

Readings: Ch. 4 Cases 2.1, 2.3, 2.4

### Chapter 4: The Market Forces of Supply and Demand

- Economists use the **model of supply and demand** to analyse **competitive markets**.
- In a **competitive market**, there are **many buyers and sellers**, each of whom has **little or no influence** on the market price.
- The **demand curve** shows how the **quantity of a good demanded depends on the price**.
- According to the **law of demand**, as the **price of a good falls**, the **quantity demanded rises**. Therefore, the demand curve slopes **downwards**.
- In addition to price, **other determinants** of the quantity demanded include **income, tastes, expectations, and the prices of substitutes and complements**. If one of these other determinants changes, the demand curve shifts.
- The **supply curve** shows how the **quantity of a good supplied depends on the price**.
- According to the **law of supply**, as the **price of a good rises**, the **quantity supplied rises**. Therefore, the supply curve slopes **upwards**.
- In addition to price, **other determinants** of the quantity supplied include **input prices, technology and expectations**. If one of these other determinants changes, the **supply curve shifts**.
- The **intersection of the supply and demand curves** determines the **market equilibrium**. At the **equilibrium price**, the **quantity demanded equals the quantity supplied**.
- The **behaviour of buyers and sellers naturally drives markets towards their equilibrium**.
- When the **market price is above the equilibrium price**, there is **excess supply**, which causes the **market price to fall**. When the **market price is below the equilibrium price**, there is **excess demand**, which causes the **market price to rise**.
- To analyse how any event influences a market, we **use the supply-and-demand diagram to examine how the event affects the equilibrium price and quantity**.
- To do this we follow three steps. First, **we decide whether the event shifts the supply curve or the demand curve**. Second, we decide in **which direction** the curve shifts. Third, we **compare the new equilibrium with the old equilibrium**.
- In market economies, **prices are the signals that guide economic decisions** and thereby **allocate scarce resources**. For every good in the economy, the **price ensures that supply and demand are in balance**. The **equilibrium price** then determines how much of the good buyers choose to purchase and how much sellers choose to produce.

### Case Study 2.1: What Determines Demand?

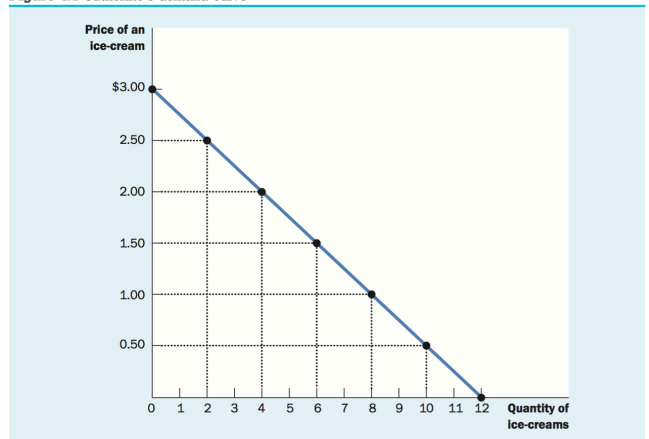
- **Demand for goods and services** can be influenced by many **factors**. Sometimes these are the types of influences described in your textbook, such as **changes in the price of substitute or complementary goods**, or **changes in consumer incomes**. But there are many other influences that may matter, such as **changes in consumer tastes or preferences**, changes in the **opportunity cost of buying or consuming a good**, and changes in the **availability of substitutes**.

### Demand Schedule and Curve

Table 4.1 Catherine's demand schedule

Price of an ice-cream	Quantity of ice-creams demanded
\$0.00	12
0.50	10
1.00	8
1.50	6
2.00	4
2.50	2
3.00	0

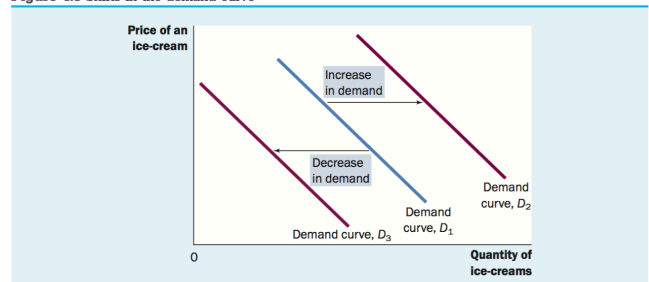
Figure 4.1 Catherine's demand curve



This demand curve, which graphs the demand schedule in Table 4.1, shows how the quantity demanded of the good changes as its price varies. Because a lower price increases the quantity demanded, the demand curve slopes downwards.

### Shifts in the Demand Curve

Figure 4.3 Shifts in the demand curve



Any change that raises the quantity that buyers wish to purchase at a given price shifts the demand curve to the right. Any change that lowers the quantity that buyers wish to purchase at a given price shifts the demand curve to the left.

### Variables That Influence Buyers

Table 4.3 Variables that influence buyers

Variables that affect quantity demanded	A change in this variable ...
Price	Represents a movement along the demand curve
Income	Shifts the demand curve
Prices of related goods	Shifts the demand curve
Tastes	Shifts the demand curve
Expectations	Shifts the demand curve
Number of buyers	Shifts the demand curve

### Movement in the Demand Curve

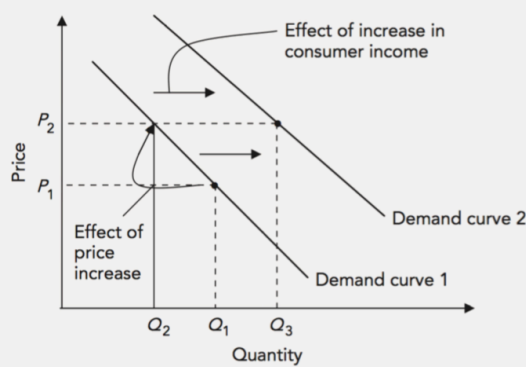


Figure 2.1.1 Movement along and shift in the demand curve

### Case Study 2.3: Something Fishy? No, It's Just a Matter of Demand and Supply

- The prices of a variety of types of seafood have changed dramatically over both short and long time spans in the United States and Australia.
- The changes in prices that have occurred can be explained by changes in demand for and/or supply of each type of seafood.
- The demand and supply framework is a useful starting point when trying to explain the causes of changes to prices in a competitive market.

### Increase in the Price of Lobsters

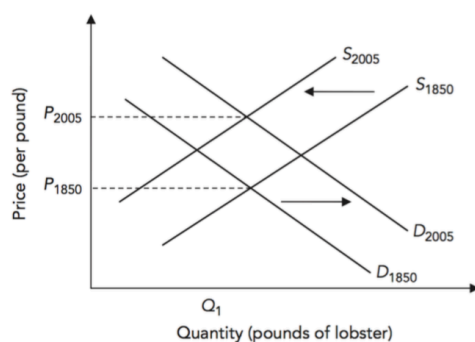


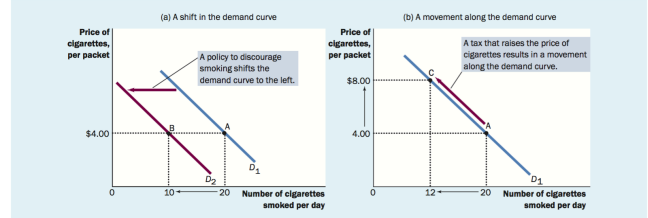
Figure 2.3.1 Explaining the increase in the price of lobsters

### Case Study 2.4: Explaining Changes in the Price of Oil

- The theory of perfectly competitive markets emphasises the role of changes in market demand and market supply in explaining changes to market prices.
- The theory therefore provides a valuable organising framework for examining the causes of changes in the price of a good such as oil, where market-level demand and supply are important influences on the price.
- The theory, together with information on the price elasticities of demand and supply, is able to explain why changes in the price of oil in response to changes in demand and supply have been large.
- Changes in the price of a good or service often cause spill over effects on the demand for a supply of another good or service. An example is how the 2014-2015 decrease in the world price of oil reduced the demand for gas.

### Shifts in Demand vs Movements

Figure 4.4 Shifts in the demand curve versus movements along the demand curve



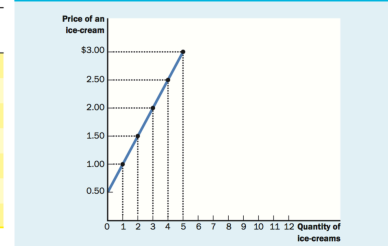
If warnings on cigarette packets convince smokers to smoke less, the demand curve for cigarettes shifts to the left. In panel (a), the demand curve shifts from  $D_1$  to  $D_2$ . At a price of \$4 per packet, the quantity demanded falls from 20 to 10 cigarettes per day, as reflected by the shift from point A to point B. In contrast, if a tax raises the price of cigarettes, the demand curve does not shift. Instead, we observe a movement to a different point on the demand curve. In panel (b), when the price rises from \$4 to \$8, the quantity demanded falls from 20 to 12 cigarettes per day, as reflected by the movement from point A to point C.

### Supply Curve and Schedule

Table 4.4 Tony's supply schedule

Price of an ice-cream (\$)	Quantity of ice-creams supplied
0.00	0
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5

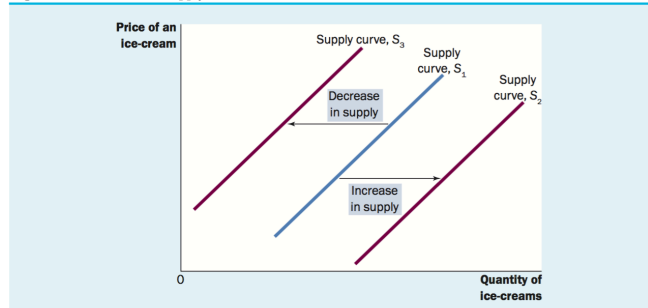
Figure 4.5 Tony's supply curve



This supply curve, which graphs the supply schedule in Table 4.4, shows how the quantity supplied of the good changes as its price varies. Because a higher price increases the quantity supplied, the supply curve slopes upwards.

### Shifts in Supply Curve

Figure 4.7 Shifts in the supply curve



Any change that raises the quantity that sellers wish to produce at a given price shifts the supply curve to the right. Any change that lowers the quantity that sellers wish to produce at a given price shifts the supply curve to the left.

### Variables That Influence Sellers

Table 4.6 Variables that influence sellers

Variables that affect quantity supplied	A change in this variable ...
Price	Represents a movement along the supply curve
Input prices	Shifts the supply curve
Technology	Shifts the supply curve
Expectations	Shifts the supply curve
Number of sellers	Shifts the supply curve

### Impact on the Price of Oil

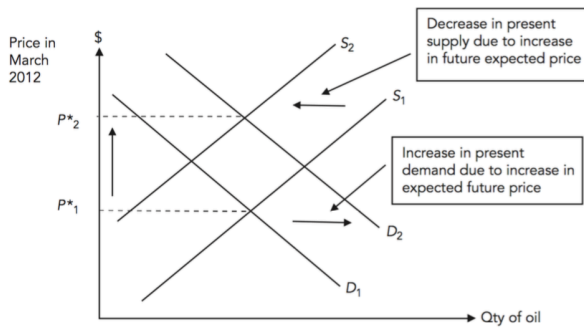


Figure 2.4.2 The effect on the price of oil in March 2012 of an increase in the expected future price

### Predicting the Change in Price of Oil

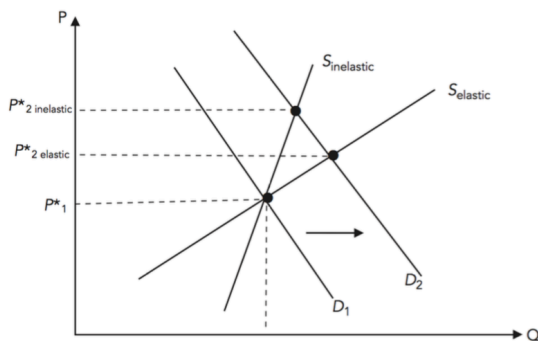
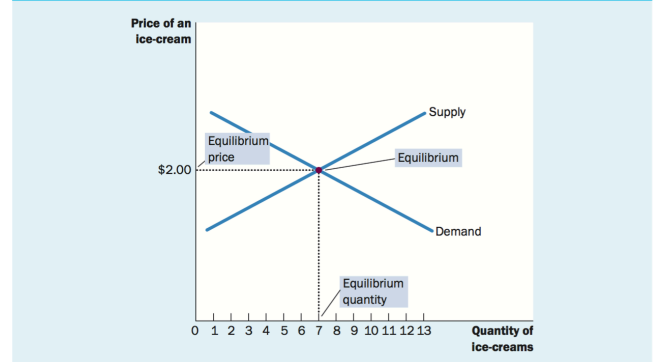


Figure 2.4.3 Predicting the size of change in the price of oil

### Market Equilibrium

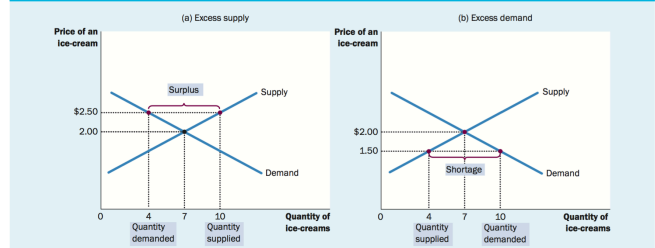
Figure 4.8 The equilibrium of supply and demand



The equilibrium is found where the supply and demand curves intersect. At the equilibrium price, the quantity supplied equals the quantity demanded. Here the equilibrium price is \$2. At this price, seven ice-creams are supplied and seven ice-creams are demanded.

### Markets Not in Equilibrium

Figure 4.9 Markets not in equilibrium



In panel (a), there is excess supply. Because the market price of \$2.50 is above the equilibrium price, the quantity supplied (10 ice-creams) exceeds the quantity demanded (four ice-creams). Suppliers try to increase sales by cutting the price of an ice-cream and this moves the price towards its equilibrium level. In panel (b), there is excess demand. Because the market price of \$1.50 is below the equilibrium price, the quantity demanded (10 ice-creams) exceeds the quantity supplied (four ice-creams). Because too many buyers are chasing too few goods, suppliers can take advantage of the shortage by raising the price. Hence, in both cases, the price adjustment moves the market towards the equilibrium of supply and demand.

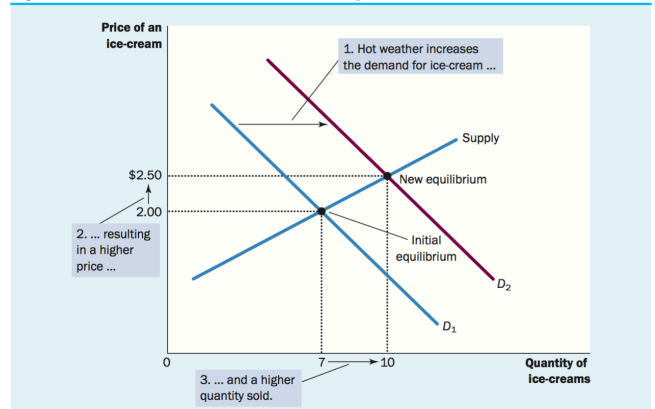
### Steps for Comparative Statics

Table 4.7 A three-step program for doing comparative statics

1	Decide whether the event shifts the supply or demand curve (or perhaps both).
2	Decide in which direction the curve shifts.
3	Use the supply-and-demand diagram to see how the shift changes the equilibrium.

### Effect From Increase in Demand

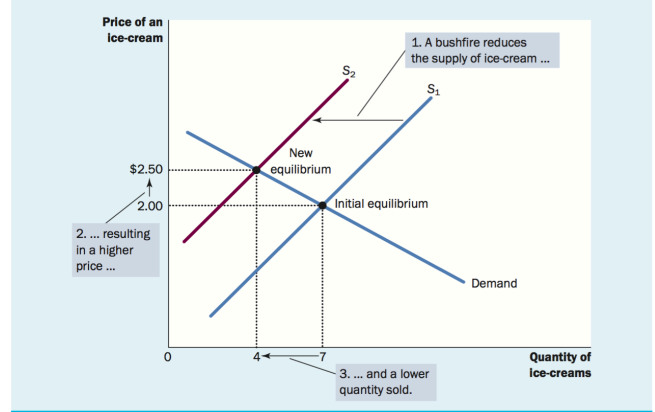
Figure 4.10 How an increase in demand affects the equilibrium



An event that raises quantity demanded at any given price shifts the demand curve to the right. The equilibrium price and the equilibrium quantity both rise. Here, an abnormally hot summer causes buyers to demand more ice-cream. The demand curve shifts from  $D_1$  to  $D_2$ , which causes the equilibrium price to rise from \$2.00 to \$2.50 and the equilibrium quantity to rise from seven to 10 ice-creams.

## Effects of a Decrease in Supply

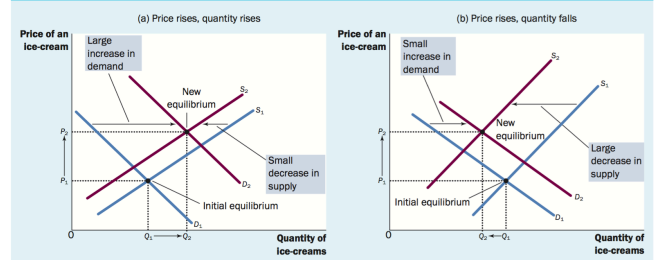
**Figure 4.11** How a decrease in supply affects the equilibrium



An event that reduces quantity supplied at a given price shifts the supply curve to the left. The equilibrium price rises, and the equilibrium quantity falls. Here, a bushfire causes sellers to supply less ice-cream. The supply curve shifts from  $S_1$  to  $S_2$ , which causes the equilibrium price to rise from \$2.00 to \$2.50 and the equilibrium quantity to fall from seven to four ice-creams.

## Shifts in Demand and Supply

**Figure 4.12** A shift in both supply and demand



Here we observe a simultaneous increase in demand and decrease in supply. Two outcomes are possible. In panel (a), the equilibrium price rises from  $P_1$  to  $P_2$ , and the equilibrium quantity rises from  $Q_1$  to  $Q_2$ . In panel (b), the equilibrium price again rises from  $P_1$  to  $P_2$ , but the equilibrium quantity falls from  $Q_1$  to  $Q_2$ .

Week 2a, Lecture 3  
Demand and Supply

Definitions

- **Market:** where buyers and sellers trade a particular good/service
- **Perfectly Competitive Markets:** these markets have many buyers and sellers trading identical goods because buyers know that there are several sellers to choose from and that there is no product differentiation
- **Buyers:** buyers constitute the demand side of the market and choose whether to buy by considering MB and MC (the marginal benefits and marginal costs)
- **Sellers:** sellers constitute the supply side of the market and choose whether to sell by considering MB and MC (the marginal benefits and marginal costs)
- **The Law of Demand:** price and quantity demanded are inversely related, other things being equal
- **The Law of Supply:** price and quantity supplied are positively related, other things being equal
- **Market Equilibrium:** a situation in which demand and supply have been brought into balance

Nota Bene

- **trade** occurs when  $MB \geq MC$  for both buyers and sellers
- when **price changes**, we see a **movement** along the **demand/supply curve**
- when the prices of **substitutes** or **complements change**, there is a **shift in the demand curve**
- for **substitutes**, the price of one good is **positively related** to the demand for the other good; for **complements**, they are **inversely related**
- for a **normal** good, **income and demand are positively related**, for an **inferior** good, they are **inversely related**

Topics

1. Demand and Supply
2. Perfectly Competitive Markets
3. Demand
  - *when price changes*
  - *other (non-price) determinants of demand*
  - *impact of prices of other goods on demand*
  - *other factors that may shift the demand curve*
4. Supply
  - *when price changes*
  - *other factors that may shift the supply curve*
5. Market Equilibrium

Week 2b, Lecture 4  
Market Equilibrium and Comparative Statics

Definitions

- **Market Equilibrium:** when the values of P and Q are equal to  $P^*$  and  $Q^*$  and quantity demanded is equal to quantity supplied
- **Excess Supply:** when there is more quantity supplied than demanded at a certain price resulting in a surplus [ $Q_D(P^1) < Q^* < Q_S(P^1)$ ] as the price is higher than the equilibrium price [ $P = P^1 > P^*$ ]
- **Excess Demand:** when there is more quantity demanded than supplied resulting in a shortage [ $Q_D(P^2) > Q^* > Q_S(P^2)$ ] as the price is lower than the equilibrium [ $P = P^2 < P^*$ ]
- **Comparative Statics:** the comparison of two different equilibrium (due to changes in demand and/or supply)

Nota Bene

- When  $P \neq P^*$ , the competitive process will **drive the price to converge to  $P^*$**
- only when  $P = P^*$  will the price be stable (that is, in equilibrium)

Topics

1. Excess Supply
2. Excess Demand
3. Comparative Statics
4. Demand Shocks
5. Supply Shocks
6. Demand and Supply Shocks
  - "When Lobster was Fertiliser"
  - "Fluctuations in Foreign Exchange"

Demand				
		increase ↑	constant	decrease ↓
Supply	increase ↑	$Q^* \uparrow$ $P^* ?$	$Q^* \uparrow$ $P^* \downarrow$	$Q^* ?$ $P^* \downarrow$
	constant	$Q^* \uparrow$ $P^* \uparrow$	$Q^*$ $P^*$	$Q^* \downarrow$ $P^* \downarrow$
	decrease ↓	$Q^* ?$ $P^* \uparrow$	$Q^* \downarrow$ $P^* \uparrow$	$Q^* \downarrow$ $P^* ?$

Your Weight. Average is **82.500**. This was calculated on 01-May-2018. [?](#)

Year	Study Period	Subject	Short Title	Ver	Mark	Grade Code	Grade Description	Credit Points
2017	Semester 2			1	77	H2A	Second Class Hons A	12.500
2017	Semester 2			1	80	H1	First Class Honours	12.500
2017	Semester 2			1	75	H2A	Second Class Hons A	12.500
2017	Semester 2			1	91	H1	First Class Honours	12.500
2017	Semester 1			1	82	H1	First Class Honours	12.500
2017	Semester 1	ECON10004	Introductory Microeconomics	1	80	H1	First Class Honours	12.500
2017	Semester 1			1	90	H1	First Class Honours	12.500
2017	Semester 1			1	85	H1	First Class Honours	12.500

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