

A market model organises plans

Demand and supply describe quantities people plan to buy and sell at different prices over a specified period. They are schedules, not single quantities. An equilibrium price makes those planned quantities equal within the model. All markets and numbers in this lesson are illustrative; actual markets may have search, contracts, queues and bargaining.

Demand relates quantity to the good's own price

A demand schedule gives quantity demanded at each own price, holding relevant other conditions fixed. Our illustrative market has $Q_d = 60 - 2P$, where P is pounds per box and Q_d is boxes per week. At £10, quantity demanded is forty boxes; at £15, it is thirty boxes.

A movement is different from a shift

A change in the good's own price causes a movement along an unchanged demand curve. A change in income, preferences, buyer numbers, expectations or related-good prices can shift demand. A rightward shift means more is demanded at a given own price. Demand is a schedule; quantity demanded is one point on it.

Supply describes sellers' conditional plans

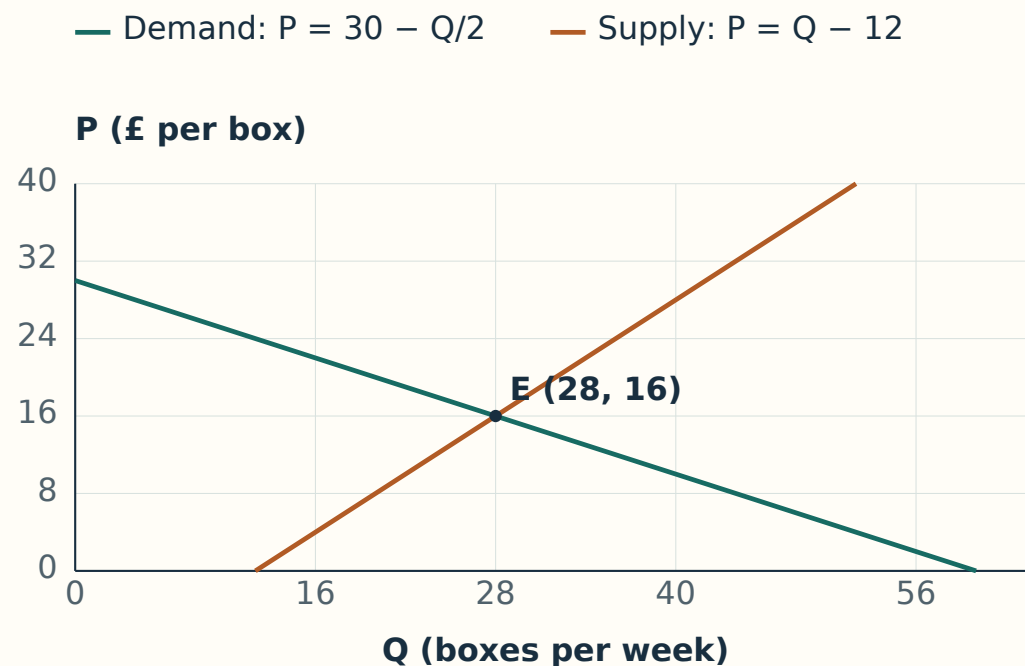
A supply schedule gives quantity supplied at each own price, holding technology, input prices and other relevant conditions fixed. Here $Q_s = 12 + P$. At £10, sellers plan twenty-two boxes per week; at £15, twenty-seven. The upward slope represents a larger planned quantity at a higher price within the illustrative range.

Supply shifts have different causes

Lower input costs or improved technology can increase supply: more is offered at each price. Higher costs or lost capacity can reduce it. A change in the product's own price is a movement along supply, not a supply shift. Time matters because firms can adjust some inputs quickly and others only slowly.

Worked example: solve the equilibrium

Set the planned quantities equal: $60 - 2P = 12 + P$. Subtract 12 and add $2P$ to get $48 = 3P$. Divide by three: $P = £16$. Substitute into either schedule: $Q = 28$ boxes per week. Check both: $60 - 32 = 28$ and $12 + 16 = 28$.



Worked example: diagnose a shortage

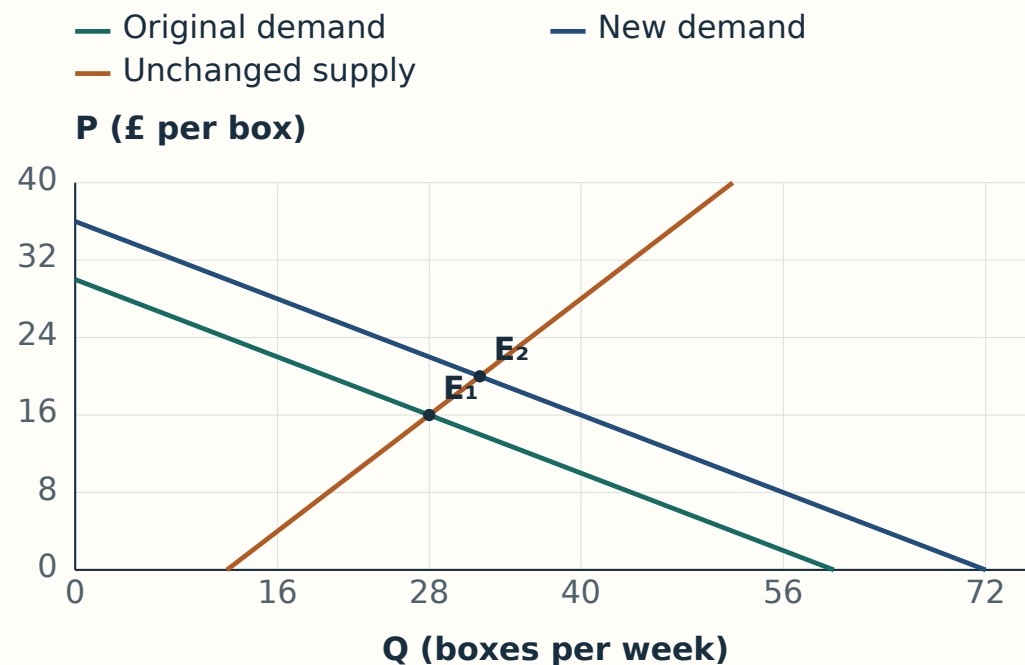
At a price of £12, $Q_d = 60 - 24 = 36$ boxes, while $Q_s = 12 + 12 = 24$ boxes. Excess demand is twelve boxes per week. This is a shortage at that price: planned purchases exceed planned sales. It is different from scarcity, which exists even when the market clears.

Worked example: diagnose a surplus

At £20, quantity demanded is twenty boxes and quantity supplied is thirty-two. Excess supply is twelve boxes per week. Sellers' plans exceed buyers' plans at that price. A surplus does not mean the goods have no possible use; it means the specified price and conditions do not reconcile those purchase and sale plans.

Worked example: a demand shift

Suppose demand becomes $Q_d = 72 - 2P$ while supply remains $Q_s = 12 + P$. At each price, buyers now want twelve additional boxes. Equilibrium satisfies $72 - 2P = 12 + P$, giving $P = £20$ and $Q = 32$. Demand shifted; the resulting price change causes movement along unchanged supply.



Worked example: a supply contraction

Return to original demand, $Q_d = 60 - 2P$. Now supply becomes $Q_s = 6 + P$, six fewer boxes at each price. Equating schedules gives $60 - 2P = 6 + P$, so $P = £18$ and $Q = 24$. A contraction of supply raises price and lowers equilibrium quantity in this model.

Several changes can occur together

If demand rises while supply falls, both changes tend to raise price in this model. Their quantity effects oppose one another, so quantity's direction cannot be inferred without relative magnitudes. With $Q_d = 72 - 2P$ and $Q_s = 6 + P$, equilibrium is £22 and twenty-eight boxes, the original quantity at a higher price.

Observations do not identify the cause automatically

A higher observed price and quantity are consistent with a demand increase under an unchanged upward-sloping supply curve. They do not prove that demand was the only thing that changed. Quality, income, costs, seasonality and market boundaries may also differ. A causal explanation needs a justified account of what moved and what stayed fixed.

Equilibrium is not a moral verdict

Market clearing means planned demand equals planned supply under specified conditions. It does not establish justice, adequate information, equal opportunity or absence of harm to outsiders. Efficiency claims need additional assumptions about competition, rights, information and external effects. Whether an outcome should be accepted also depends on values beyond this equality.

Use the model carefully

Define the good, period and units. Write the demand and supply schedules and their valid ranges. Solve for equality and check both sides. For any proposed price, distinguish shortage from surplus. When conditions change, identify the shifted schedule before calculating a new equilibrium. Finally, state assumptions, uncertainty and questions the model leaves unanswered.