some period, and summarizes points on a demand curve (Figure 2).***

(Figure 2) demand curve represents the maximum price that people are willing to pay for an additional unit of a good



A demand schedule is a table listing the maximum quantities

Price	Books
40	0
35	2
30	4
25	6
20	8
15	10
10	12
5	14
0	16

Demand and Supply

Market Demand Curve

- ***Market demand is simply the sum of all individual demands. Horizontal summation of the individual demand curves of all potential buyers yields a Market Demand Curve.***
- ***This means we can sum quantities per period that individuals buy at each price.***

Demand and Supply

Market Demand Curve

- ***This seems as a simple procedure**, but estimating actual market demand curves requires sophisticated statistical techniques that lie beyond the scope of this book. **Many professional economists** spend much of their time estimating market demands for particular goods.*

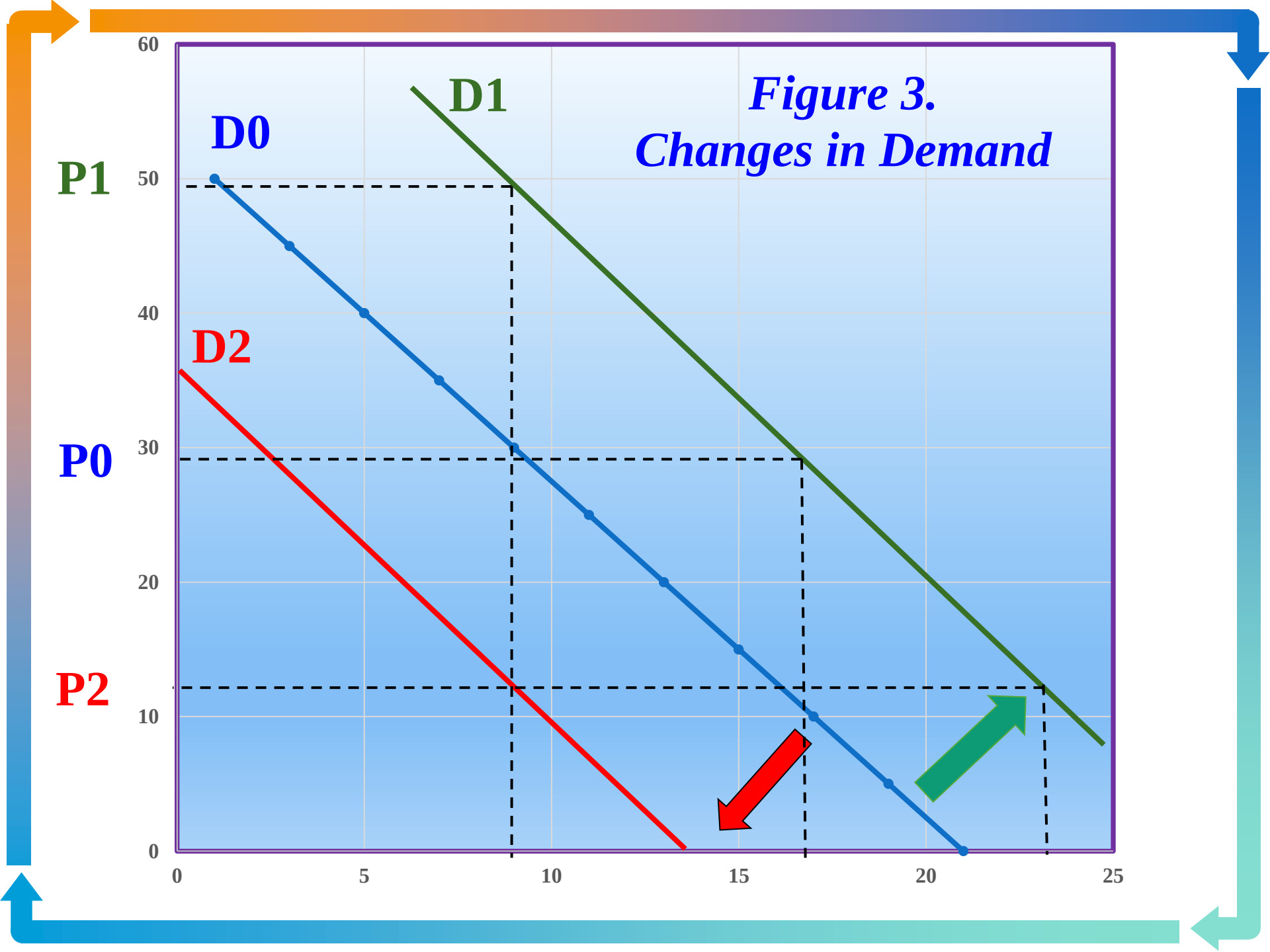


Figure 3.
Changes in Demand
D0
D1
D2
P1
P0
P2
60
50
40
30
20
10
0
0
5
10
15
20
25

Demand and Supply

Other influences on Demand

- ***Demand curves reflect relationships between the prices and quantities of goods bought during a given period, but prices alone do not determine our purchases.***

Demand and Supply

Other influences on Demand

Other influences generally fall into one of six categories:

1. ***tastes and preferences;***
2. ***income and its distribution;***
3. ***prices of related goods (substitute goods, complementary goods);***
4. ***number and ages of buyers;***
5. ***expectations about prices, income, or availability;***
6. ***taxes and subsidies.***

Demand and Supply

Other influences on Demand

1. ***Tastes and Preferences*** ***People's preferences for goods vary because of styling, quality, personal idiosyncrasies, status characteristics (whether or not our friends or neighbors have them).***

- ***Cars, clothes, music, and numerous other goods are subject to consumers' taste*.**

Demand and Supply

Other influences on Demand

1. ***Tastes and Preferences***

- ***Demands obviously depend on consumer tastes and preferences, but measuring these precisely is as impossible as predicting the next fad.***
- ***You should, however, be able to evaluate whether a given change in preferences will raise or lower demand.***

Demand and Supply

Other influences on Demand

2. ***Income and Its Distribution*** ***Income also influences customer demands. As your income rises, your demands for higher quality goods will tend to rise markedly. Products for which demand is positively related are called normal goods. Normal goods include such luxuries as fur coats, jewelry, vacations, and luxury cars. Demand for luxuries is especially responsive to change in income.***

Demand and Supply

Other influences on Demand

2. Income and Its Distribution

- ***On the other hand**, when a poor family's income rises, its **demands for such inferior goods** such as foul, plain rice, and lentil beans falls. **Clunker cars and peanut butter sandwiches may be inferior goods**.*
- ***When students graduate and get "real" jobs**, their incomes jump and their consumption of these inferior goods typically falls.*

Demand and Supply

Other influences on Demand

2. Income and Its Distribution

- ***All else equal**, it follows that income redistribution alters the structure of demands.*
- ***Taking from the rich to provide welfare for the poor causes declines in demands for both inferior and luxuries**, where as rising inequality stimulates the demands for both.*

Demand and Supply

Other influences on Demand

3. ***Prices of Related Goods*** ***The price of a good is important, but prices of related products also influence demand. Most goods are at least mild substitutes for one another.***

- ***Examples include*** ***meat and chicken; coffee and tea; phone calls and e-mail; outpatient and inpatient services; BMW cars and Porches, all of these can be considered substitute goods.***
- ***When the price of a product rises its demand falls, and the demands for its substitute will also rise.***

Demand and Supply

Other influences on Demand

3. ***Prices of Related Goods Complementary Goods*** ***cars, tires, and gasoline are example of complementary goods; they are consumed together.***

- ***Other sets of complements*** ***are computers and printers; left shoes and right shoes, or outpatient and inpatient services. As the price of complementary goods rises, the demand for the good in question falls, and vice versa.***

Demand and Supply

Other influences on Demand

4. ***Number and Ages of Buyers*** ***Population growth raises the number of potential buyers and, hence, market demands for most products. The age structure of the consuming public is also a factor.***

- ***Expanding average life spans have increased the demands for retirement communities*** ***and related products such as medical services. Demands for baby products declines when birth rates fall. Production of diapers and baby formula rises when birth rates rise.***

Demand and Supply

Other influences on Demand

5. ***Expectations about Prices, Income, or Availability*** ***Consumers who expect shortages or sharp price hikes in the coming weeks or months may rush out and buy storable products now, thus boosting current demands.***

- ***Buying may also increases if people expect their income to rise substantially*** ***in the near future.***
- ***Expectations about government actions and the availability of products*** ***also reshape buying patterns.***

Demand and Supply

Other influences on Demand

6. ***Taxes and Subsidies*** ***Until now, we have focused on ways that the behavior of private individuals causes shifts in demand.***

- ***But taxes, subsidies, and regulations may also strongly influence demand.***

Demand and Supply

Other influences on Demand

6. Taxes and Subsidies

- ***From the buyer's perspective*, demand is the relationship between the quantity bought and the price paid.**
- ***Sellers on the other hand*, view demand as the relationship between the quantity sold and the price received.**

Demand and Supply

Other influences on Demand

6. Taxes and Subsidies

- ***These approaches normally yield the same results, but taxes and subsidies can drive a wedge or increase the gap between the demand price that buyers are willing to pay and the price the sellers receive.***

Figure 3. Six factors that can shift demand curves re summarized below. The direction of the arrows indicates whether the demand curve shifts represent and increase in demand or a decrease in demand.

(a) Factors that increase demand

(b) Factors that decrease demand

Demand and Supply

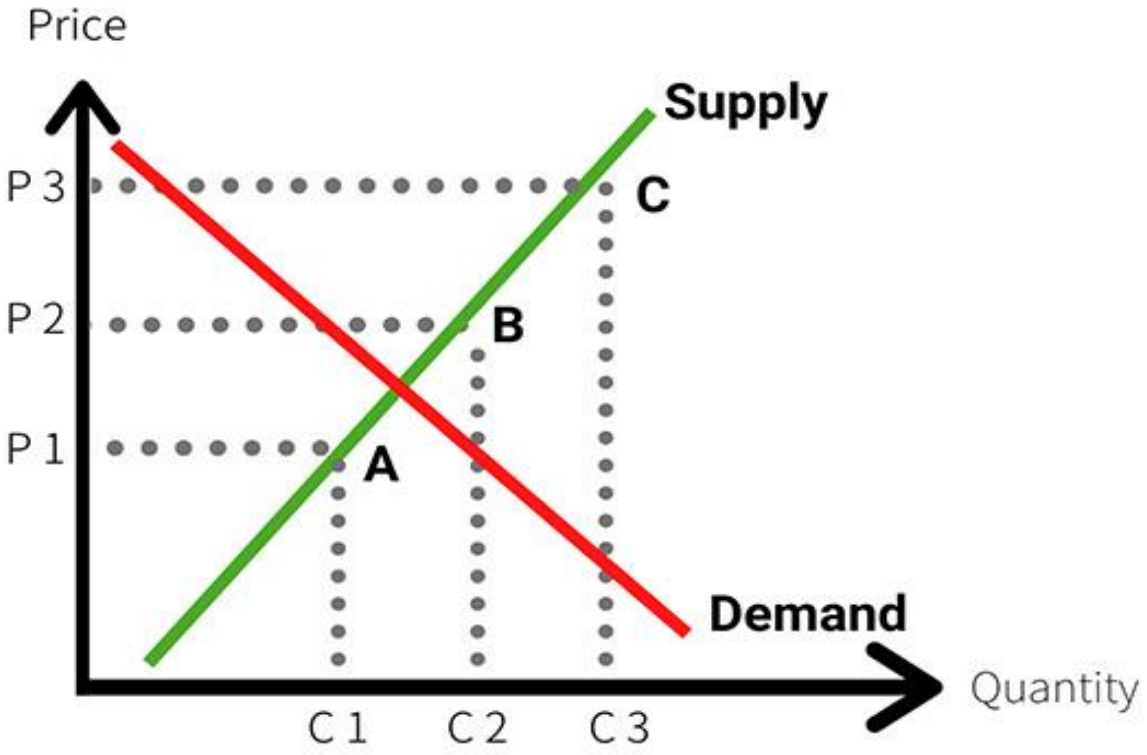
The Law of Supply

Supply The term supply refers to how much of a certain product, item, commodity, or service suppliers are willing to make available at a particular price.

Demand refers to how much of that product, item, commodity, or service consumers are willing and able to purchase at a particular price. (Figure 4)

(Figure 4)

Law of supply and demand



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Demand and Supply

The Law of Supply

- ***The law of supply in economics suggests** that with other factors remaining constant, if the price of a commodity increases, its market supply also goes up and vice-versa. It is one of the fundamental laws in economics. **It establishes a direct relationship between the price and supply of a commodity**.*
- ***Therefore,** if there is a rise in the price, the supply also increases, giving sellers a chance to make more money.*

Demand and Supply

The Supply Curve

- ***The supply curve is a graphic representation of the correlation between the cost of a good or service and the quantity supplied for a given period.***
- ***In a typical illustration, the price will appear on the left vertical axis, while the quantity supplied will appear on the horizontal axis.***

Demand and Supply

Supply Price

- ***Supply price is the lowest price that sellers will accept for a good.***
- ***It is based on the opportunity cost that seller incur in the production of the good.***
- ***While a number of factors influence the supply price, quantity supplied tends to be among the most important.***

Demand and Supply

Market Supply Curve

- ***The market supply curve is derived by summing the quantity suppliers are willing to produce when the product can be sold for a given price*.**
- ***As a result*, it depicts the price to quantity combinations available to consumers of the good or service.**
- ***In combination with market demand*, the market supply curve is requisite for determining the market equilibrium price and quantity.**

Demand and Supply

Other Influences on Supply

Changes in Supply

1. ***Production Technology,***
2. ***Resources Costs,***
3. ***Prices of Other Goods,***
4. ***Expectations of Producers,***
5. ***Number of Sellers,***
6. ***Taxes, Subsidies, and Government Regulation***
7. ***Supply Shocks***

Demand and Supply

Changes in Supply

1. ***Production Technology,*** ***Technology advances can improve production efficiency and therefore cut down the cost spent for production.*** ***If a new method or technique of production is developed, the cost of producing each good declines and producers are willing to supply more at each price - shifting the supply curve to the right.*** ***Computers, televisions and cell phones are good examples*** ***of the effects of technology on the supply curve.***

Demand and Supply

Changes in Supply

2. ***Resources Costs,*** ***A change in the price of labor or some other factor of production will change the cost of producing any given quantity of the good or service.*** ***This change in the cost of production will change the quantity that suppliers are willing to offer at any price.*** ***An increase in factor prices should decrease the quantity*** ***suppliers will offer at any price, shifting the supply curve to the left.*** ***A reduction in factor prices increases the quantity*** ***suppliers will offer at any price, shifting the supply curve to the right.***

Demand and Supply

Changes in Supply

3. ***Prices of Other Goods, Goods that are produced using similar resources are substitutes in production. Complements in production are goods that are jointly produced. Beef cows provide not only steaks and hamburger but also leather that is used to make belts and shoes. An increase in the price of steaks will cause an increase in the quantity supplied of steaks and will also cause an increase (or shift right) in the supply of leather which is a complement in production.***

Demand and Supply

Changes in Supply

4. ***Expectations of Producers, Expectations about the future price will shift the supply. All supply curves are based in part on seller expectations about future market conditions. Many decisions about production and selling are typically made long before a product is ready for sale. Those decisions necessarily depend on expectations. Changes in seller expectations can have important effects on price and quantity.***

Demand and Supply

Changes in Supply

5. ***Number of Sellers, A change in the number of sellers in an industry changes the quantity available at each price and thus changes supply. An increase in the number of sellers supplying a good or service shifts the supply curve to the right; a reduction in the number of sellers shifts the supply curve to the left.***

Demand and Supply

Changes in Supply

6. Taxes, Subsidies, and Government Regulation

Taxes and subsidies impact the profitability of producing a good. If businesses have to pay more taxes, the supply curve would shift to the left. On the other hand, if businesses received a subsidy for producing a good, they would be willing to supply more of the good, thus shifting the supply curve to the right. With the role to regulate and protect the industry, the Government has a great influence on the supply of a product.

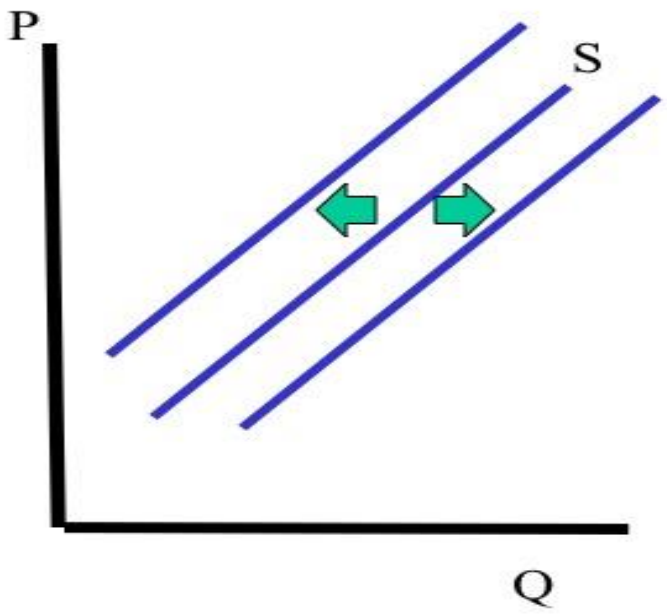
Demand and Supply

Changes in Supply

7. ***Supply Shocks,*** ***The last factor is often out of the hands of the producer.*** ***Natural disasters such as earthquakes, hurricanes, pandemics and floods impact both the production and distribution of goods.*** ***While supply shocks are typically negative, there can be beneficial supply shocks with rains coming at the ideal times in a growing season.***

To recap, changes in the price of a good will result in movements along the supply curve called changes in quantity supplied. A change in any of the other factors we've discussed (and listed above), will shift the supply curve either right or left. The resulting movements are called changes in supply.

Shifts in the Supply



- Resource price
- Technique of production
- Prices of other goods
- Taxes & Subsidies
- Price Expectations
- Number of sellers
- Supply Shocks

Demand and Supply

Demands, Supplies, and Time

- ***The logic of the model of demand and supply is simple.***
- ***The demand curve shows the quantities of a particular good or service that buyers will be willing and able to purchase at each price during a specified period.***
- ***The supply curve shows the quantities that sellers will offer for sale at each price during that same period.***
- ***Economists like Adam Smith believed that a free market would trend towards equilibrium.***

Demand and Supply

Market Equilibrium

- ***By putting the two curves together**, we should be able to find a price at which the quantity buyers are willing and able to purchase equals the quantity sellers will offer for sale.*
- ***The equilibrium price in any market** is the price at which quantity demanded equals quantity supplied. (Figure 4)*

(Figure 4) Economists like Adam Smith believed that a free market would trend towards equilibrium

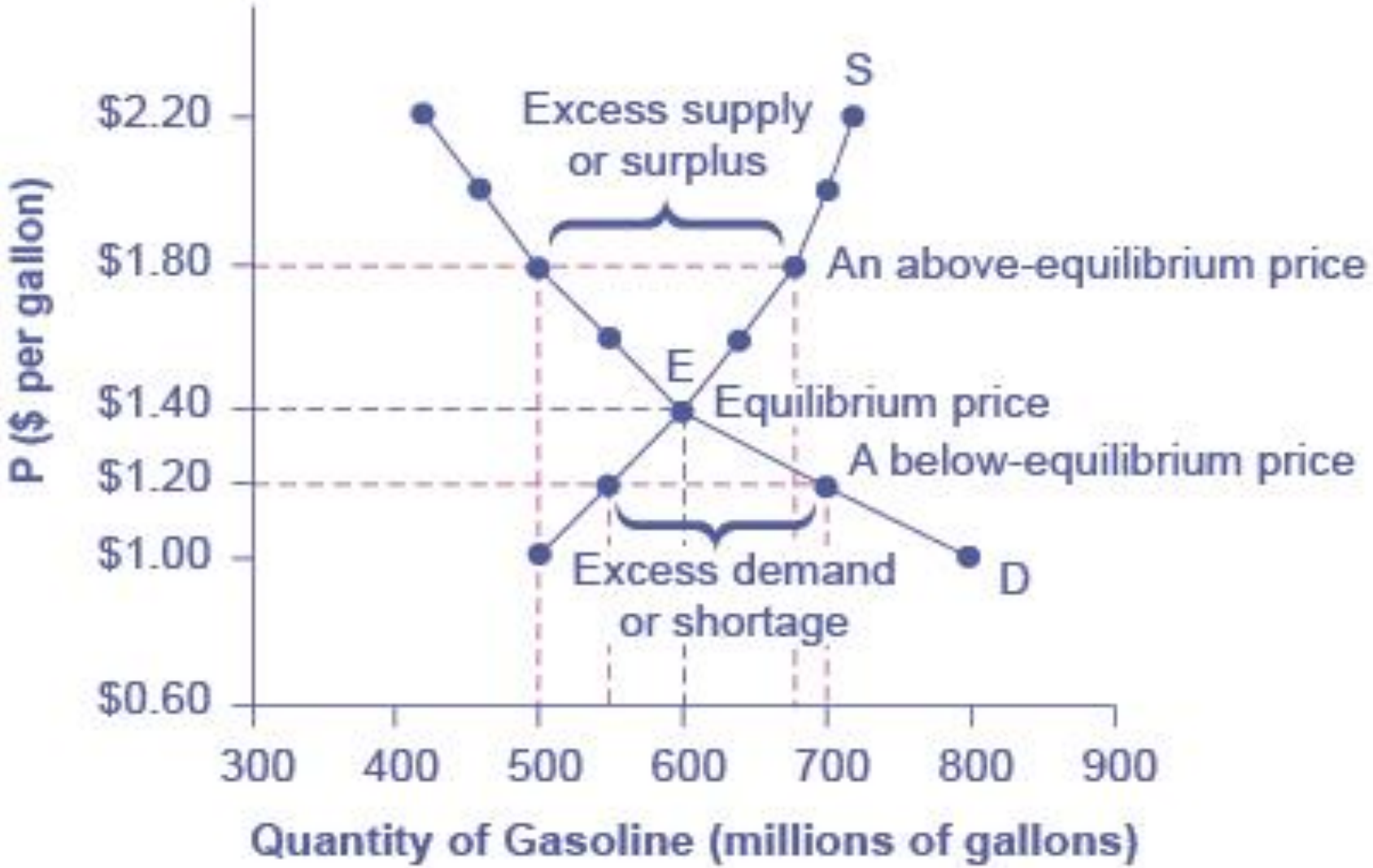
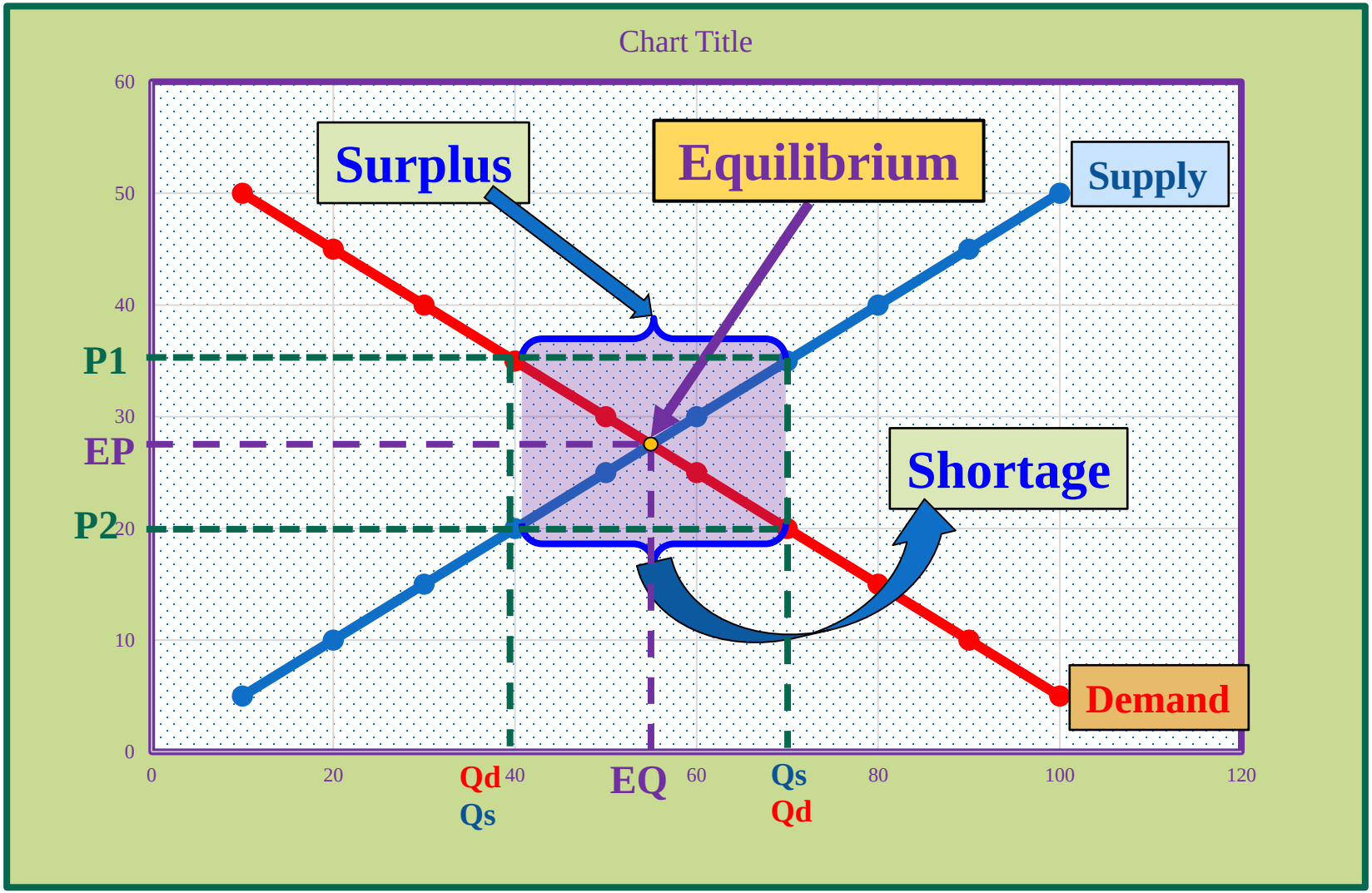


Figure 4. **Equilibrium is the state in which market supply and demand balance each other, and as a result prices become stable.**



Demand and Supply

Market Equilibrium

- ***The equilibrium price is the only price** where the plans of consumers and the plans of producers agree—that is, where the amount consumers want to buy of the product, **quantity demanded**, is **equal** to the amount producers want to sell, **quantity supplied**.*
- ***This common quantity is called the equilibrium quantity**. **(Figure 4)***

Demand and Supply

Market Surplus

- ***A Market Surplus occurs when there is excess supply- that is quantity supplied is greater than quantity demanded.***
- ***In this situation, some producers won't be able to sell all their goods.***
- ***This will induce them to lower their price to make their product more appealing. (Figure 4)***

Demand and Supply

Market Surplus

- ***In order to stay competitive many firms will lower their prices thus lowering the market price for the product.***
- ***In response to the lower price, consumers will increase their quantity demanded, moving the market toward an equilibrium price and quantity.***
- ***In this situation, excess supply has exerted downward pressure on the price of the product. (Figure 4)***

Demand and Supply

Market Shortage

- ***A Market Shortage occurs when there is excess demand- that is quantity demanded is greater than quantity supplied.***
- ***In this situation, consumers won't be able to buy as much of a good as they would like.***
- ***In response to the demand of the consumers, producers will raise both the price of their product and the quantity they are willing to supply.***

Demand and Supply

Market Shortage

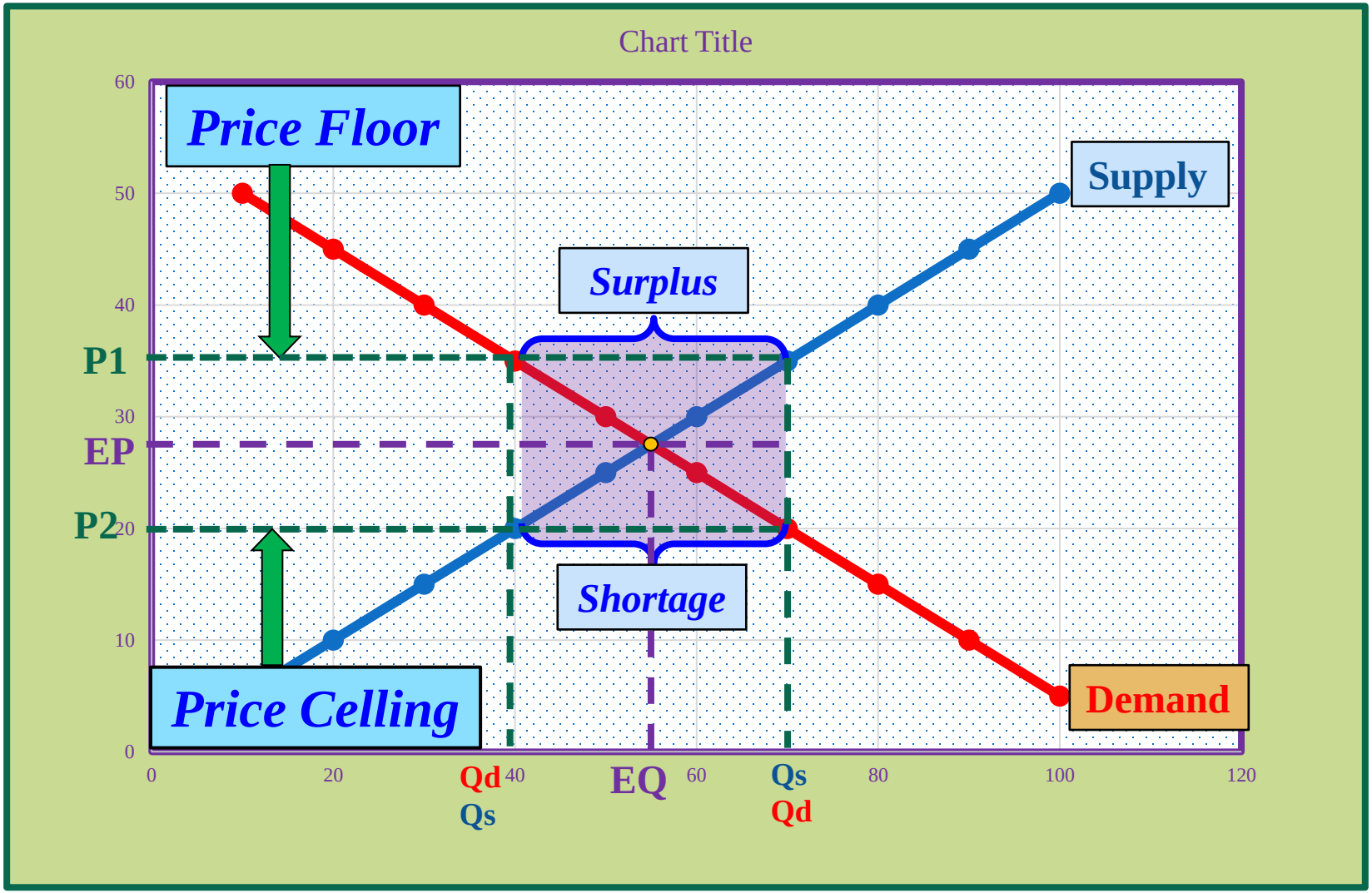
- ***The increase in price will be too much for some consumers and they will no longer demand the product.***
- ***Meanwhile the increased quantity of available product will satisfy other consumers. Eventually equilibrium will be reached. (Figure 4)***

Demand and Supply

Price Celling and Price Floor

- ***Laws that government enacts** to regulate prices are called **Price controls**. **(Figure 5)***
- ***Price controls** come in two flavors.*
- ***A price ceiling** keeps a price from rising above a certain level (the "ceiling") price floor keeps a price from falling below a certain level (the "floor").*
- ***A price floor** is the lowest legal price that can be paid in markets for goods and services, labor, or financial capital.*
- ***Perhaps the best-known example** of a price floor is the minimum wage, Rent control is an example of price ceiling*

Figure 5. Price controls come in two flavors Price Celling and Price Floor

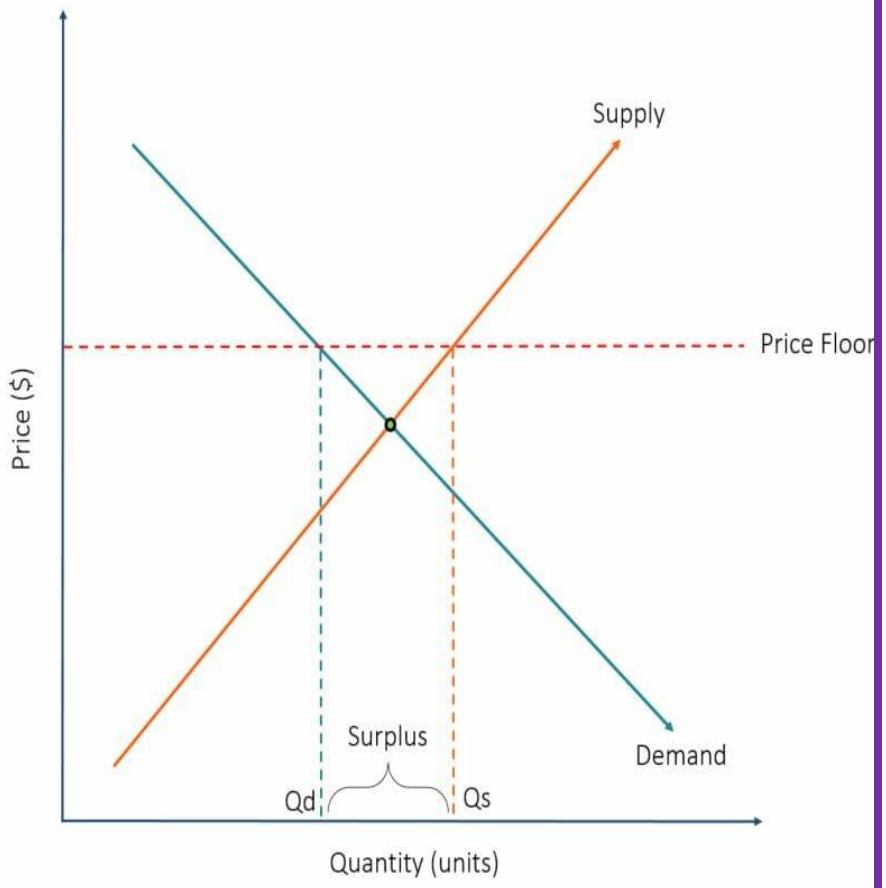
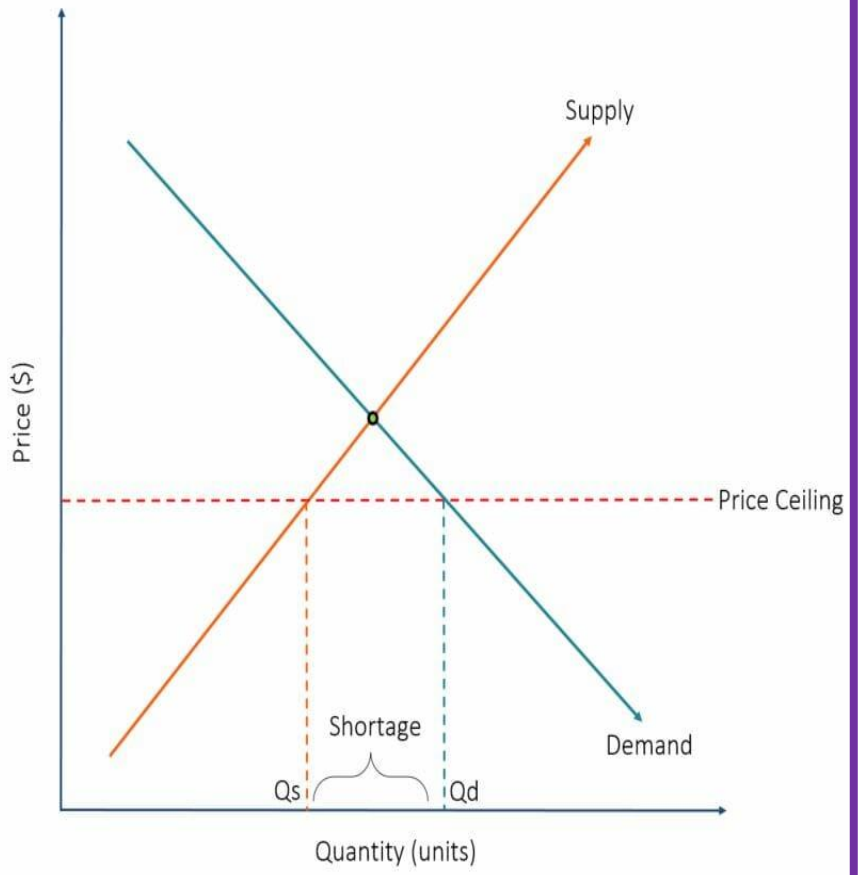


Demand and Supply

Price Celling and Price Floor

- ***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).*
- ***For a price ceiling to be effective** it must be imposed below the competitive equilibrium price.*
- ***Surplus is caused by an effective price floor** (i.e., the minimum you can charge):*
- ***For a price floor to be effective**, it must be above the competitive equilibrium price **(Figure 6)**.*

Figure 6.

Surplus is caused by an effective price floor	*Shortage is caused by an effective price ceiling*
	

Demand and Supply

Transaction Costs

- ***A transaction cost is any cost involved in making an economic transaction. Transaction costs may cover many areas.***
- ***The transaction cost could be financial, extra time or inconvenience.***
- ***Economists have classified transactions among and within organizations as those that:***

a. ***support coordination between buyers and sellers, i.e., market transactions, and those***
b. ***supporting coordination within the firm.***

Demand and Supply

DEMAND ELASTICITIES

- ***The general model of demand and supply** can be highly useful in understanding directional changes in prices and quantities that result from shifts in one or the other curve.*
- ***Often, however, we want to know how much the quantity supplied or demanded will rise or fall**. How sensitive is the demand for coffee to its price?*
- ***If price increases by 10 percent**, how much will the quantity demanded change?*
- ***How much will it change** if income rises by 5 percent?*

Demand and Supply

DEMAND ELASTICITIES

- ***We use elasticities to answer questions like these. An elasticity measures the sensitivity of one variable to another.***
- ***Specifically, it is a number that tells us the percentage change that will occur in one variable in response to a 1-percent increase in another variable.***
- ***For example, the price elasticity of demand measures the sensitivity of quantity demanded to price changes.***

Demand and Supply

PRICE ELASTICITY OF DEMAND

- ***It tells us what the percentage change in the quantity demanded for a good will be following a 1-percent increase in the price of that good.***
- ***An elastic demand is one in which the change in quantity demanded due to a change in price is large.***
- ***An inelastic demand is one in which the change in quantity demanded due to a change in price is small.***

The formula used here for computing elasticity of demand is:

$$Ep = \frac{(\%\triangle Q)}{(\%\triangle P)} = \frac{\dfrac{\triangle Q}{\text{Average Q}} \text{ X } 100}{\dfrac{\triangle P}{\text{Average P}} \text{ X } 100}$$

Percentage Change in Quantity / Percentage Change in Price

$$Ep = \frac{\dfrac{\text{Quantity After} - \text{Quantity Before}}{(\text{Quantity After} - \text{Quantity Before}) / 2}}{\dfrac{\text{Price After} - \text{Price Before}}{(\text{Price After} - \text{Price Before}) / 2}}$$

Demand and Supply

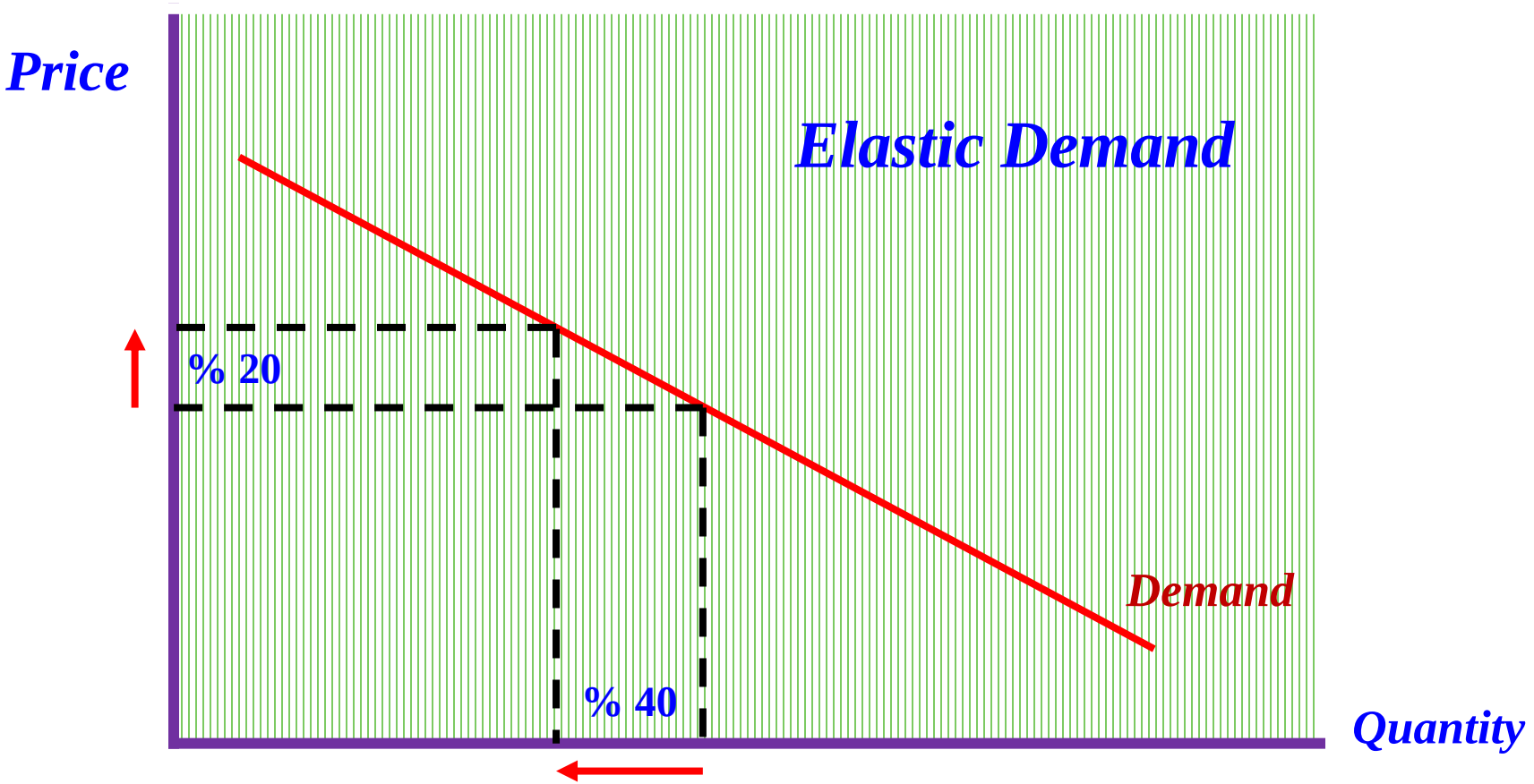
Elastic Demand

An elastic demand is one in which the change in quantity demanded due to a change in price is large.

- ***Example, suppose that the price of orange juice, a two letters container, increased from SR9 to SR11 and the quantity demanded decreased from 30 containers to 20 containers per month the price elasticity of demand is illustrated in Figure 7.***

Figure 7

$$Ep = \frac{\frac{20 - 30}{50 / 2}}{\frac{11 - 9}{20 / 2}} = \frac{= 0.4 = \%40}{= 0.2 = \%20} = 2$$



Demand and Supply

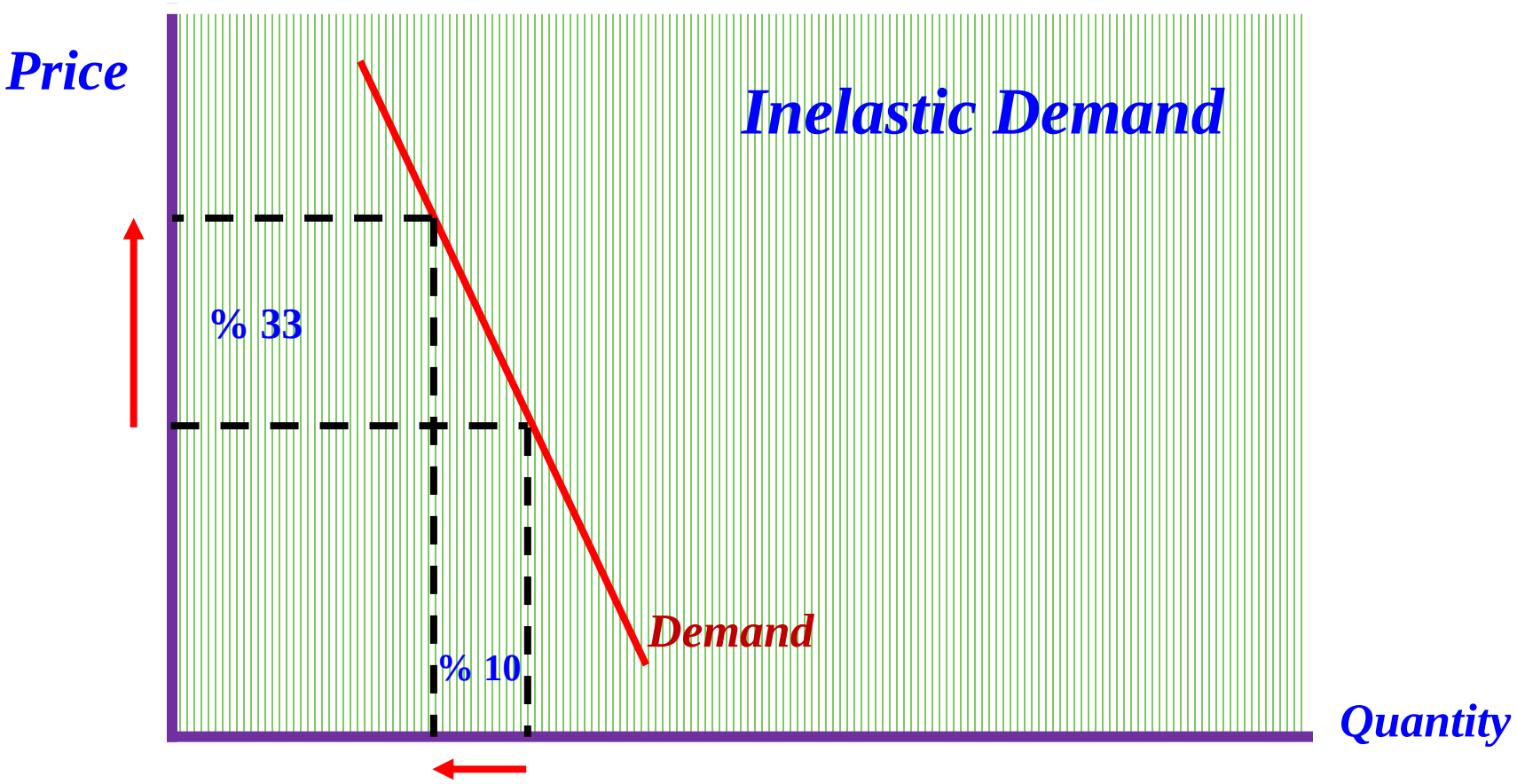
Inelastic Demand

***An inelastic demand** is one in which the change in quantity demanded due to a change in price is small.*

- ***Example,** suppose that the price of Similac infant formula 400-gram container, increased from SR36 to SR50 and the quantity demanded decreased from 20 containers to 18 containers per month the price elasticity of demand is illustrated in Figure 8.*

Figure 8

$$Ep = \frac{\frac{18 - 20}{38 / 2}}{\frac{50 - 36}{86 / 2}} = \frac{= 0.1 = \%10}{= 0.33 = \%33} = 0.3$$



Demand and Supply

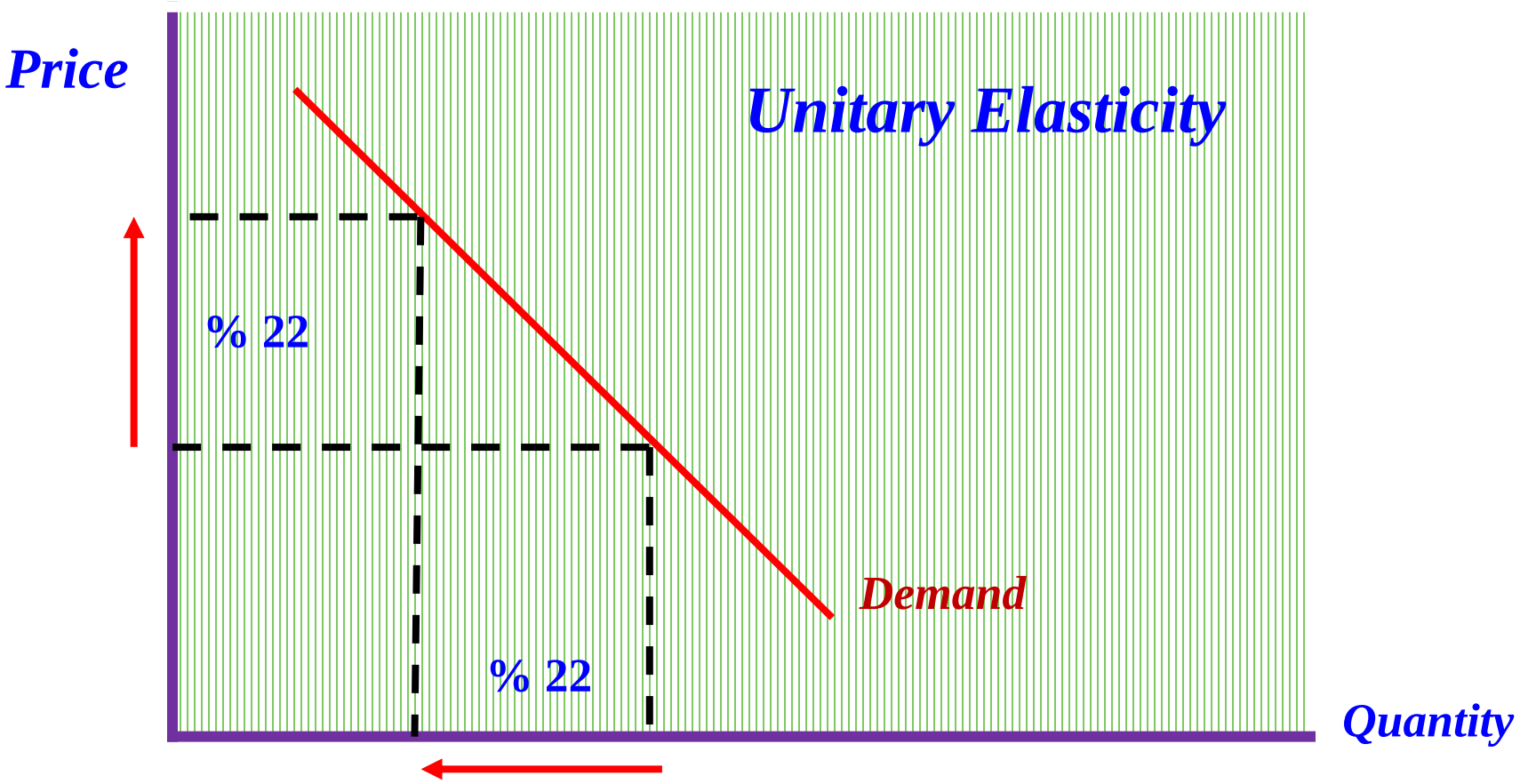
Unitary Elasticity

If the elasticity coefficient is equal to one, demand is unitarily elastic. (No Change in Quantity demand)

- ***Example, suppose that the price of your favorite perfume increased from SR200 to SR250 and the quantity demanded decreased from 5 containers to 4 containers per year the price elasticity of demand is illustrated in Figure 9.***

Figure 9

$$Ep = \frac{\frac{4 - 5}{9 / 2}}{\frac{250 - 200}{450 / 2}} = \frac{= 0.22 = \%22}{= 0.22 = \%22} = 1$$



Price Elasticity of Demand (E)

Table 6.1

Elasticity	Responsiveness	$\lvert E \rvert$
Elastic	$\lvert \%\Delta Q \rvert > \lvert \%\Delta P \rvert$	$\lvert E \rvert > 1$
Unitary Elastic	$\lvert \%\Delta Q \rvert = \lvert \%\Delta P \rvert$	$\lvert E \rvert = 1$
Inelastic	$\lvert \%\Delta Q \rvert < \lvert \%\Delta P \rvert$	$\lvert E \rvert < 1$

Demand and Supply

PRICE ELASTICITY OF DEMAND

- ***Because of the negative relationship between price and the quantity demanded, the price elasticity of demand is usually a negative number. When the price of a good increases, the quantity demanded usually falls.***
- ***When the price elasticity is greater than 1 in magnitude, we say that demand is price elastic because the percentage decline in quantity demanded is greater than the percentage increase in price. If the price elasticity is less than 1 in magnitude, demand is said to be price inelastic.***

Demand and Supply

PRICE ELASTICITY OF DEMAND

- ***In general, the price elasticity of demand for a good depends on the availability of other goods that can be substituted for it.***
- ***When there are close substitutes, a price increase will cause the consumer to buy less of the good and more of the substitute.***
- ***Demand will then be highly price elastic.***
- ***When there are no close substitutes, demand will tend to be price inelastic.***

Demand and Supply

PRICE ELASTICITY OF DEMAND

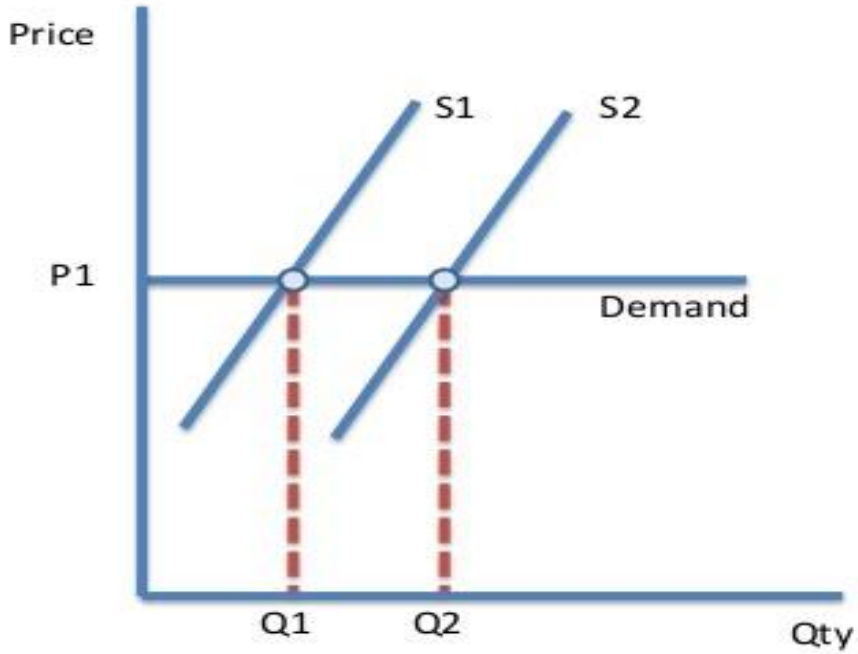
- ***Infinitely (Perfectly) Elastic Demand Principle*** ***that consumers will buy as much of a good as they can get at a single price, but for any higher price the quantity demanded drops to zero, while for any lower price the quantity demanded increases without limit*** ***(Figure 10)*****.**
- ***Completely (Perfectly) Inelastic Demand Principle*** ***that consumers will buy a fixed quantity of a good regardless of its price.***

The price elasticity of demand **is the response of the quantity demanded to change in the price of a commodity.**

Perfectly Elastic Demand (Ped = infinity)

If the co-efficient of PED = infinity, then demand is **perfectly elastic** – there is one price at which consumers are prepared to pay

- If demand is **perfectly elastic**, a change in market supply (shown on the right as an outward shift of supply) will not lead to any change in the equilibrium price.
- This demand curve applies to highly **competitive markets** where no supplier has any "pricing power"



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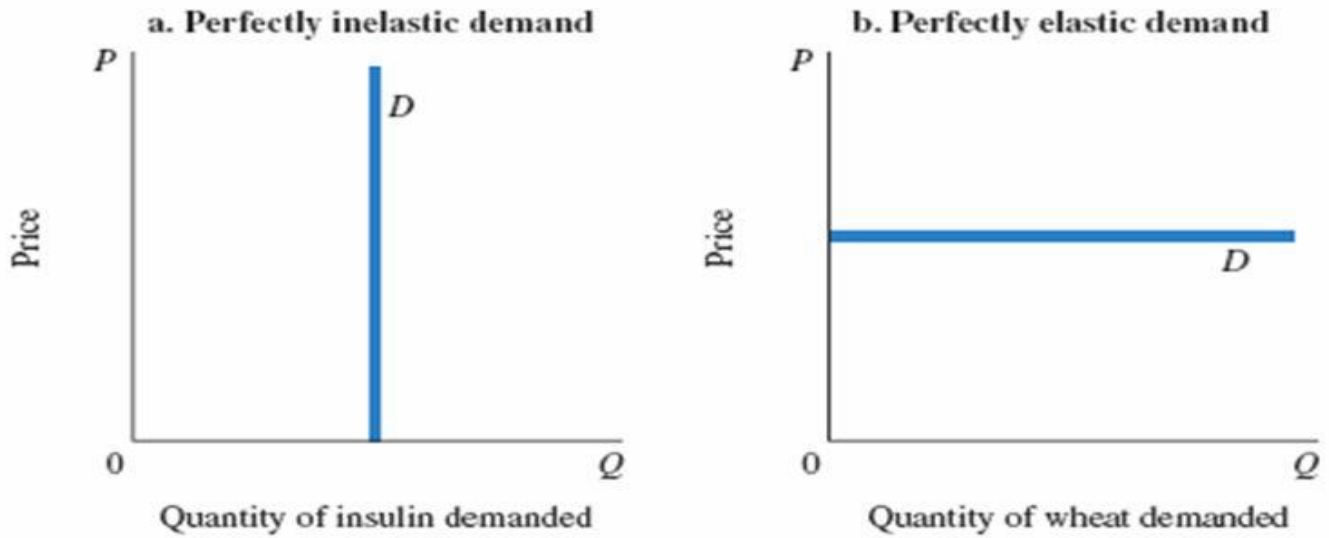
The price elasticity of demand is the response of the quantity demanded to change in the price of a commodity.

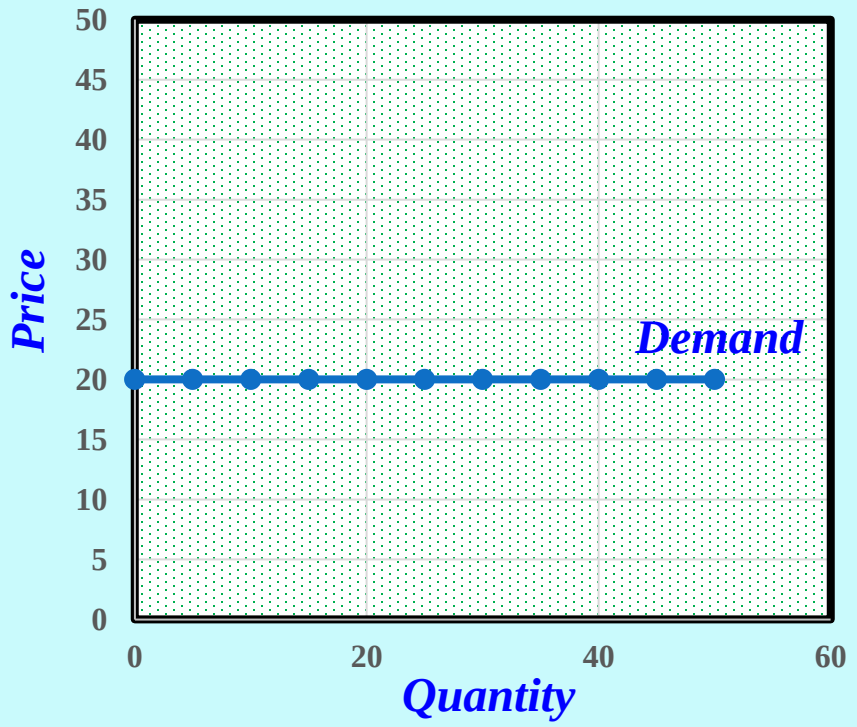
FIGURE 5.2 Perfectly Inelastic and Perfectly Elastic Demand Curves

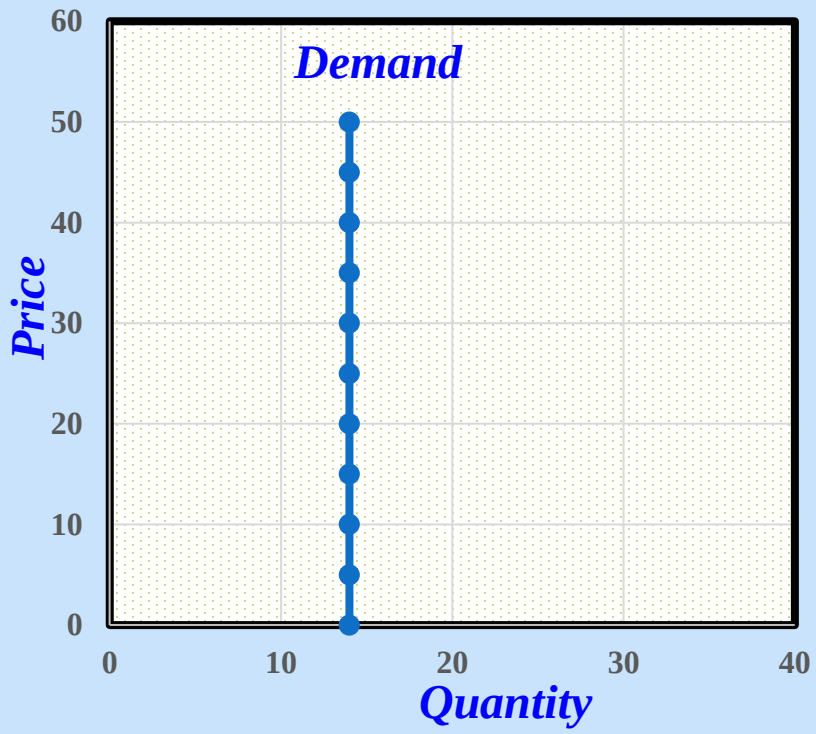


Panel (a) shows a perfectly inelastic demand curve for insulin. Price elasticity of demand is zero. Quantity demanded is fixed; it does not change at all when price changes.
Panel (b) shows a perfectly elastic demand curve facing a wheat farmer. A tiny price increase drives the quantity demanded to zero. In essence, perfectly elastic demand implies that individual producers can sell all they want at the going market price but cannot charge a higher price.

Figure 10.

(Perfectly) Elastic Demand Principle	(Perfectly) Inelastic Demand Principle





THANK YOU