
Course: Foundations of Economics
Lecture 2: Basics of Demand and Supply

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Learning goals

Demand

Supply

Equilibrium

Shortage

Surplus

Black Friday



Image source: Getty Images

Demand

Relationship between demand and price

- the law of demand
- the income effect
- the substitution effect

The demand curve

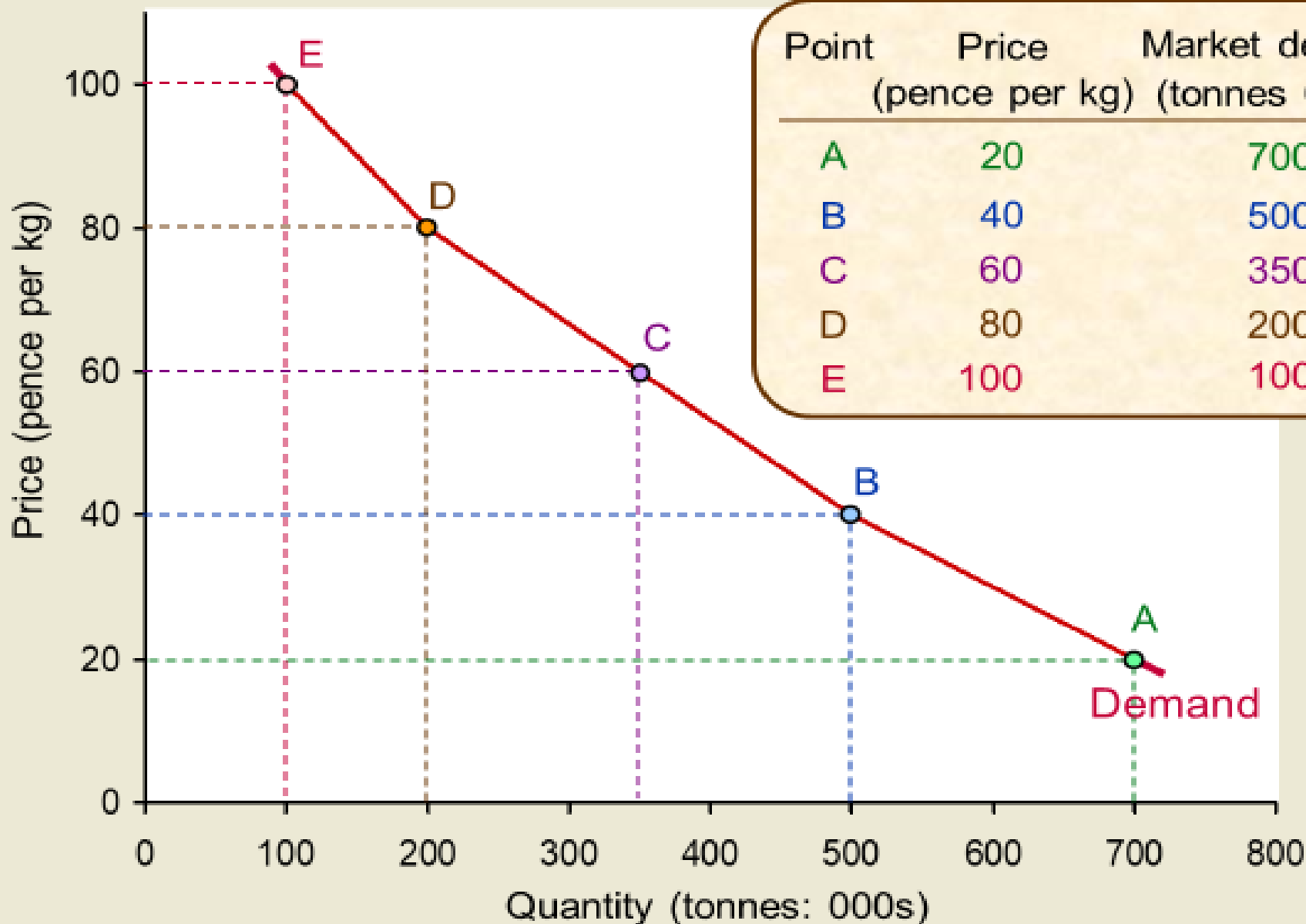
- assumptions
 - other things remain equal (*ceteris paribus*)
 - a given time period
- the axes
- individual's and market demand curves

The demand curve:

The demand for potatoes (monthly)

	(1) Price (pence per kg)	(2) Kate's demand (kg)	(3) Simon's demand (kg)	(4) Total market demand (tonnes: 000s)
A	20	28	16	700
B	40	15	11	500
C	60	5	9	350
D	80	1	7	200
E	100	0	6	100

Market demand for potatoes (monthly)



Demand

Other determinants of demand

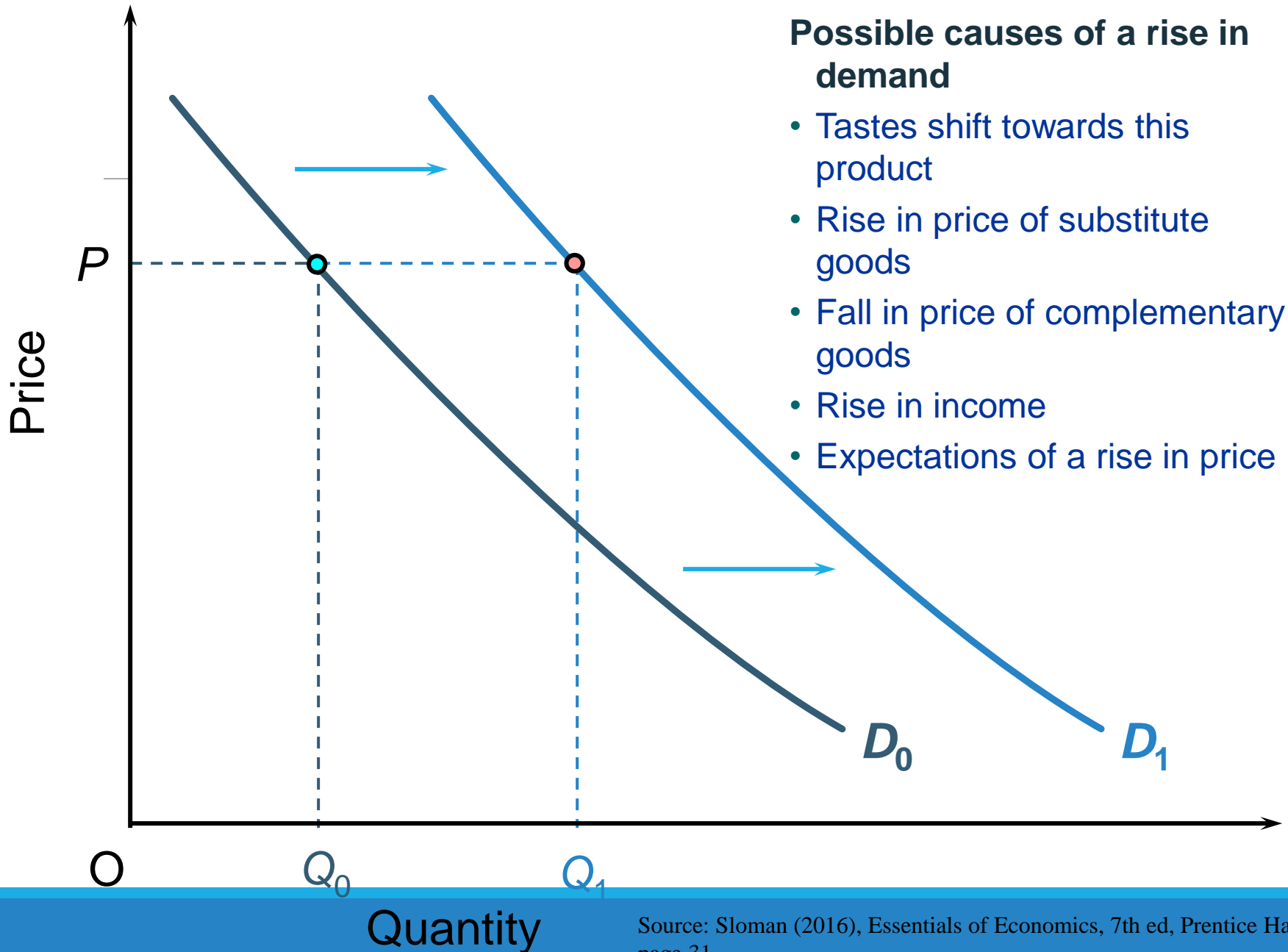
- tastes
- number and price of substitute goods
- number and price of complementary goods
- income
- distribution of income
- expectations

Demand

Movements along and shifts in the demand curve

- change in price
 - ⇒ movement along D curve (change in quantity demanded)
- change in any other determinant of demand
 - ⇒ shift in D curve (change in demand)
 - increase in demand ⇒ rightward shift
 - decrease in demand ⇒ leftward shift

An increase in demand



Demand

Demand functions

- simple demand functions

$$Q_d = a - bP$$

- more complex demand functions

$$Q_d = a - bP + cY + dP_s - eP_c$$

- estimated demand equations
- problems of estimating demand equations
- demand functions and the demand curve

Supply

Relationship between supply and price

- short-run supply
- long-run supply

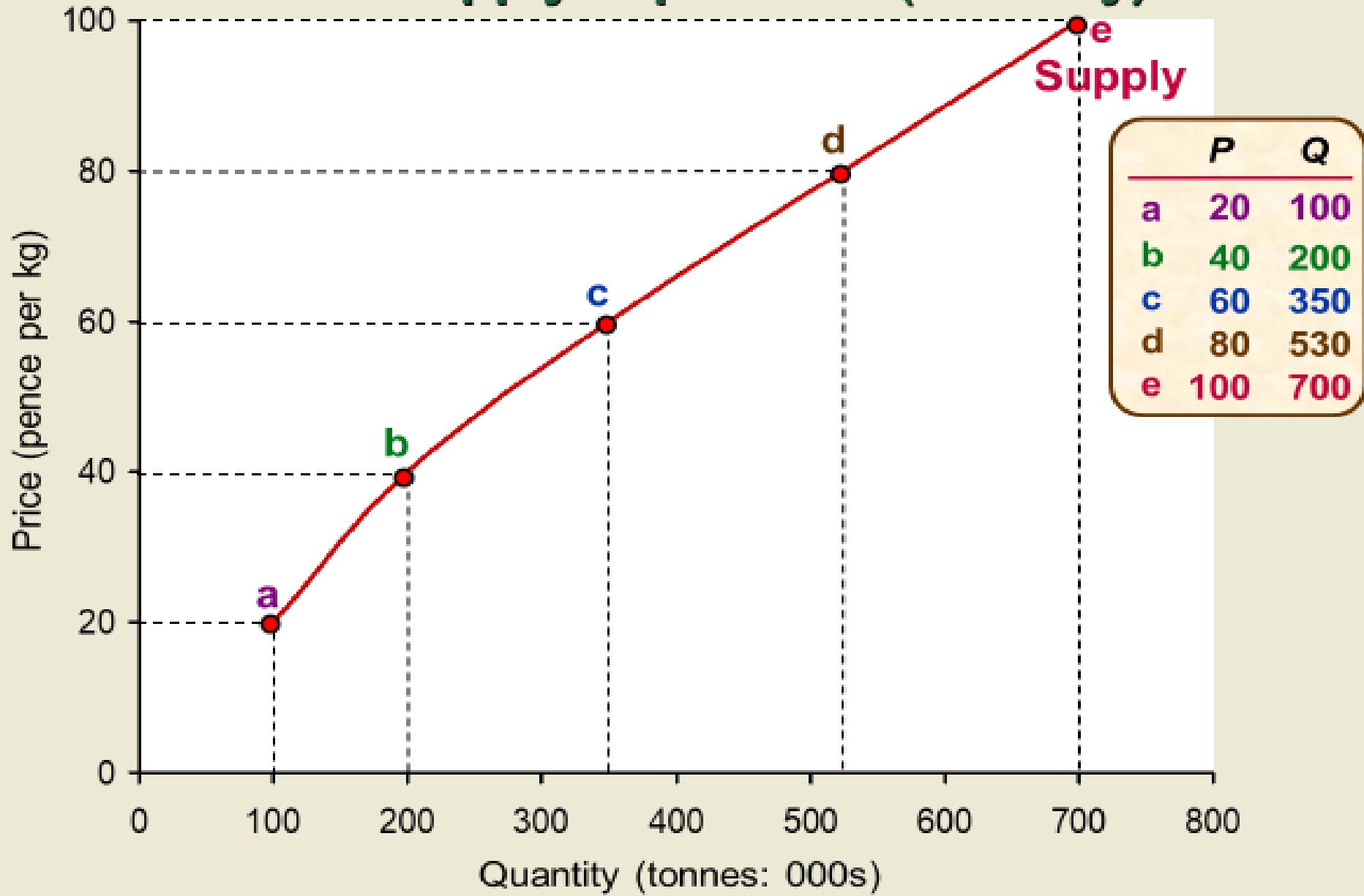
The supply curve

- assumptions
 - other things remain equal (*ceteris paribus*)
 - a given time period
- the axes
- individual's and market supply curves

The supply curve: The supply of potatoes (monthly)

	Price of potatoes (pence per kg)	Farmer X's supply (tonnes)	Total Market supply (tonnes: 000s)
a	20	50	100
b	40	70	200
c	60	100	350
d	80	120	530
e	100	130	700

Market supply of potatoes (monthly)



Supply

Other determinants of supply

- costs of production
- profitability of alternative products (substitutes in supply)
- profitability of goods in joint supply
- nature and other random shocks
- aims of producers
- expectations of producers

Supply

Movements along and shifts in the supply curve

- change in price

⇒ movement along S curve (change in quantity supplied)

- change in any other determinant of supply

⇒ shift in S curve (change in supply)

- increase in supply ⇒ rightward shift
- decrease in supply ⇒ leftward shift

Supply functions

Simple supply functions

$$Q_s = a + bP$$

Where:

Q_s is a quantity supplied

a - a quantity supplied when Price is zero

b - a coefficient defining slope

P - price

Supply functions continued

more complex supply functions

$$Q_s = a + bP + cC + dP_s - eP_j$$

Where

c,d,-e – coefficients affecting price

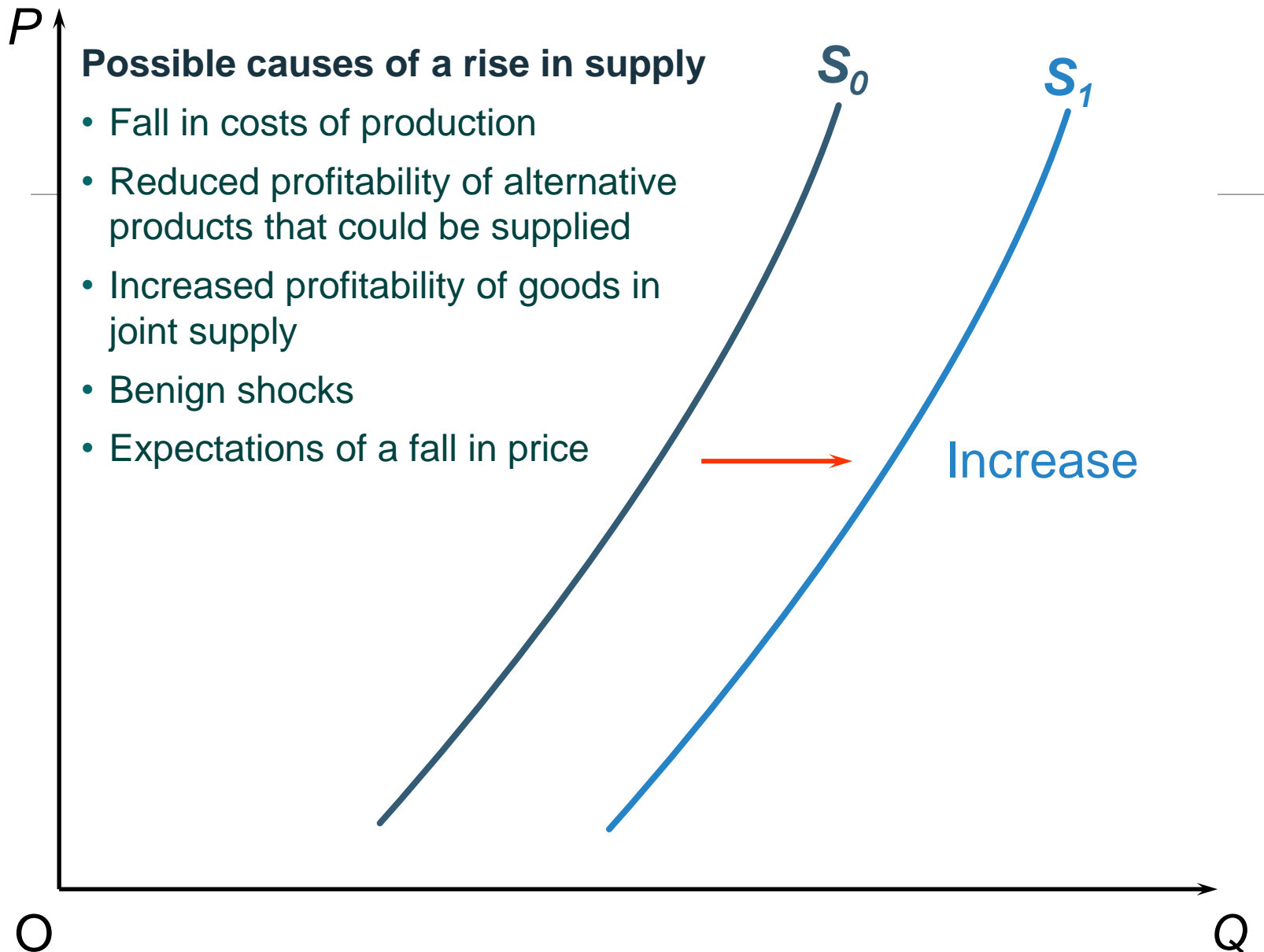
C – cost of production

P_s – price of substitute product

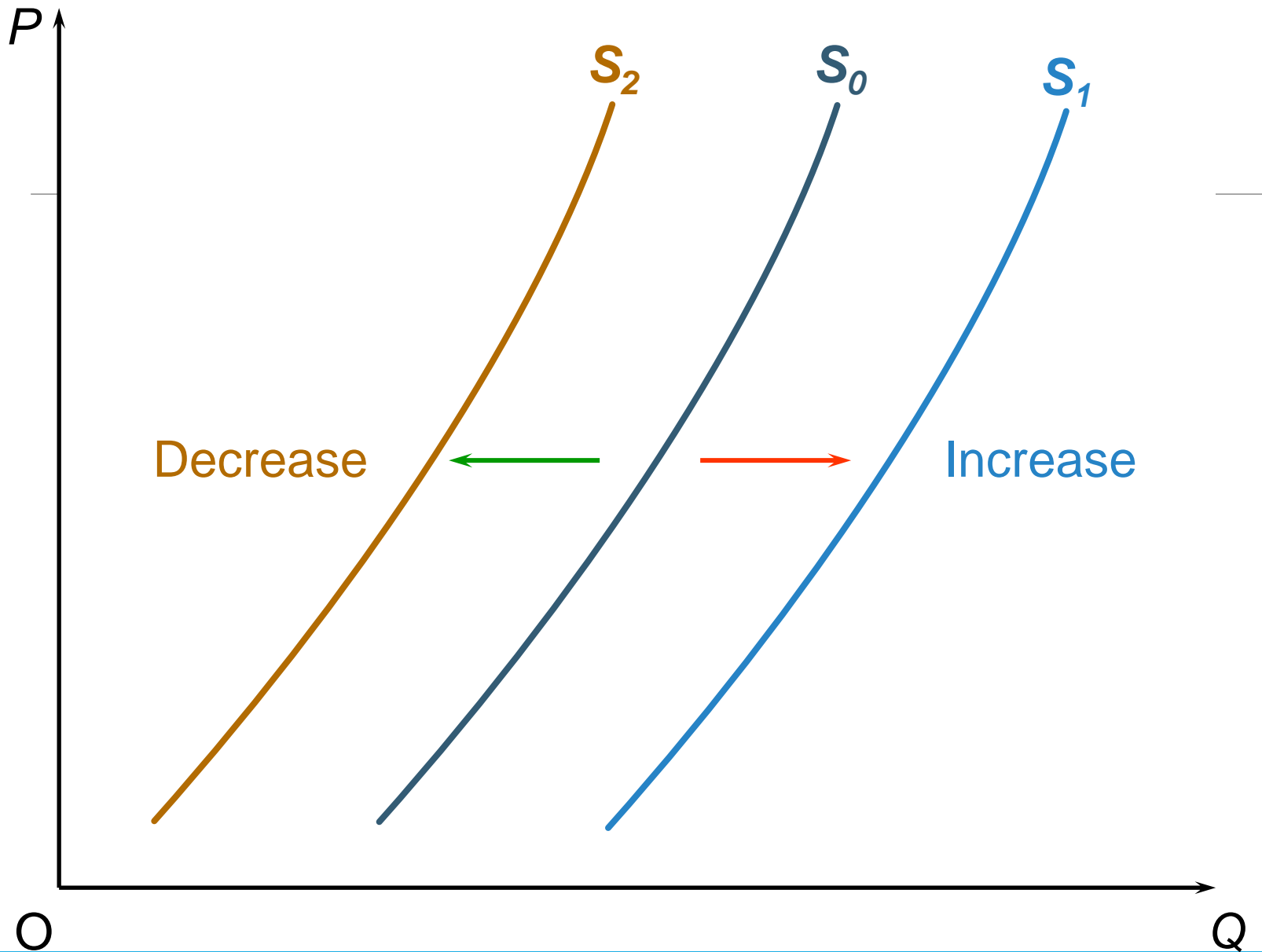
P_j - price of products in joint supply

- non-linear functions
- estimated supply equations
- problems of estimating supply equations

Shifts in the supply curve



Shifts in the supply curve



Supply and Demand

PRICE AND OUTPUT
DETERMINATION



Price and output determination

Equilibrium price and output

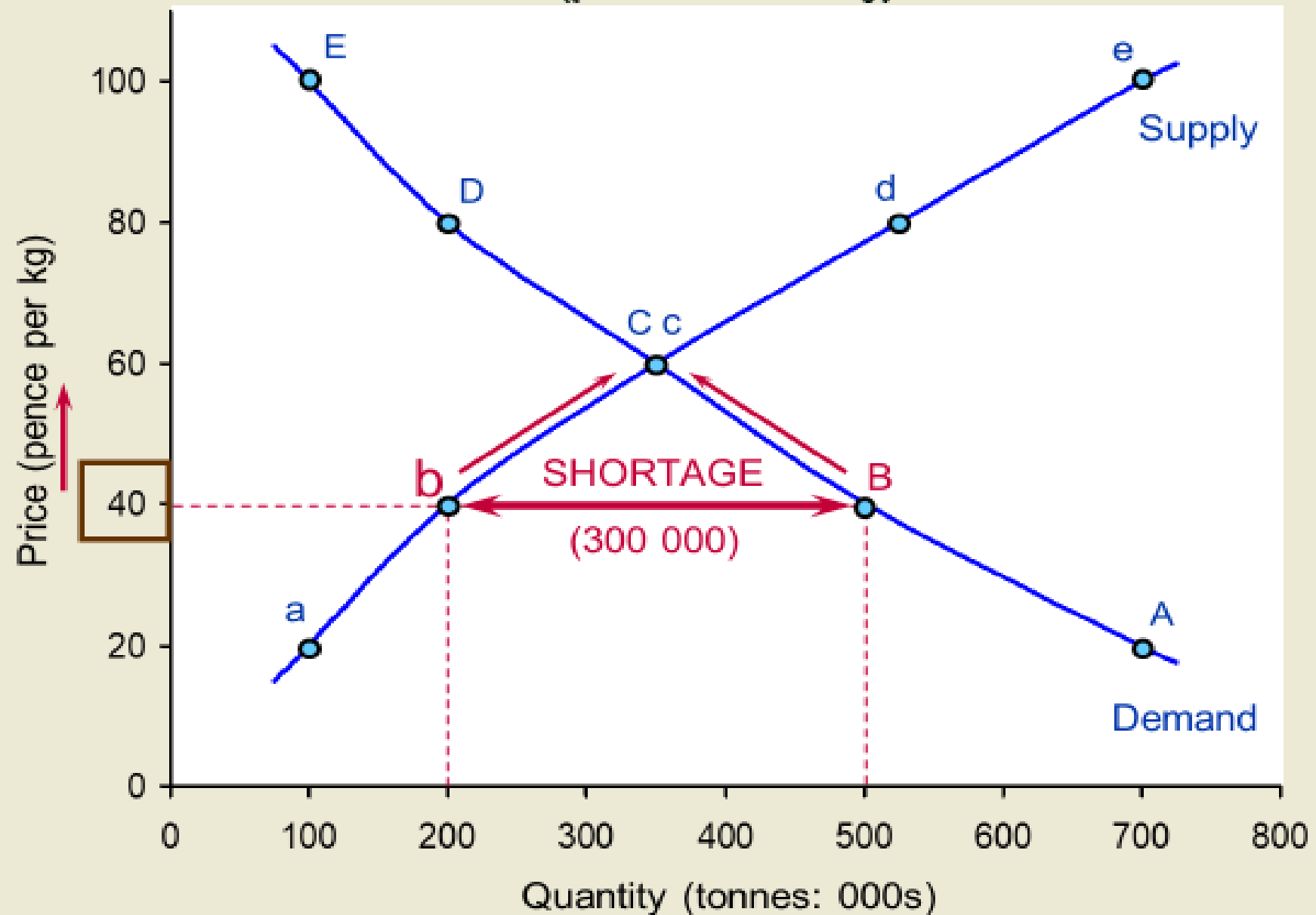
- response to shortages and surpluses
 - shortage ($D > S$)
 - ⇒ price rises
 - surplus ($S > D$)
 - ⇒ price falls
- significance of 'equilibrium'

Equilibrium price and output:

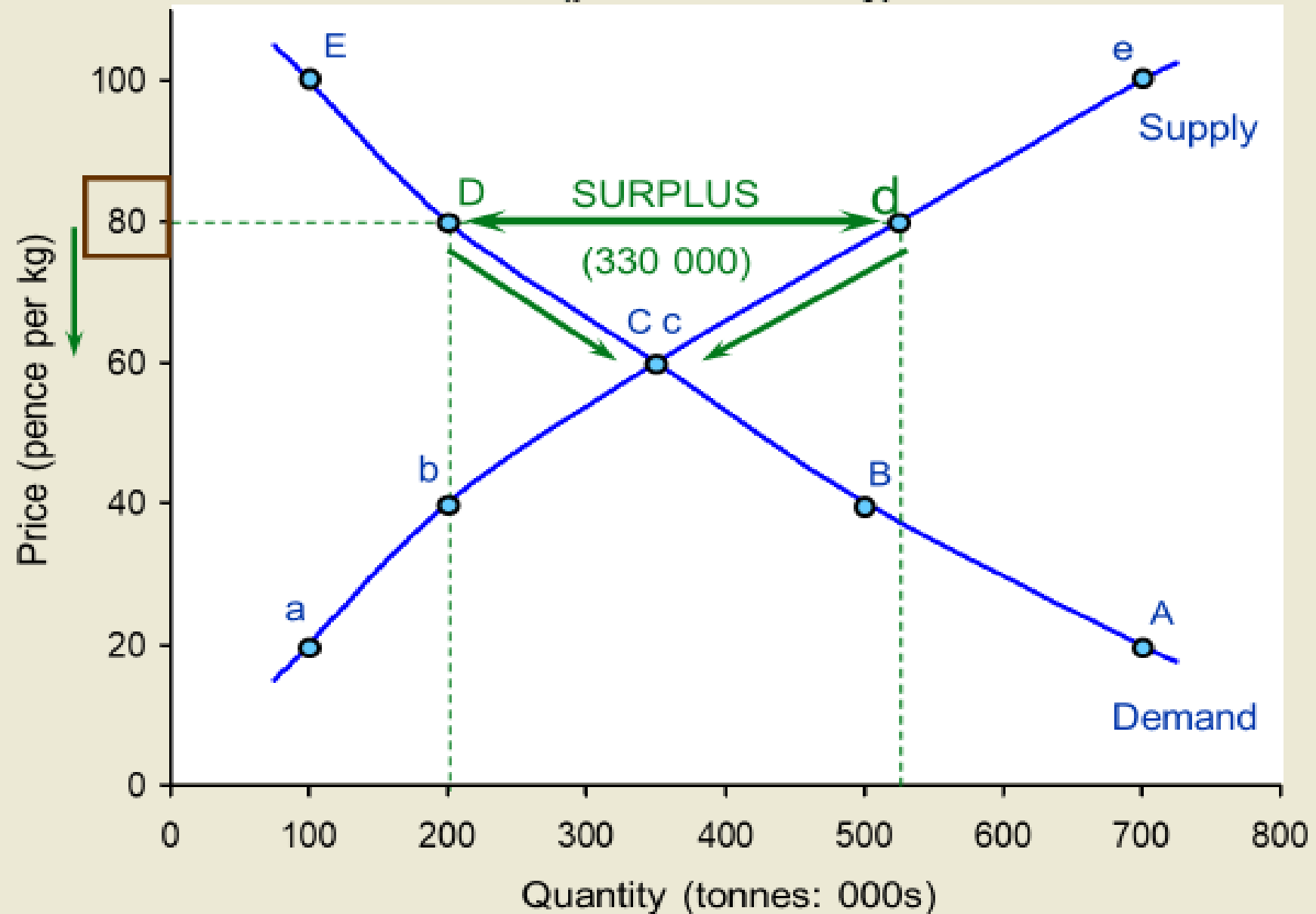
The market demand and supply of potatoes (monthly)

Price of potatoes (pence per kilo)	Total market demand (tonnes: 000s)	Total market supply (tonnes: 000s)
20	700 (A)	100 (a)
40	500 (B)	200 (b)
60	350 (C)	350 (c)
80	200 (D)	530 (d)
100	100 (E)	700 (e)

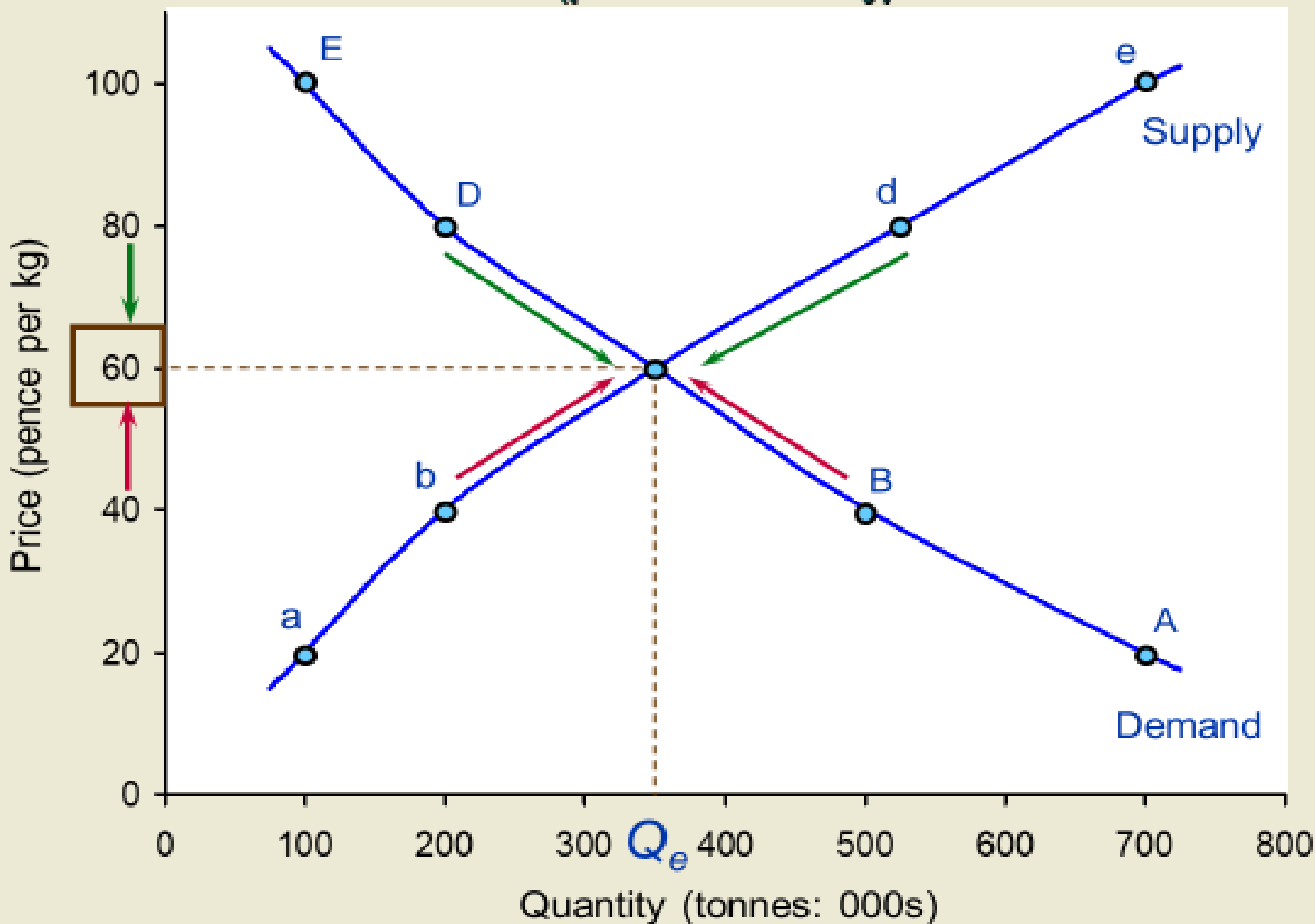
The determination of market equilibrium (potatoes: monthly)



The determination of market equilibrium (potatoes: monthly)



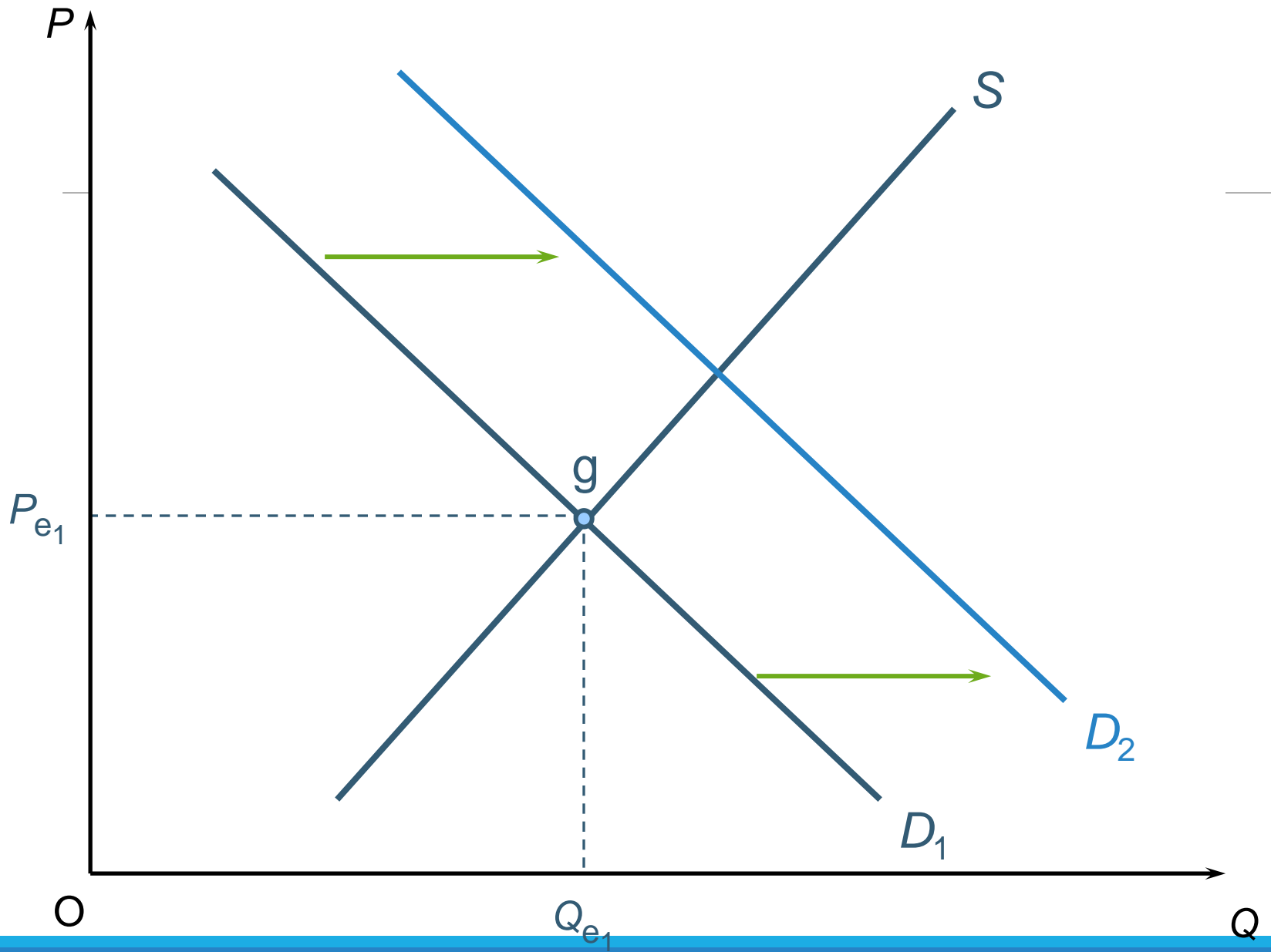
The determination of market equilibrium (potatoes: monthly)



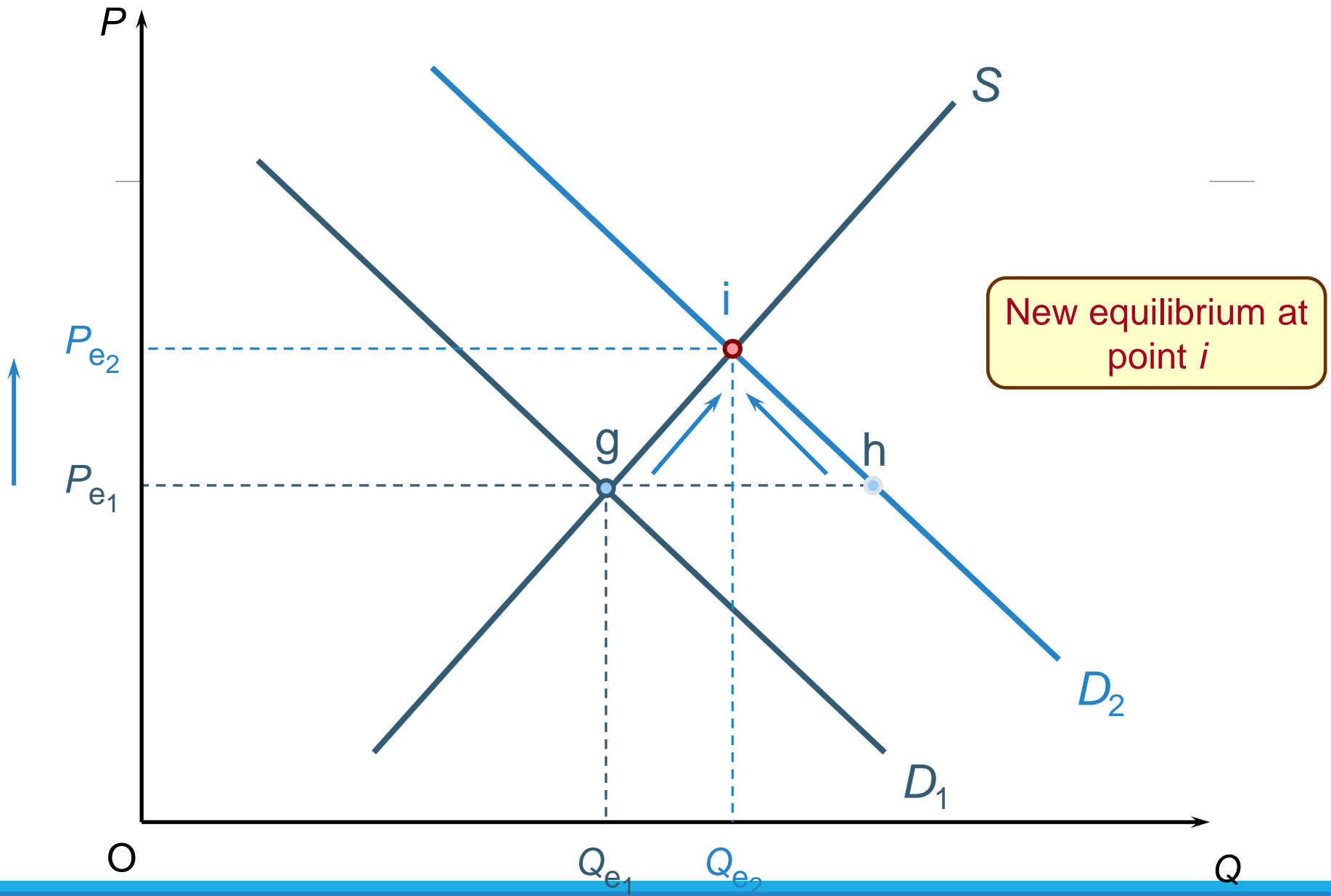
Price and output determination

- Effects of shifts in the demand curve
 - movement along the supply curve and the new demand curve
- Effects of shifts in the supply curve
 - movement along demand curve and new supply curve

Effect of a shift in the demand curve



Effect of a shift in the demand curve



Price and output determination

Effects of shifts in the demand curve

- movement along the supply curve and the new demand curve

Effects of shifts in the supply curve

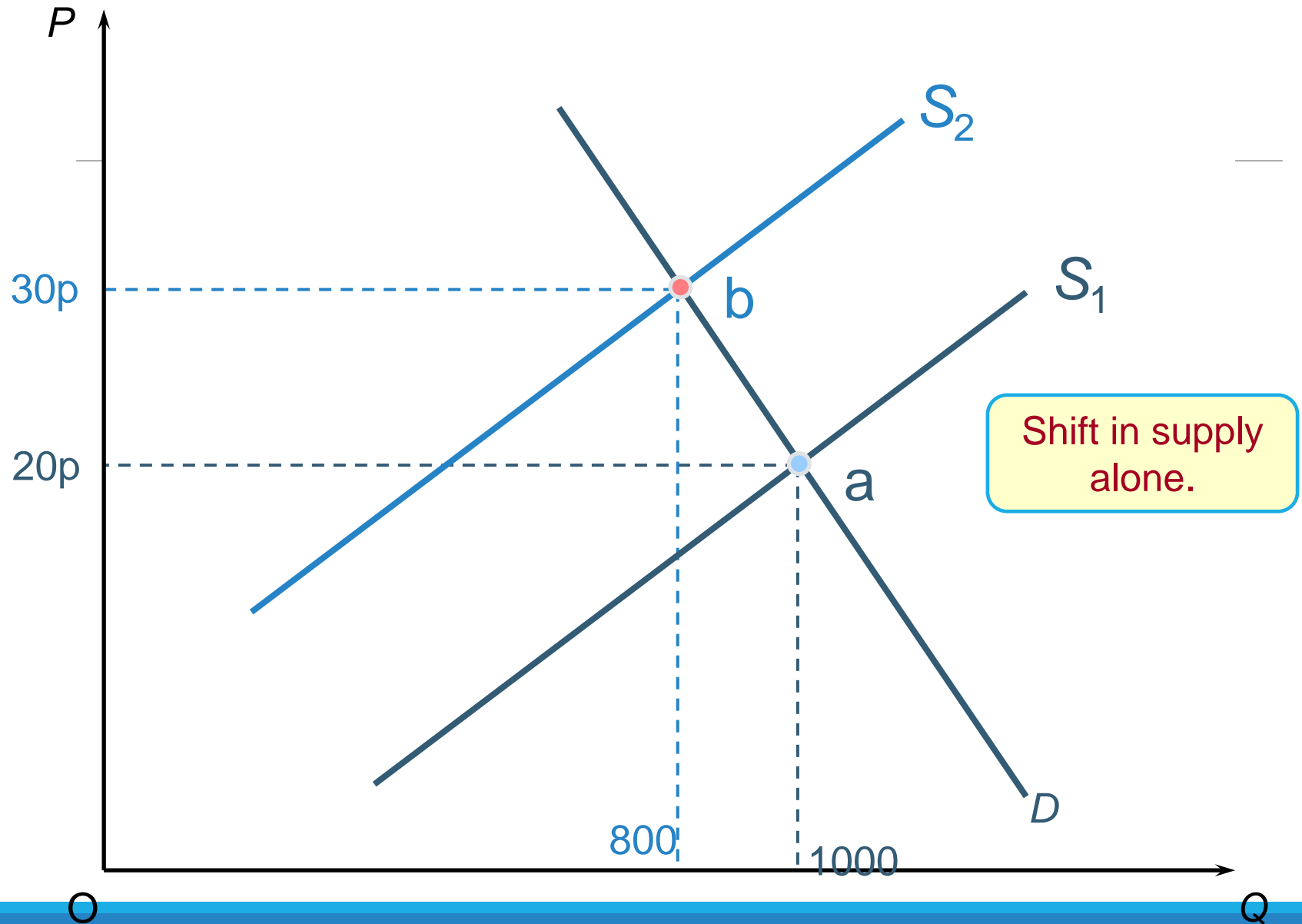
- movement along demand curve and new supply curve

- **Incentives in markets**

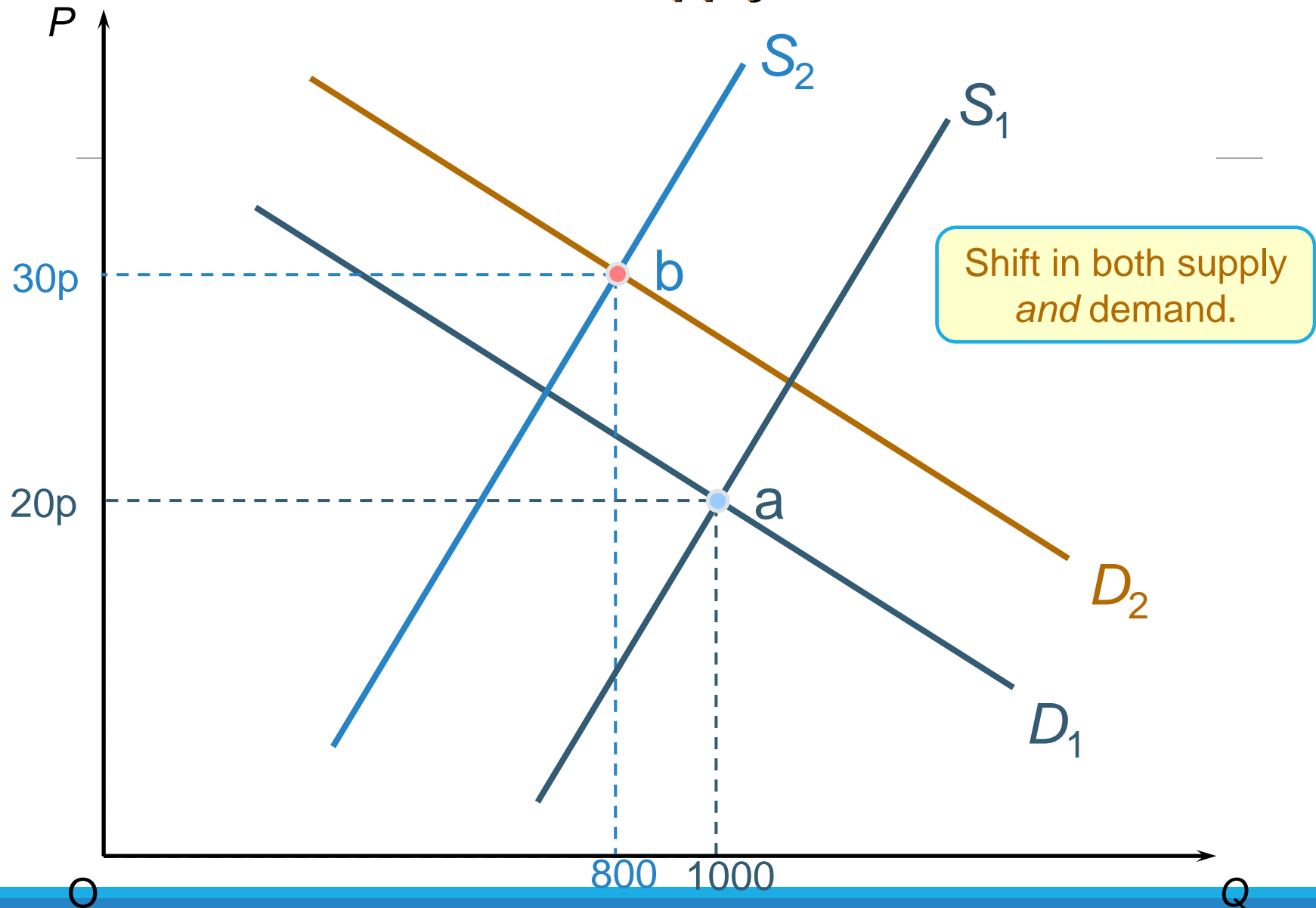
- incentives to respond to price signals
- do incentives necessarily lead to desirable outcomes?

- **Identifying the position of demand & supply curves**

Problems in identifying the position and shape of the demand curve: shift in supply curve



Problems in identifying the position and shape of the demand curve: shift in supply *and* demand curves



Recap

Demand and Price have negative relationship

Supply and Price go in the same direction

Graphically, with vertical axe representing Price and horizontal axe Quantity, Demand is a downward sloping curve, while supply is an upward sloping

When Demand/Supply change in response to change in Price we have a movement along demand/supply curves

If Demand/Supply changes due to non-price factors we have a shift in Demand/Supply

Recap continued

Market Equilibrium is the point where Quantity demanded equals Quantity supplied

Shortage is when quantity demanded is larger than quantity supplied at a given price

Surplus is when quantity supplied is bigger than quantity demanded at a given price

Shortage and surplus are short term

Markets move towards an equilibrium.

REFERENCES

- John Sloman, (2016), Essentials of Economics, 7th ed, Prentice Hall.
- Irvin B. Tucker, (2018), Survey of Economics, 10th ed, Cengage learning.
- Karl Case, Ray Fair, (2004), Principles of Economics, 7/e, Prentice Hall Business Publishing.