

Exercise walk-through

2.4

The interaction of demand and supply

A-Level Economics

Demand and what shifts it

A fictional coffee market: classify each event

- 1 Coffee's own price falls from \$7 to \$6; other conditions stay fixed.
- 2 The price of tea, a substitute, rises.
- 3 Consumers' income rises. No income elasticity is given.

Attempt: movement along or shift? State the direction where the information permits it. Draw and label the change.

The **law of demand** holds other conditions constant. An income rise needs a normal/inferior-good assumption before choosing a direction.

Demand and supply: the definitions that matter

demand

the quantity buyers are **willing and able** to buy at each **price** in a period of time – not just a wish

market demand

add up the quantity *all* **consumers** want at each price – horizontal summation of the individual **demand curves**

supply

the quantity **producers** are willing and able to *sell* at each price in a period

movement

a change in the good's **own price** moves you *along* the curve

shift

a change in a non-price **determinant** moves the **whole curve**

“Willing *and able*” is the phrase: wanting a Ferrari is not demand. Define the relationship at each price, in a stated period, as the task requires.

The two laws, and the words they use

Check the three demand cases

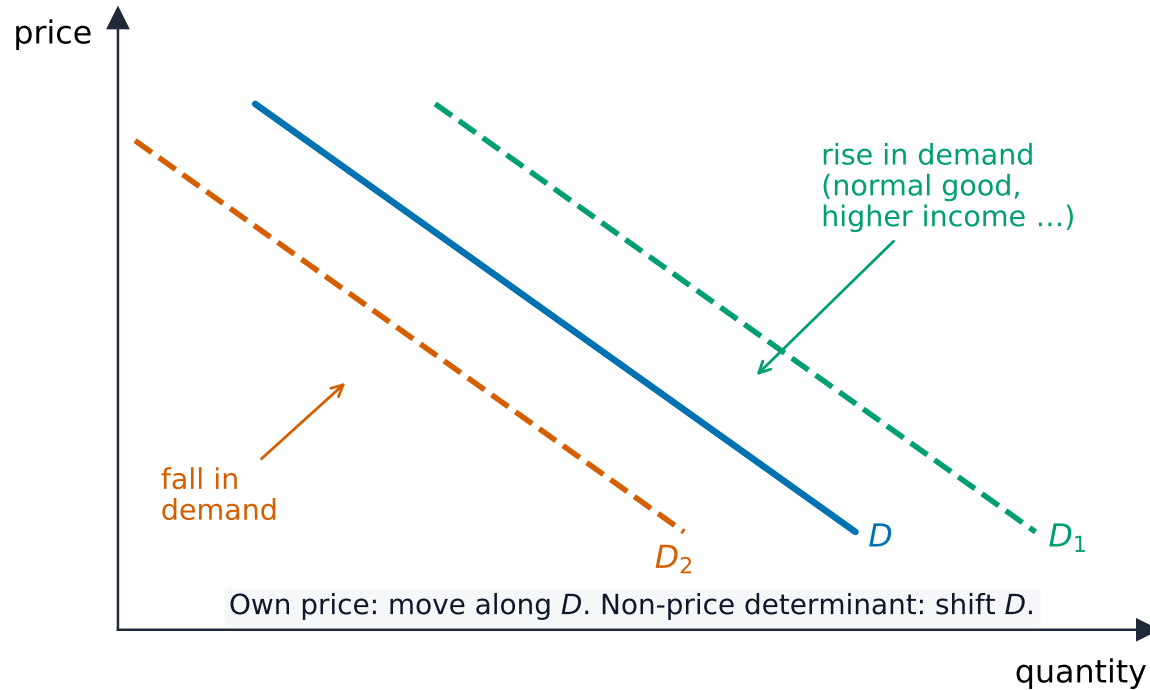
Own price falls: quantity demanded rises *along* the original curve.

Tea becomes dearer: coffee demand shifts right if they are substitutes.

Income rises: demand shifts right for a normal good, left for an inferior good; the case does not tell us which.

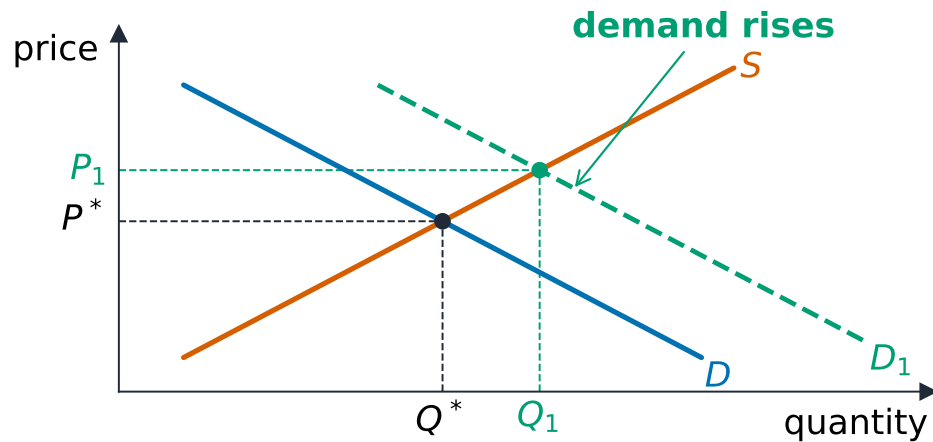
A change in **quantity demanded** refers to an amount at one price. A change in demand changes the relationship across prices.

Demand and what shifts it, in detail



A change in income, tastes or related prices shifts the whole curve (D_1 right, D_2 left); a change in the good's own price is a movement along it.

With supply fixed



$$D \uparrow \text{ (S fixed) } \Rightarrow P_e \uparrow \text{ and } Q_e \uparrow$$

With supply fixed, a rise in demand ($D \rightarrow D_1$) raises both the equilibrium price and the equilibrium quantity.

Exercises 2.1-2.3

2.1 Define the term *equilibrium price*.

[2]

2.2 State what happens to price when there is **excess demand**.

[1]

2.3 State the effect on equilibrium price and quantity of a rightward shift in supply. [2]

Exercises 2.1-2.3

2.1 Define the term *equilibrium price*. [2]

2.1

- the price at which the quantity demanded equals the quantity supplied, so there is no pressure for it to change (2 for a clear definition; 1 for a partial idea)

2.2 State what happens to price when there is **excess demand**. [1]

2.2

- the price rises (2 for “rises, because buyers compete for the shortage”; 1 for “rises”)

2.3 State the effect on equilibrium price and quantity of a rightward shift in supply. [2]

2.3

- price falls and quantity rises (1 + 1)

Exercises 3.1-3.2

3.1 A price set **below** the equilibrium price will cause:

[1]

☐

A excess supply, pushing price down

B excess demand, pushing price up

C the market to stay in equilibrium

D the supply curve to shift left

3.2 Using a demand and supply diagram, explain how an increase in demand changes the equilibrium price and quantity.

[8]

Exercises 3.1·3.2

3.1 A price set **below** the equilibrium price will cause:

[1]

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- A excess supply, pushing price down
- B excess demand, pushing price up
- C the market to stay in equilibrium
- D the supply curve to shift left

3.1 B

- Below equilibrium there is excess demand, which pushes the price up

3.2 Using a demand and supply diagram, explain how an increase in demand changes the equilibrium price and quantity.

[8]

3.2

- [8] AO1 1 + **AO3 diagram up to 4** (labelled axes, demand shifts right $D \rightarrow D_1$, new equilibrium) + AO2/AO3 up to 3 – higher demand creates excess demand at the old price
- the price is bid up
- as price rises, quantity supplied rises along the supply curve
- a new equilibrium at a higher price and higher quantity

Exercise 3.3

3.3 The price of coffee beans (an input) rises sharply. Discuss the likely effects on the market for coffee. [12]

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3.3

- [12] AO1/AO2/AO3 up to 8 (diagram: supply shifts left, price $\uparrow$, quantity $\downarrow$) + AO4 up to 4. **Analysis:** dearer beans raise production costs
- supply of coffee shifts left
- equilibrium price rises and quantity falls; how much depends on PED. **Evaluation:** if demand for coffee is inelastic, the price rises a lot but quantity falls little; producers of complements (e.g. milk) may lose; consumers may switch to substitutes. Judgement: the size of the effect depends on elasticities and whether the cost rise is temporary