Report Requirements

Prepare a report undertaking an economic analysis of a company of your choice, its markets and the wider macroeconomic context using evidence including company reports, market reports, market data and academic journal articles, etc.

It is advisable to choose a large company to analyse as there is more information available about such companies. There will by a 10 point mark deduction for reports that analyse Tesla, Apple, Huawei, Netflix or Amazon.

My reasoning for imposing a mark deduction on reports that choose one of these organisations is because if I do not, many students will choose to analyse these companies. As a result, many students will submit reports that have a lot of similarities which is a situation we want to avoid.

Report Requirements

The report should include:

i. a description of the company's basic characteristics;
ii. an analysis of the markets and economic environment in which your chosen company operates;
iii. an assessment of your company's recent and likely future performance.

Report Assessment Criteria

Assessment criterion	Hard Fail (0-39)	Soft Fail (40-49)	Pass (50-59)	Merit (60-69)	Distinction (70-79)	Distinction (80+)
Structure and focus	Minimal or no structure, with little or no focus/logic to selection and sequencing of material.	Rudimentary structure, albeit with limited and/or confused focus/logic to selection and sequencing of material.	Solid, mostly coherent structure, with broadly consistent focus/logic to selection and sequencing of material.	Clear, fully coherent structure, with consistent focus/logic to selection and sequencing of material.	Very clear, highly coherent structure, with fully consistent focus/logic to selection and sequencing of material.	Superbly clear, highly coherent structure, with exceptionally consistent focus/logic to selection and sequencing of material.
Knowledge and understanding	Little/no knowledge/ understanding evident in relation to key economics concepts.	Limited but partial knowledge/ understanding evident in relation to key economics concepts.	Broadly satisfactory knowledge/ understanding evident in relation to key economics concepts.	High level of knowledge/ understanding evident in relation to key economics concepts.	Very high level of knowledge/ understanding in relation to key economics concepts.	A fully comprehensive and deep knowledge /understanding of key concepts, with some evidence of advanced material/ideas.
Application and research	Little or no application of economic theory in the specific business and market context. Extremely limited/no engagement with relevant literature. Little/no presentation and analysis of relevant data to inform discussion and support arguments made.	Some, albeit poor application of economic theory in the specific business and market context. Limited but superficial and/or descriptive engagement with relevant literature. Limited presentation and analysis of relevant data to inform discussion and support arguments made.	Adequate application of economic theory in the specific business and market context Solid engagement with relevant literature in an occasionally analytical manner. Satisfactory presentation and analysis of relevant data from a limited range of sources to inform discussion and support arguments made.	Good application of economic theory in the specific business and market context. Draws upon a range of relevant literature in a mostly analytical manner. Good presentation and analysis of relevant data from a wide range of sources to inform discussion and support arguments made.	Excellent application of economic theory in the specific business and market context. Draws upon a wide range of relevant literature in a sustained analytical manner. Skilful presentation and analysis of relevant data from a wide range of sources to inform discussion and support arguments made.	Outstanding application of economic theory in the specific business and market context. Draws upon an extensive range of relevant literature in a sustained and authoritative analytical manner. Sophisticated presentation and analysis of relevant data from an extensive range of sources to inform discussion and support arguments made.
Presentation and style	Poor presentation with many errors in syntax and spelling. Little or no signposting and poor/no linkages/flow. Lack of appropriate referencing and/or inaccurate use of the Harvard system of referencing.	Minimally acceptable presentation with a number of errors in syntax and spelling. Limited signposting and weak linkages/flow. Incomplete referencing and/or sometimes inaccurate use of the Harvard system of referencing	Solid presentation with satisfactory syntax and spelling. Reasonable use of signposting and mostly clear linkages/flow. Mostly complete referencing and largely accurate use of the Harvard system of referencing.	Good presentation with good syntax and spelling. Good use of signposting and clear linkages/flow. Complete referencing and mostly accurate use of the Harvard system of referencing.	Excellent presentation with good syntax and spelling, with very clear signposting and linkages/flow. Complete referencing and sustained accuracy in use of the Harvard system of referencing.	Superb, professional level of presentation. Skilful use of signposting and exemplary linkages/flow. Complete referencing and absolute accuracy in use of the Harvard system of referencing.

Some Economics background

- Opportunity cost
  - The cost of undertaking an activity in terms of the foregone activity the factors of production (land, raw materials, labour & capital) could have alternatively been used for
    - E.g. an hour of labour to make a loaf of bread, 30 minutes to make a pizza
    - The opportunity cost of making a loaf of bread is 2 pizzas

Some Economics Background

- Economics
  - Considers the key economic questions of:
    - What is produced?
    - How is it produced?
    - Who it is it produced for?
- Can be answered by the market forces of supply & demand (in a free market), by the government (in a planned economy) or by a combination of the two (in a mixed economy)

The aims of the firm

- The traditional theory of the firm:
  - Assumption of profit maximisation

  $\pi = PQ - C$

  where:

  PQ is total revenue

  P is price

  Q is quantity of output (sales)

  C is total costs

  - Profit margin is - , so if P or average cost , margin
- It is key for managers to act on each side, i.e., growing revenue or reducing cost

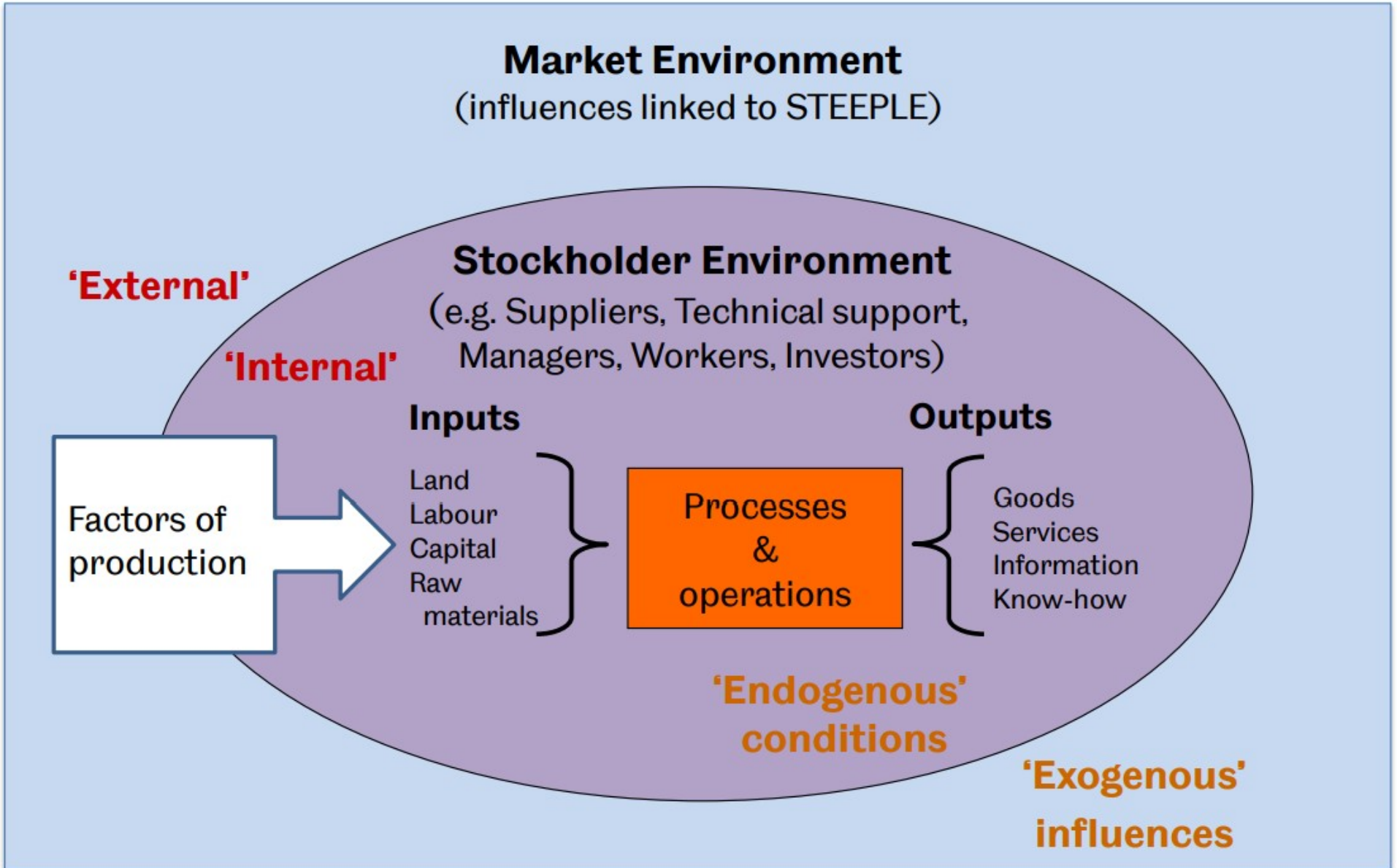
The aims of the firm

- The divorce of ownership from control. This is especially so in the UK & US which operate widely dispersed share ownership (i.e., ‘outsider’ systems). This is far less so in continental Europe & Japan.
- Managerial objectives
  - Sales maximisation (Baumol)
  - Growth maximisation (Marris)
  - Managerial utility maximisation (Williamson)

The aims of the firm

- The principal-agent relationship
  - The principal-agent problem
  - Asymmetric information
  - Dealing with imperfect information
    - Monitoring
    - Incentives
- The goal of staying in business
  - Leads to an unwillingness of firms to take risks
  - Leads to problems of being over-cautious

The influencing environment



The external business environment

- STEEPLE analysis
  - Extension of the PEST analysis
    - Social
    - Technological
    - Economic
    - Environmental
    - Political
    - Legal
    - Ethical
- Businesses are increasingly affected by questions about how environmentally friendly (i.e., pollution and sustainability) and socially responsible their activities are

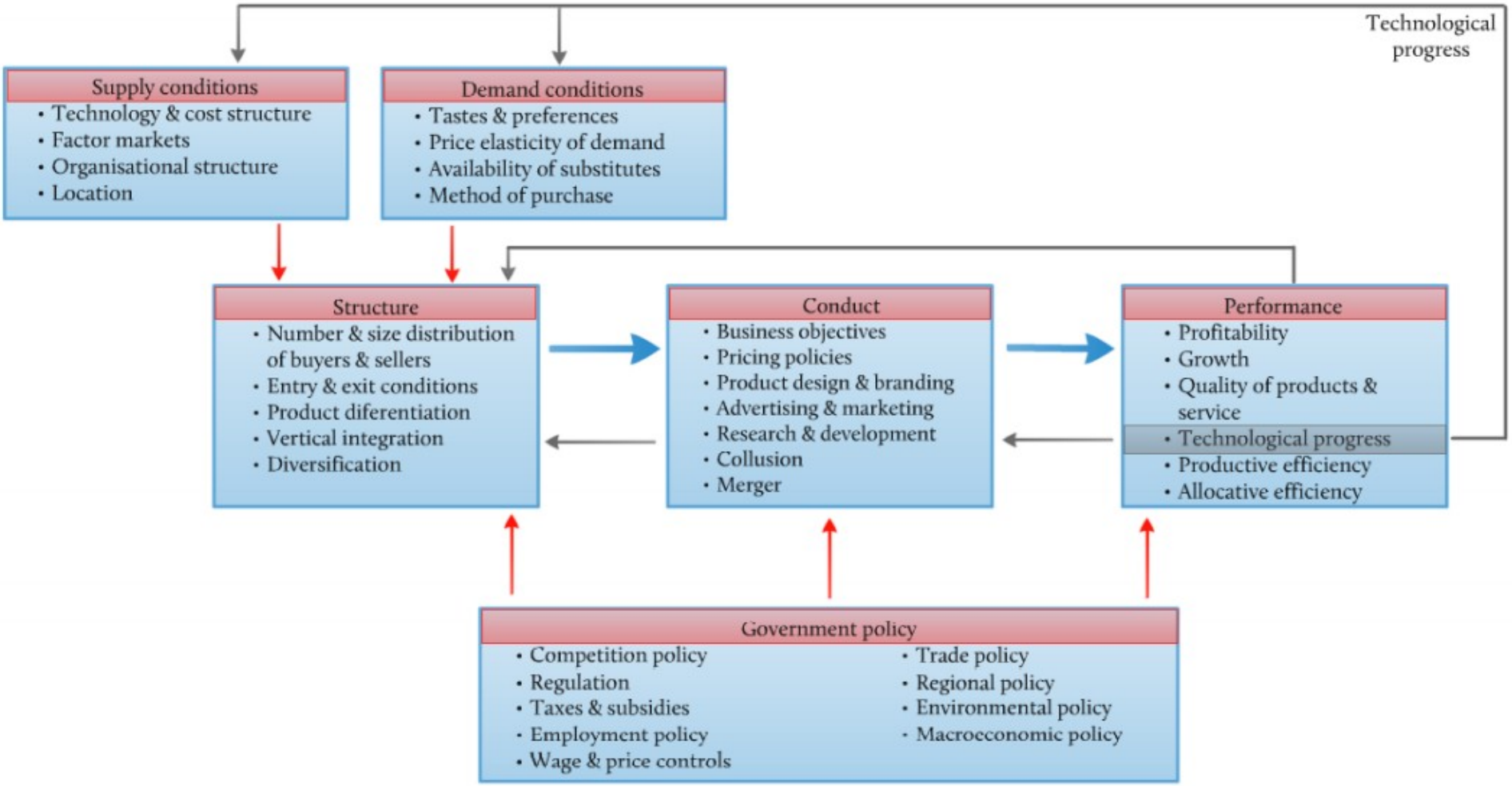
Understanding structure

- Classifying firms into industries
  - Industrial sectors
    - Classification helps analyse trends
    - Specific needs can be identified
    - To understand the relationships between firms
      - Importance of defining the boundaries of an industry
- Nature of the system of classification
  - Sections, subsections
    - Divisions, groups & classes

Business performance

- Structure-conduct-performance
  - Relationship between business structure & business conduct (behaviour)
    - Competitive markets & competitive behaviour
    - Limited competition & collusion
    - Importance of consumer tastes & technology
  - Relationship between business conduct & performance
    - Indicators for measuring performance
    - Profitability, market share, growth, etc.

The SCP framework



Law of demand

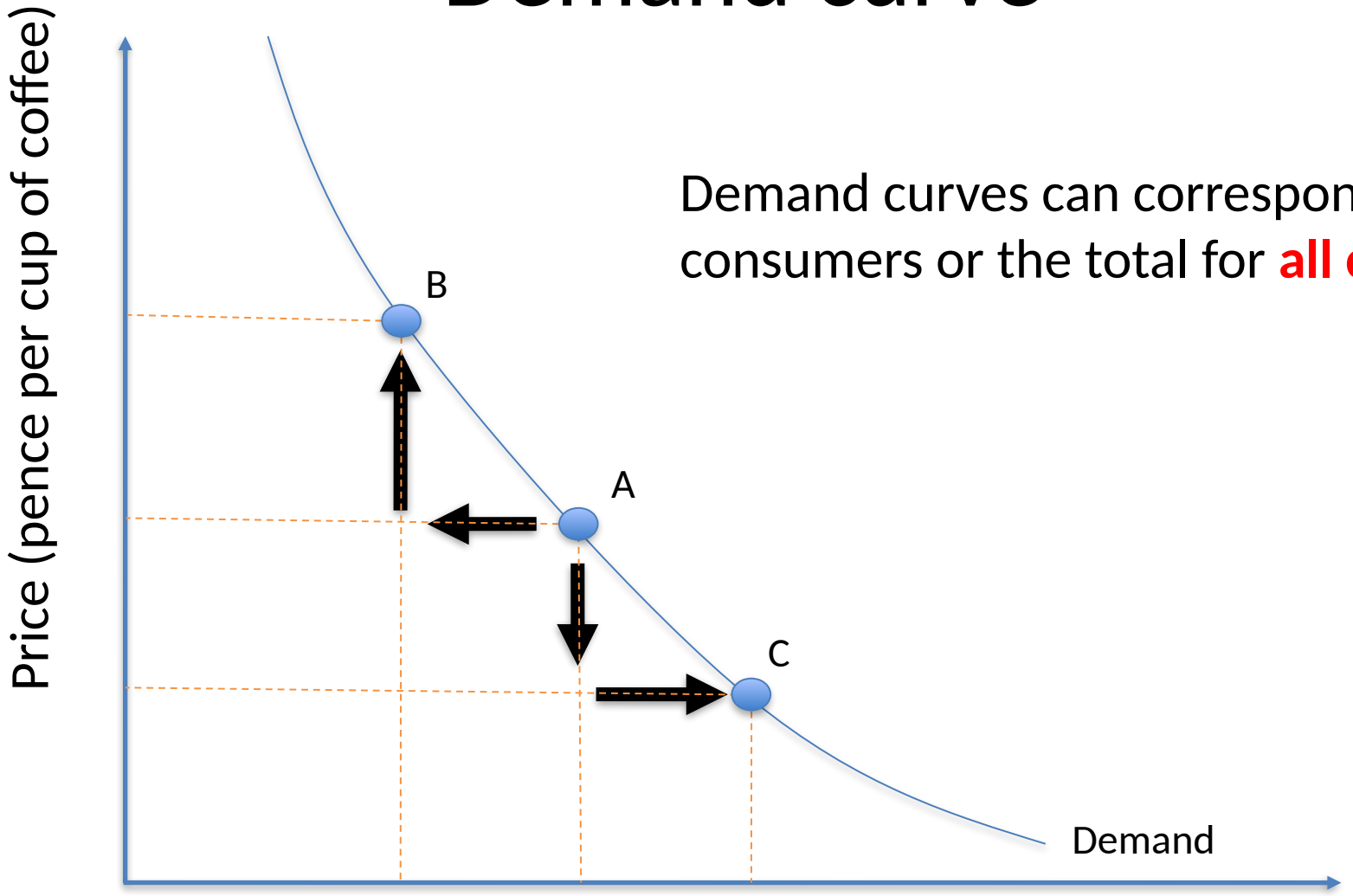
- This is an illustration of the general relationship between price and consumption:

when the price of a good rises,

the quantity demanded will fall

- which is due to two effects:
  - ***Income effect***
    - People are not able to afford to buy as much of the good with their money. The purchasing power of their income has fallen.
  - ***Substitution effect***
    - The good may now be more expensive than other goods. People switch to alternative ('substitute') goods.

Demand curve



Demand curves can correspond to **individual** consumers or the total for **all consumers**

Determinants of demand

- **Tastes** (the more desirable someone finds it, then the more they will demand it) are affected by:

  - Previous experiences
  - Observing what others buy (e.g. friends, family, social media influencers)
  - Considerations for health (your own, and others perhaps)
  - Advertising
  - Fashion

  - Can you think of examples?

Determinants of demand

- **Substitute goods** (i.e. competitors; number of and price)
  - Higher price substitutes increase demand for the good, as people switch away from substitutes
  - Can you think of examples?

Determinants of demand

- **Complementary goods** (i.e. goods consumed together; number of and price)
  - Higher price complements reduce demand for the good, as people switch away to substitutes
  - Can you think of examples?

Determinants of demand

- **Income**
  - As a person's income increases, their demand for most goods will rise
    - These are referred to as ***normal goods***
  - As a person's income increases, their demand for some goods will *not* rise
    - These are referred to as ***inferior goods***

Determinants of demand

- **Expectations:**
  - Of future price and/or quantity increases / decreases
  - Of future income increases / decreases
  - Can you think of examples?

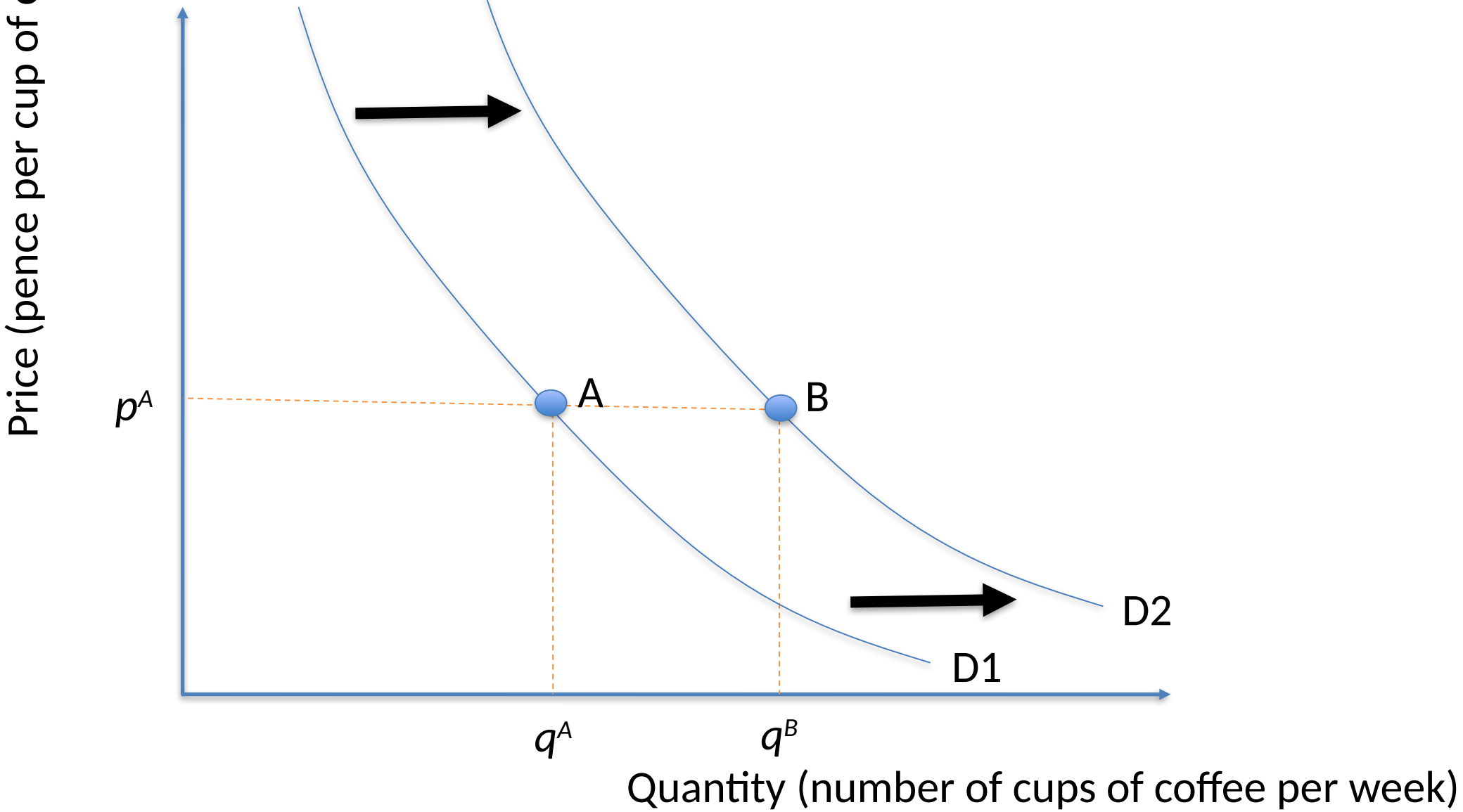
Movements along and shifts in the demand curve

The demand curve is constructed on the assumption that 'other things remain equal' (*ceteris paribus*, i.e. that none of the other determinants of demand change)

- The effect of a **change in price** is illustrated as a movement '***along***' the demand curve

- When one of the **other determinants** of demand change, then the demand curve '***shifts***' to the right/left

Shifts in a demand curve show how demand responds to ***non-price determinants***



Supply relationship

- The higher the price of a product, then the more a firm would be willing to supply that product. So, in general:

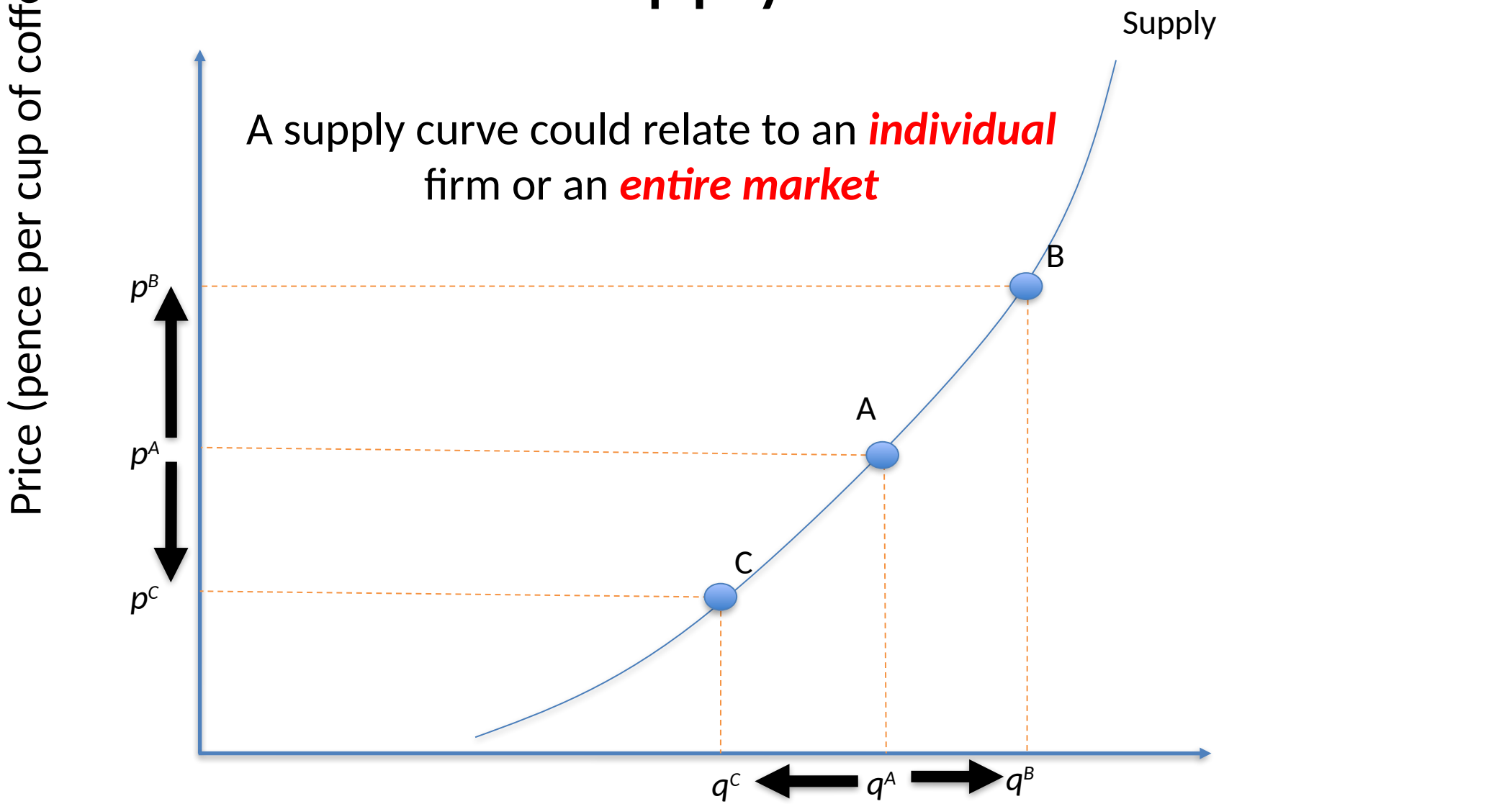
when the price of a good rises,
the quantity supplied will also rise

- Note that at higher quantities of supply, the costs of supplying the good are also likely to rise, so it is only worth producing more output if the price of the good also increases.

- In general, the higher the price of a product, then the more profitable it would be to supply that good to the market.

- E.g. a farmer will devote more of their land to the production of a particular type of crop when the price of that crop increases.

A supply curve



Determinants of supply

- ***Costs of production***

  - When costs increase, there are less profits to be made at that price.
    - Costs could change as a result of **changing input prices**, **changes in technology**, **organisational changes** within the firm, **changes in taxation**, etc.

  - As costs rise, firms often cut back on production, perhaps switching to produce an alternative good whose costs have not risen by as much.

Determinants of supply

- ***Profitability of substitute*** products
  - Many firms produce a range of products, and they may shift production (and hence output levels) from one product to another product in response to changing circumstances.

    - E.g. if the price of carrots go up or the cost of producing carrots go down, farmers may switch to producing carrots and away from growing, say, parsnips.

Determinants of supply

- ***Profitability of goods in joint supply***
  - E.g. cheese production creates the ***by-product*** of whey, which is a primary ingredient of many protein powders (often sold as a product to enhance the growth or maintenance of muscle mass)

Determinants of supply

- ***Random shocks***
  - Nature / unpredictable events
  - Weather
  - Industrial disputes
  - …

Determinants of supply

- ***Aims of producer***

  - A firm ***maximising profit*** will probably supply a different quantity of a product than a firm ***maximising sales***, or another aim

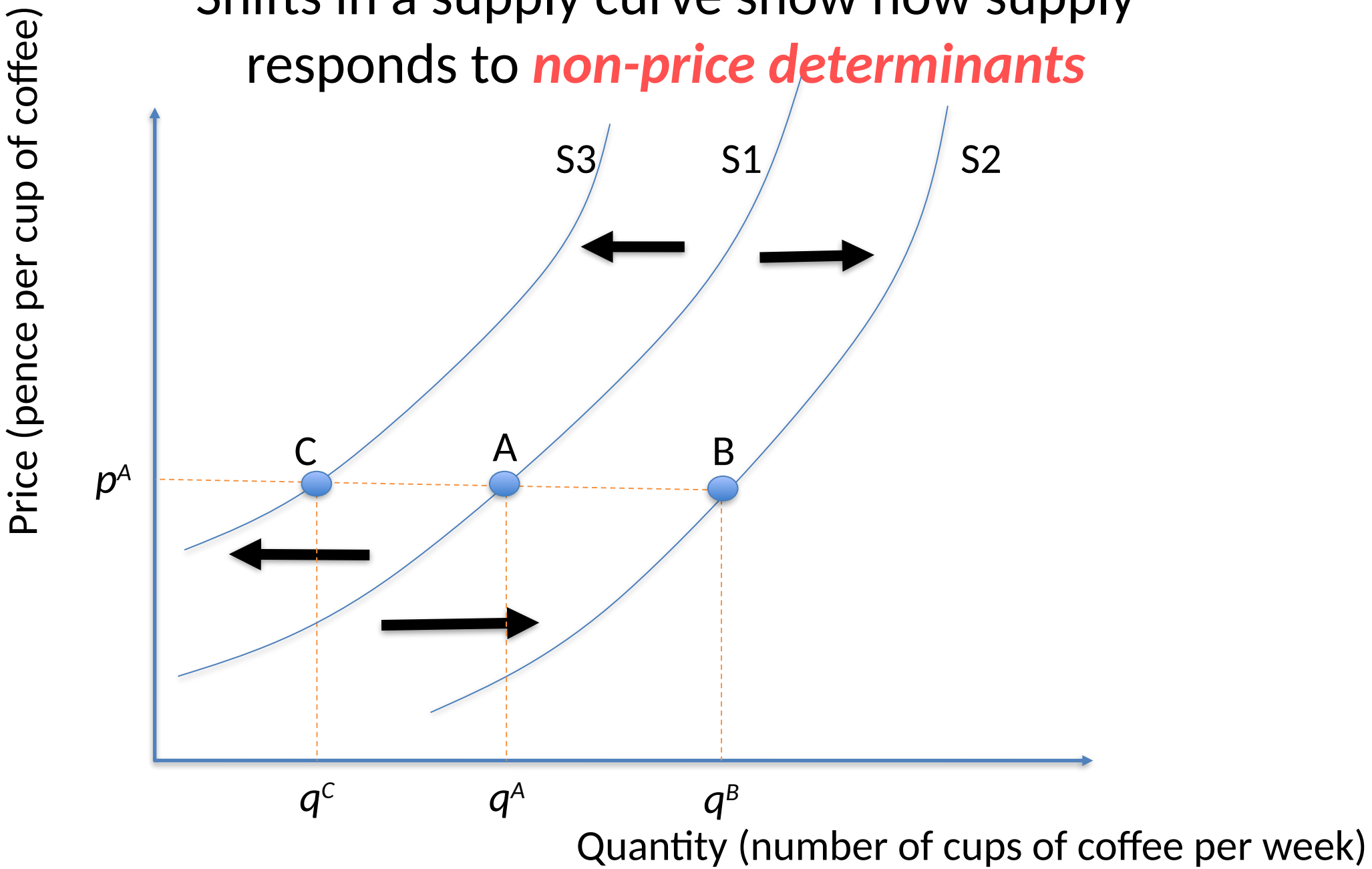
Determinants of supply

- ***Expectations of future price changes***

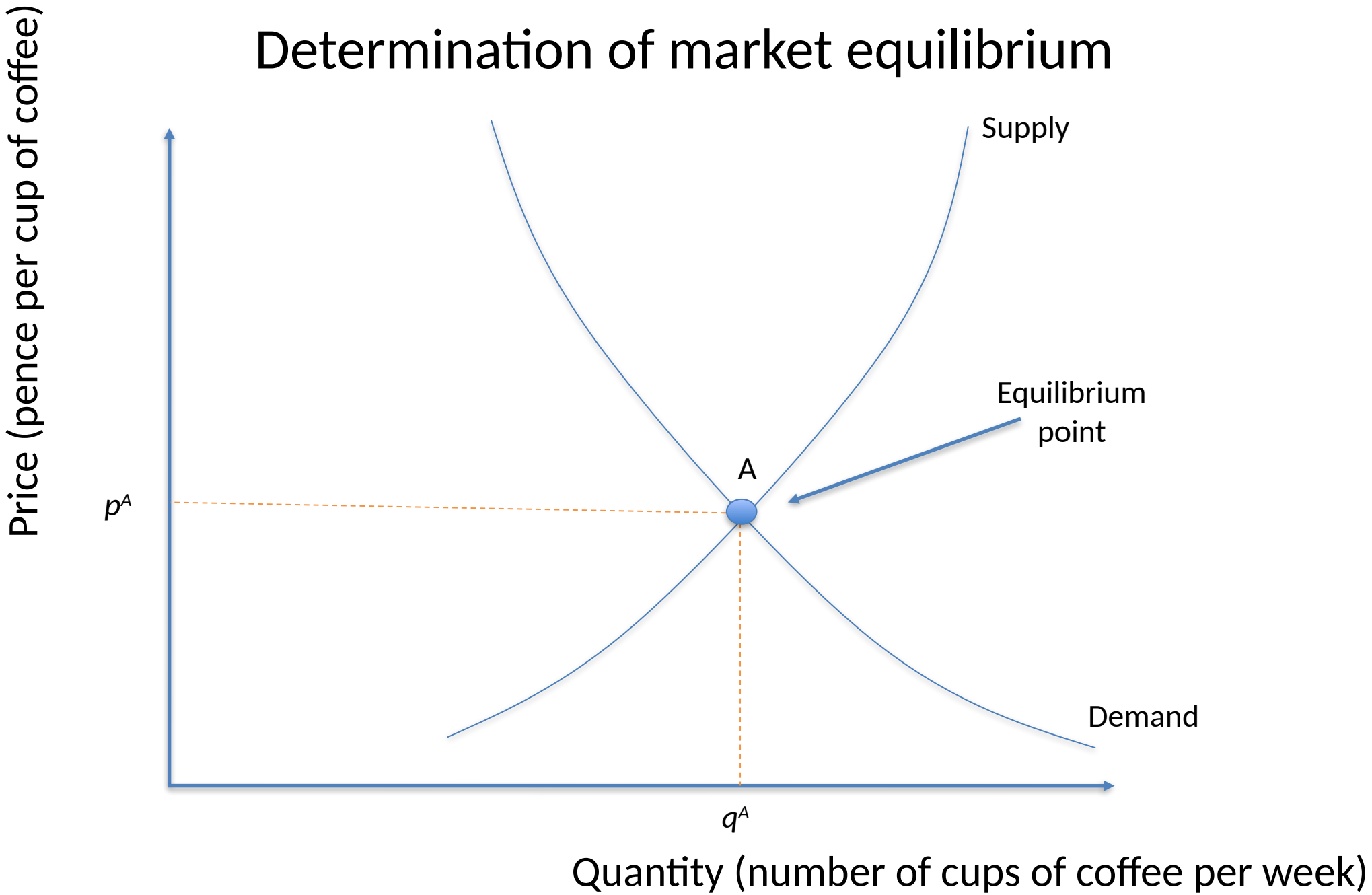
  - If prices are expected to rise, firms may temporarily reduce the amount that they supply to the market, and instead build up stocks.

    - E.g. if you are going to sell a house, and expect the price of the house to rise in the near future, then you may delay putting it on the market.

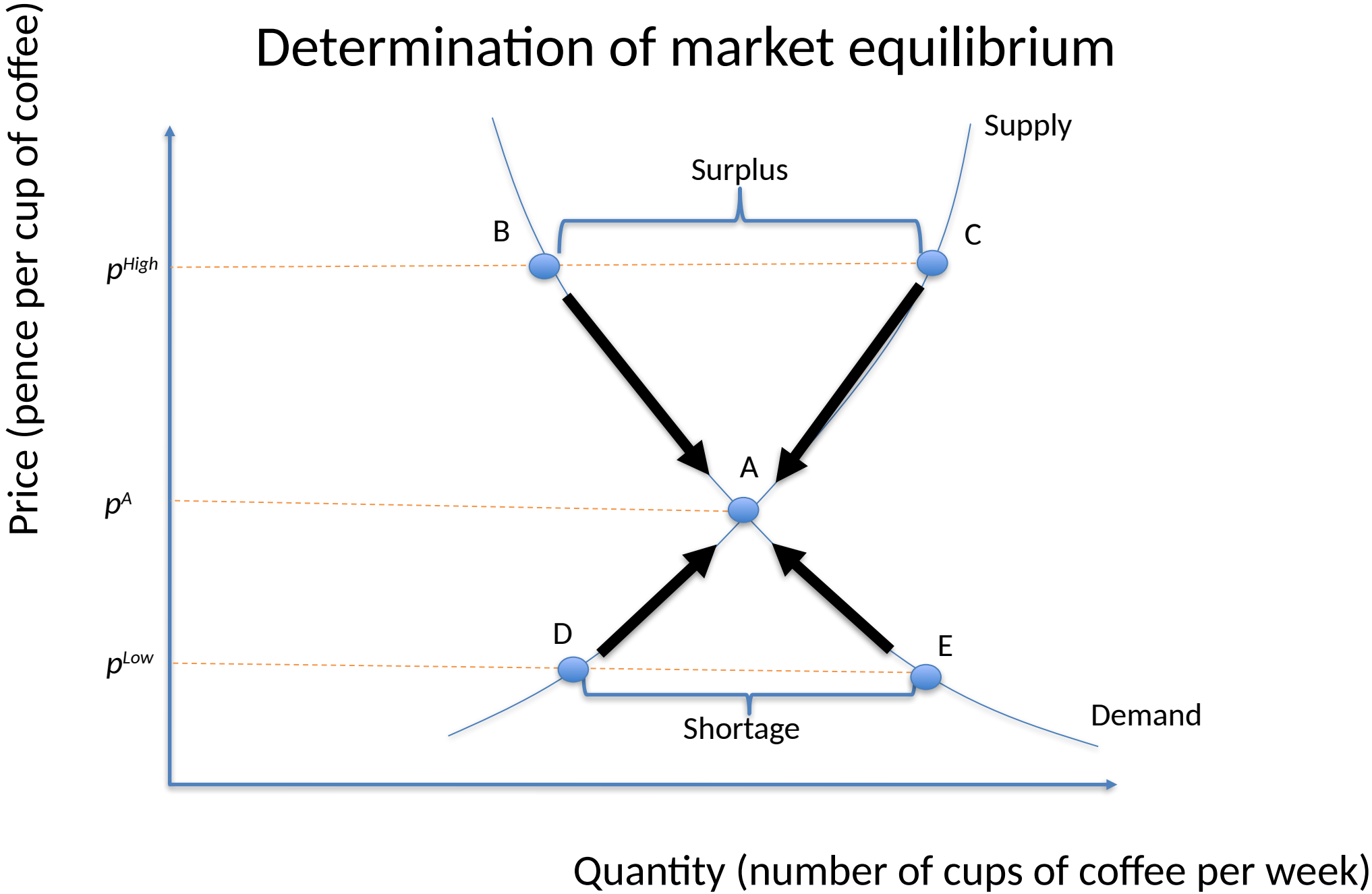
Shifts in a supply curve show how supply responds to ***non-price determinants***



Determination of market equilibrium



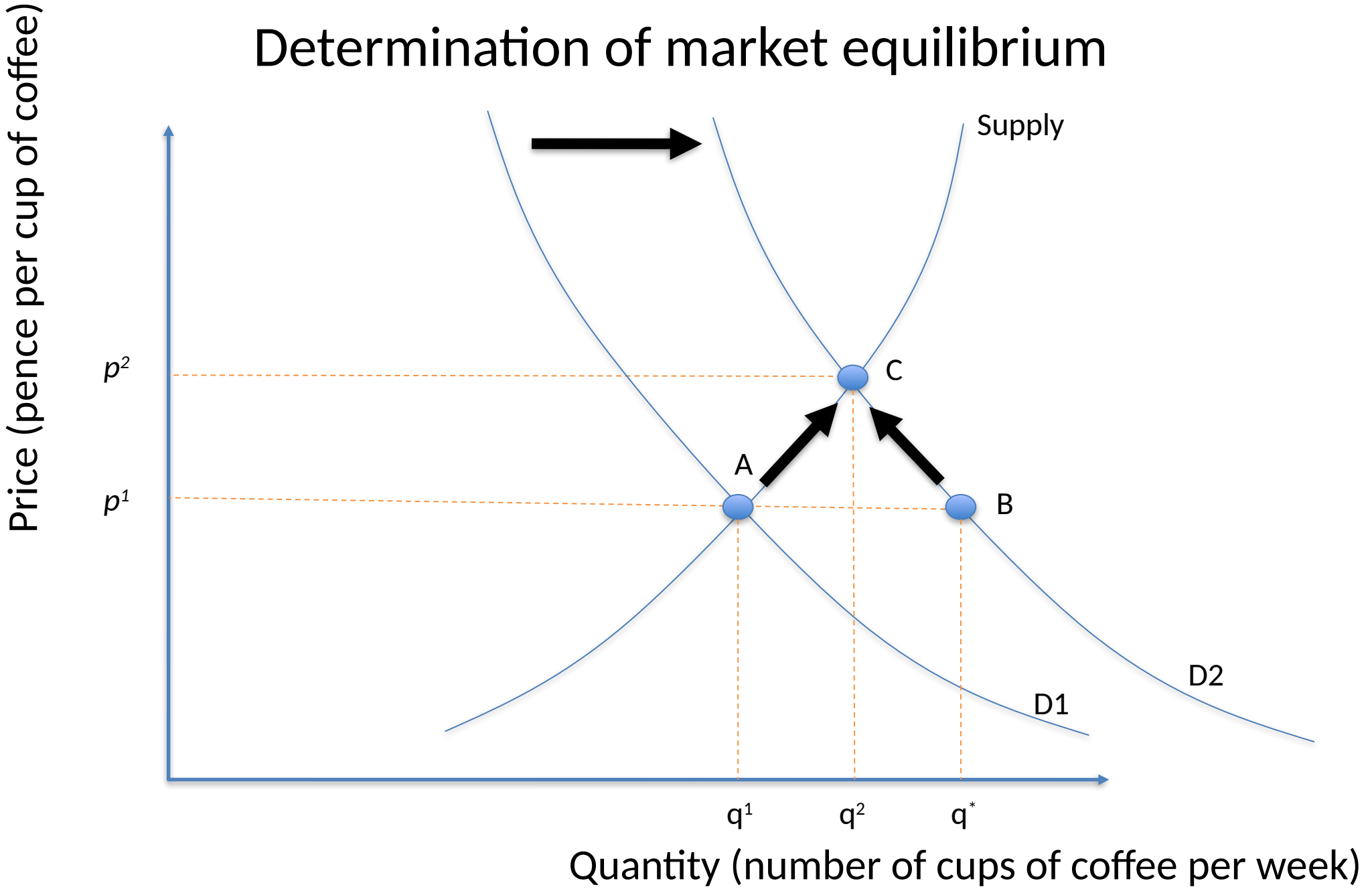
Determination of market equilibrium



What happens to the market clearing price and quantity of a good if there is an initial ***increase*** in a **non-price** determinant of ***demand***?

(e.g., an increase in incomes)

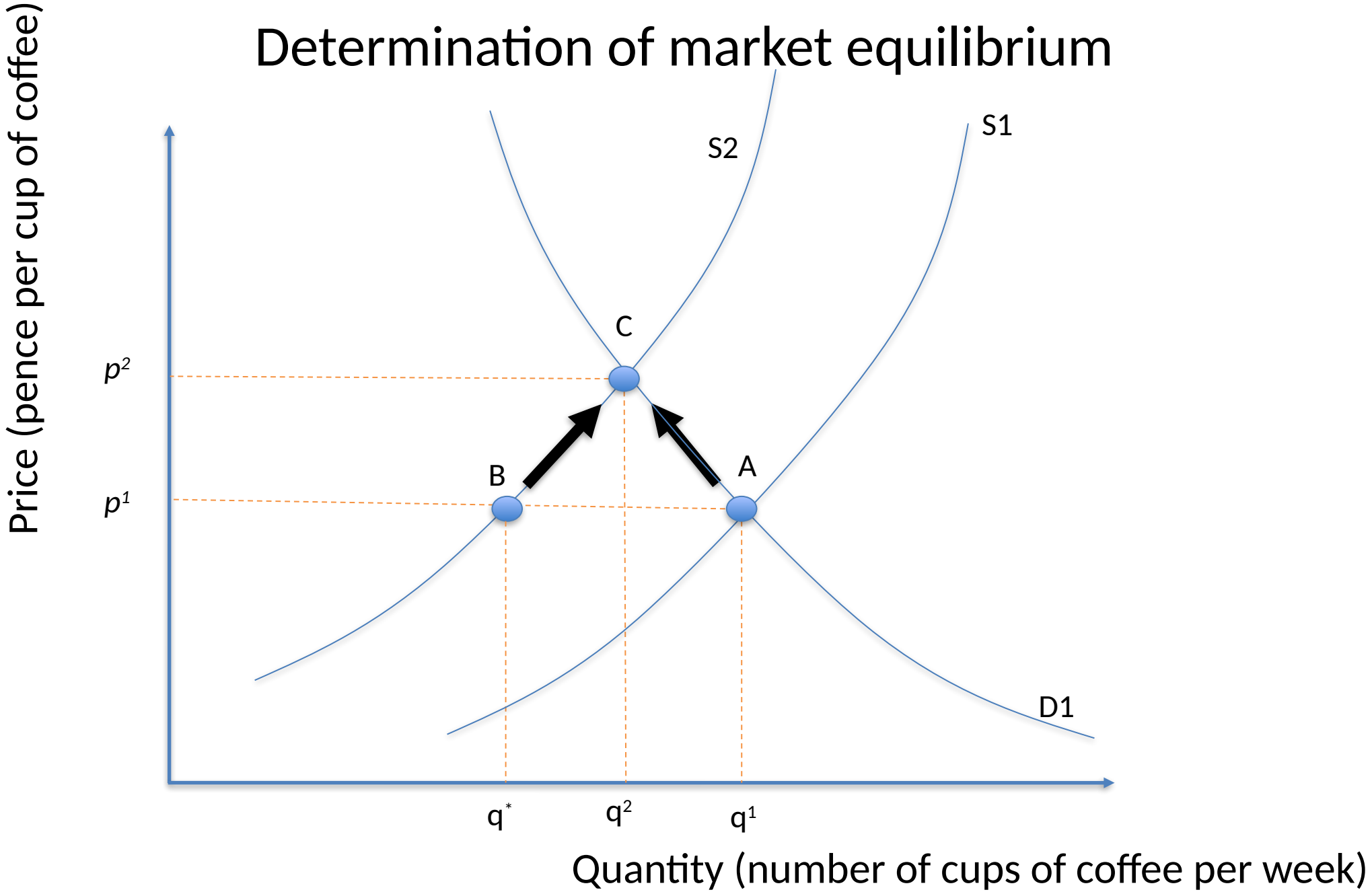
Determination of market equilibrium



What happens to the market clearing price and quantity of a good if there is an initial ***decrease*** in a ***non-price*** determinant of ***supply***?

(e.g., there is an increase in the profitability of producing a substitute good)

Determination of market equilibrium



- When the price of a good rises, the demand for the good will fall

- But by **_how much_** will it fall?

- How **_responsive_** is demand to a rise or fall in price?

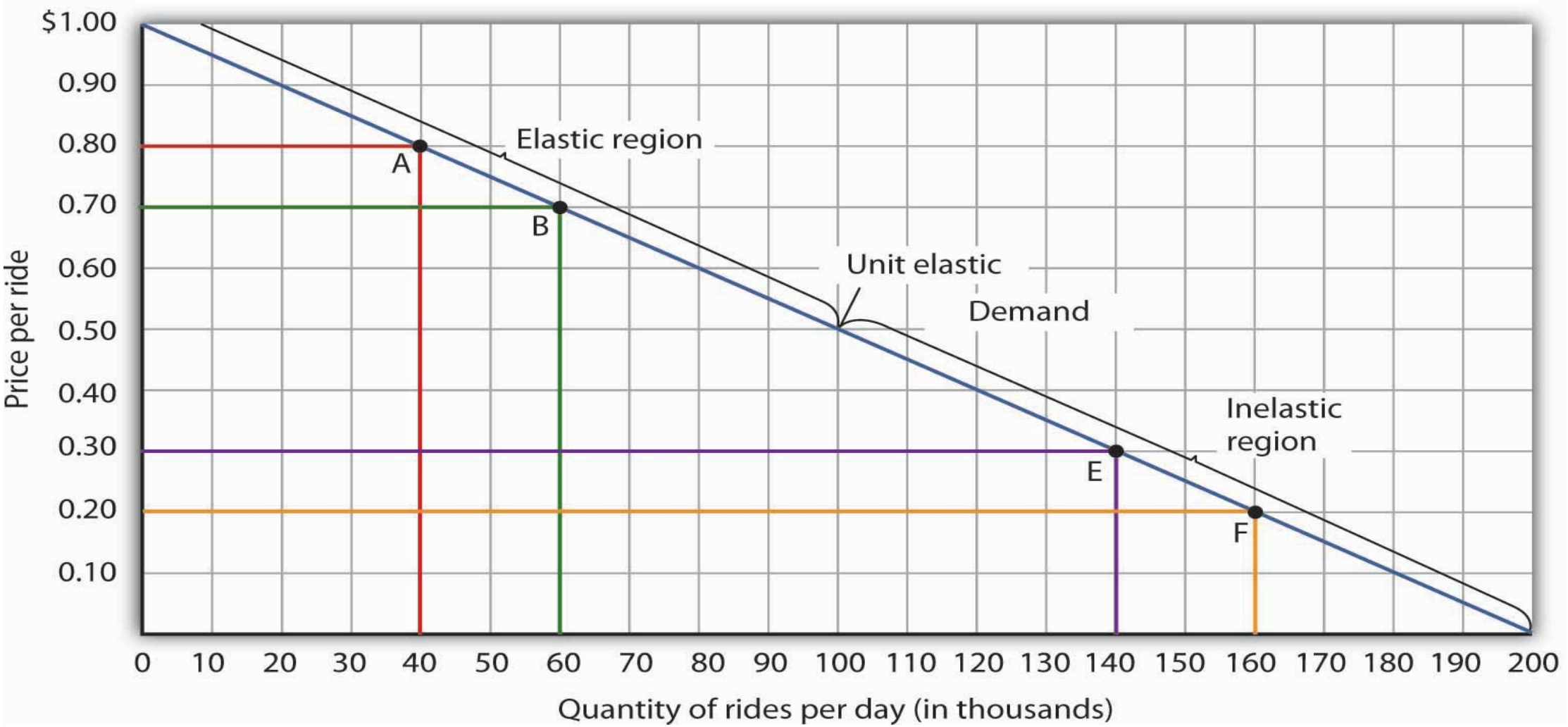
- The responsiveness of demand to a change in price is called the _**price elasticity of demand**_

$$P\varepsilon_D = \frac{\text{Proportional (or percentage) change in } \textbf{quantity demanded}}{\text{Proportional (or percentage) change in } \textbf{price}}$$

$$P\varepsilon_D = -10\% / +20\% = -0.5$$

Why is the $P\varepsilon_D$ important?

- $P\varepsilon_D$ varies along the demand curve



Why is the $P\varepsilon_D$ important?

- Let's consider the key ranges $+1<P\varepsilon_D<+\text{infinity}$ (elastic) and $0<P\varepsilon_D<+1$ (inelastic) as these ranges will apply to most products and services rather than the knife-edge case of $P\varepsilon_D=1$ (dropping minus signs here and using plus signs)
- When demand is price elastic a fall in price ($0.8 to $0.7) increases revenue
- Why? It is because the lost revenue from the fall in price is less than the revenue gained from the rise in quantity sold
- When demand is price inelastic a fall in price ($0.3 to $0.2) decreases revenue
- Why? It is because the lost revenue from the fall in price is greater than the revenue gained from the rise in quantity sold.

Other elasticities

Income ε_D =

$$\frac{\text{Proportional (or percentage) change in quantity demanded}}{\text{Proportional (or percentage) change in income}}$$

Luxury (elastic) vs. Necessity (inelastic)

Cross-price ε_D =

$$\frac{\text{Proportional (or percentage) change in quantity demanded for good A}}{\text{Proportional (or percentage) change in price of good B}}$$

Substitutes (+ve) Complements (-ve)

Price ε_{Supply} =

$$\frac{\text{Proportional (or percentage) change in quantity supplied}}{\text{Proportional (or percentage) change in price}}$$

Spare capacity and cost inefficiency

Sheffield University Management School.

MGT6128: Managerial Economics
2024-25

Topic 2: Consumers & Demand

Sheffield University Management School.

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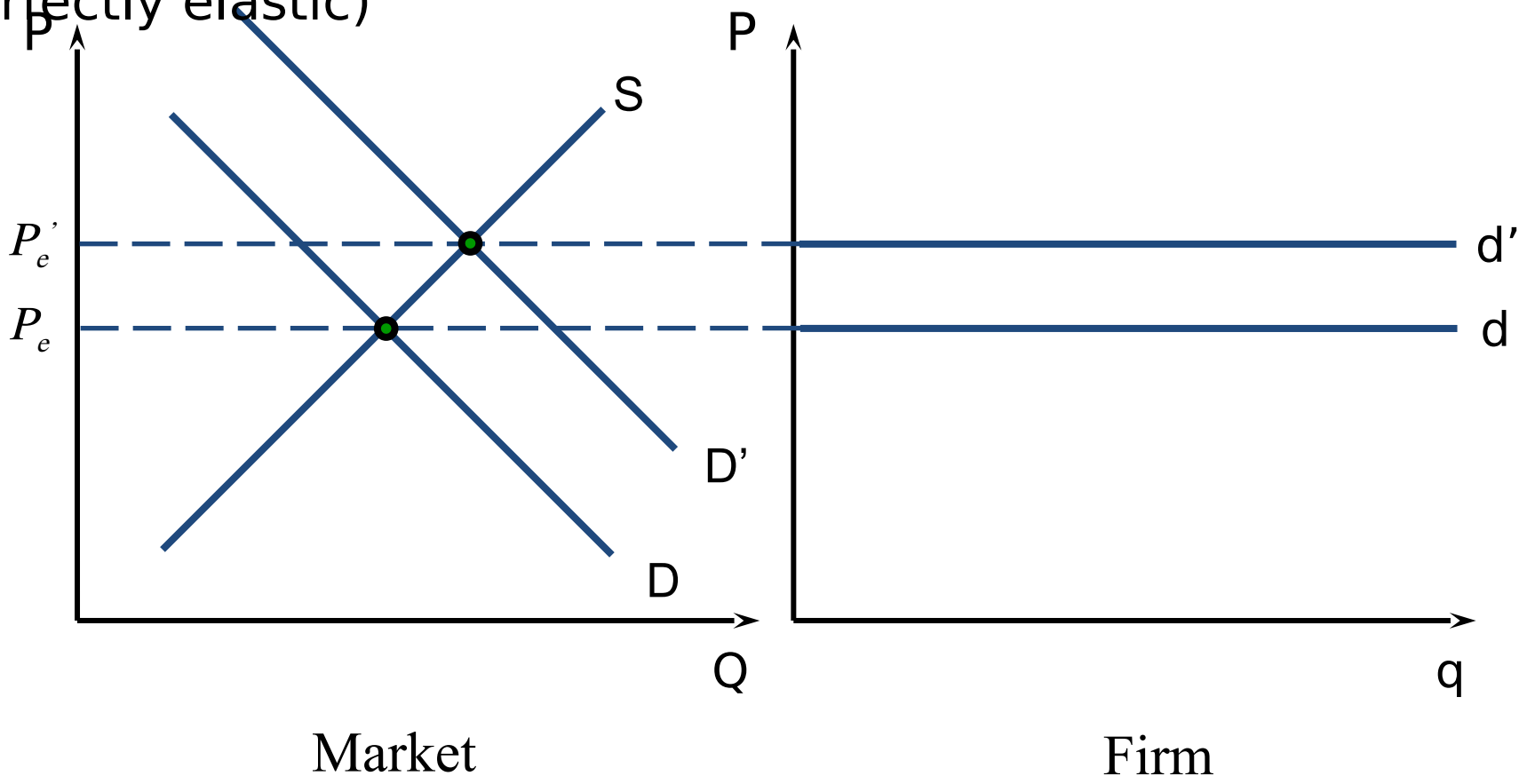
Demand & the ***perfectly competitive*** firm

In perfectly competitive markets, each producer (& consumer) is too small relative to the size of market to influence price => *price takers*. Hence, firms face a horizontal demand curve (i.e. perfectly elastic)



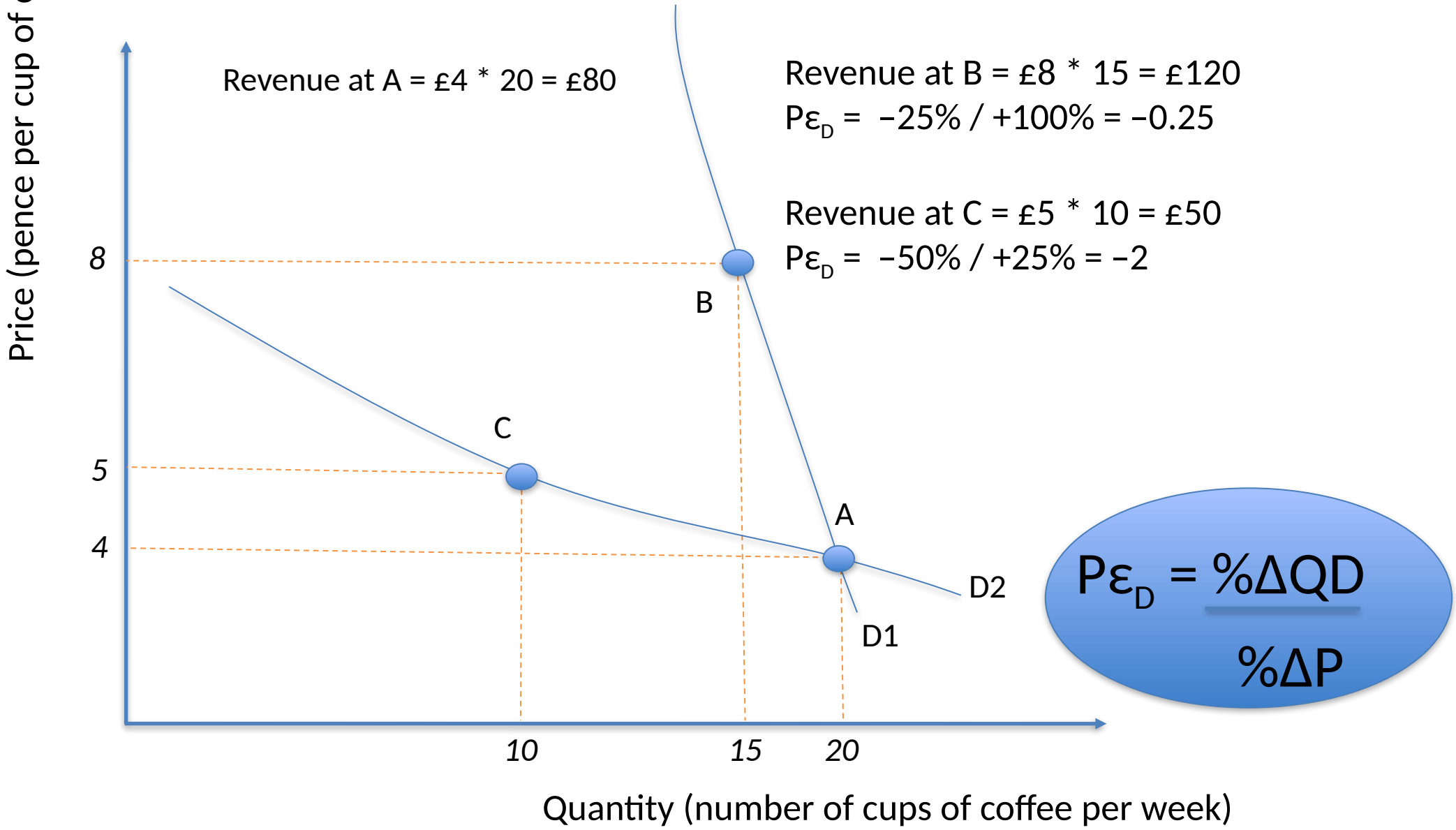
Demand & the ***imperfectly competitive*** firm

- In ***im***perfectly competitive markets, firms have some discretion about price => ***price makers***

  - Firms face a downward sloping demand curve

    - If they lower their price, they will sell more
    - If they increase their price, they will sell less
    - Knowledge of the $P\varepsilon_D$ for their goods is crucial for firms considering any price change(s)

Why is $P\varepsilon_D$ important?

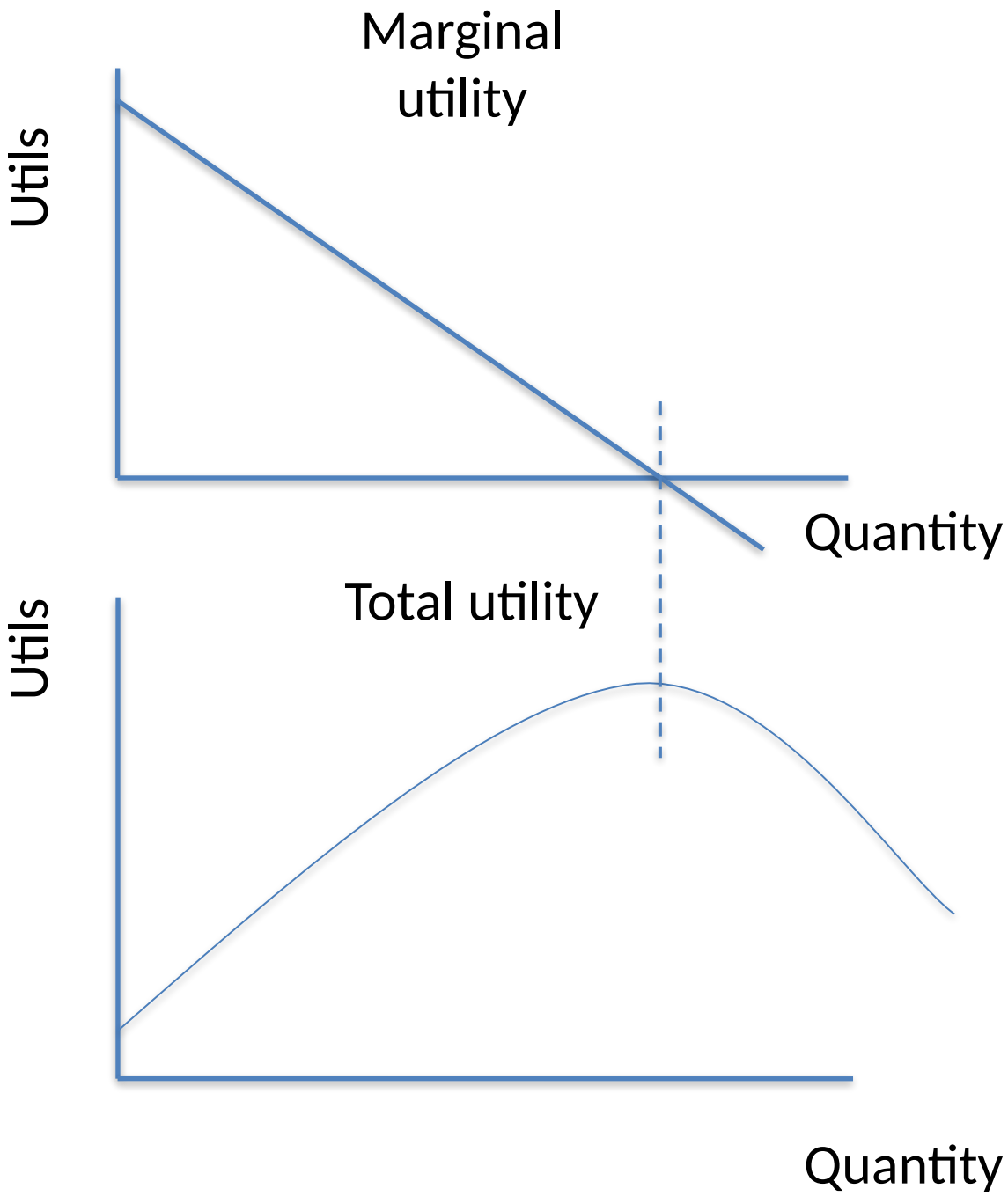


Consumer behaviour

- Economists often relate consumer demand to the satisfaction that consumers get from products
  - Utility reflects the benefit or satisfaction from consumption

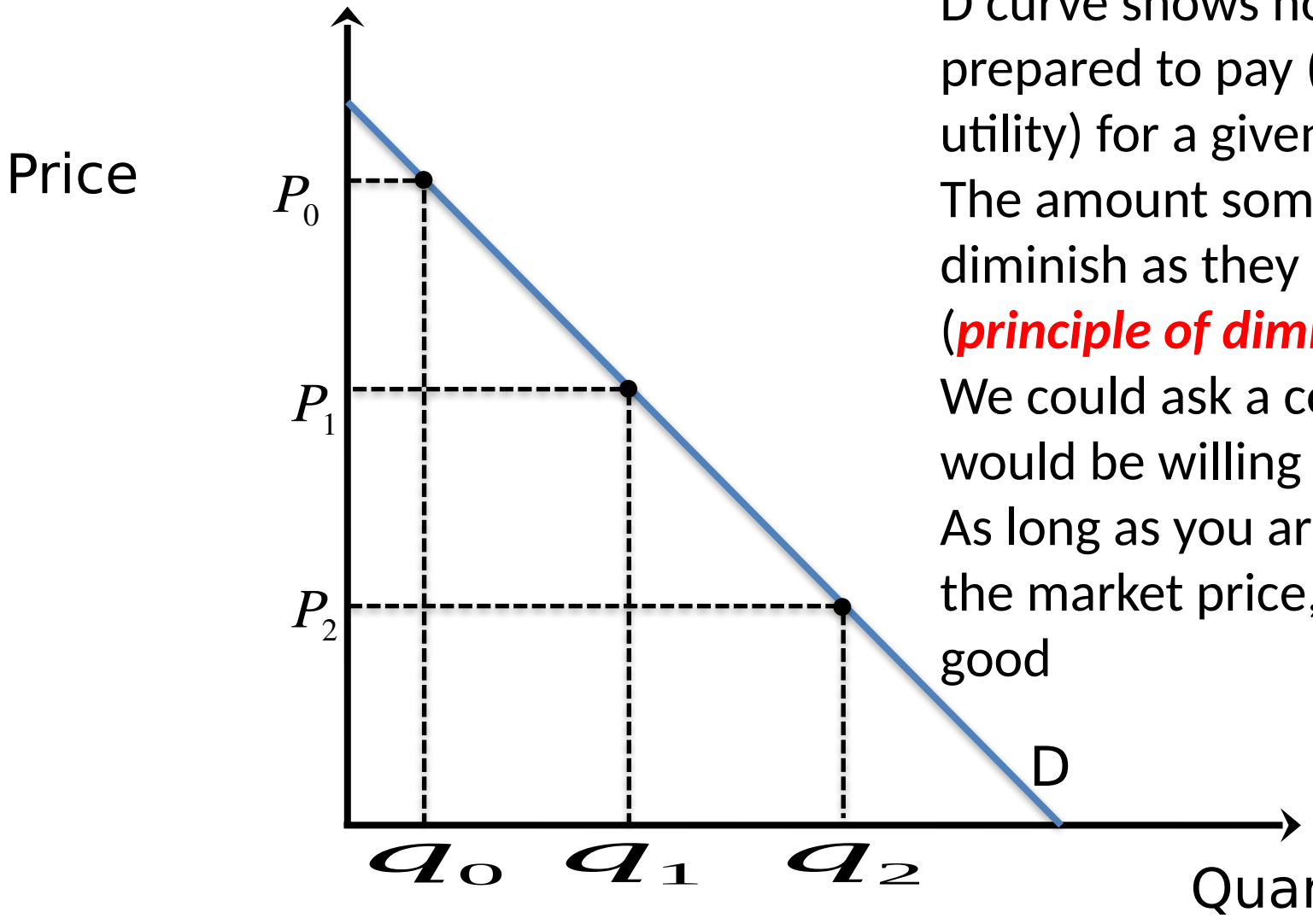
- Firms try to make demand for their products ***less*** elastic, for instance, by attempting to differentiate their products from their rivals' products. By doing so, consumers ***perceive*** their goods are ***not*** close substitutes.

- Here we will explore total utility (*TU*) and marginal utility (*MU*), and the principle of diminishing *MU*.
  - *MU* is the additional satisfaction gained from the consumption of one ***extra*** unit of a good. E.g. satisfaction received from 2nd or 5th slice of pizza



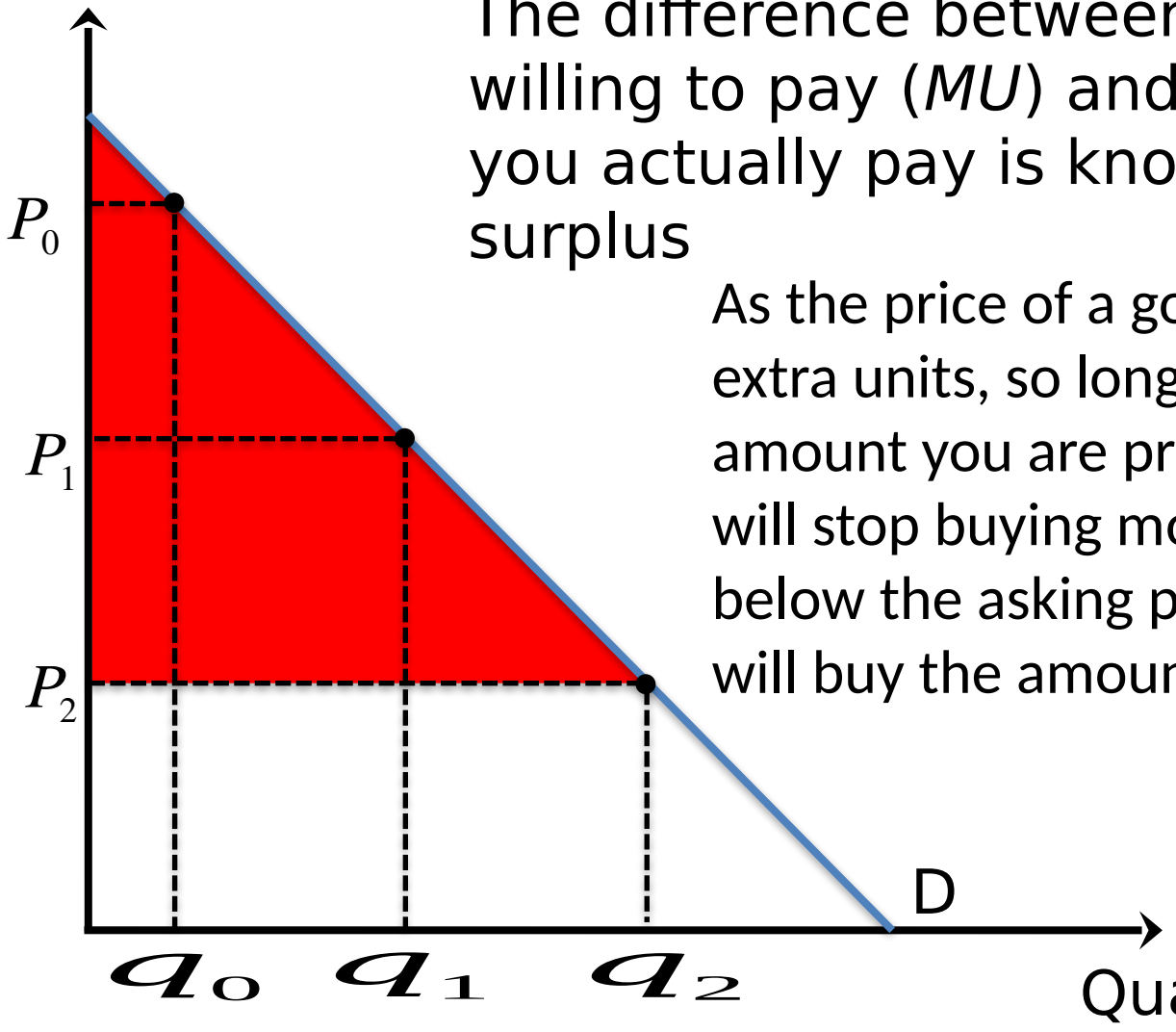
For a single item,
TU is maximised when *MU*=0

Deriving an individual's demand curve



D curve shows how much consumers are prepared to pay (an indicator/measure of utility) for a given quantity of a good.
The amount someone wishes to buy will diminish as they purchase more units (***principle of diminishing marginal utility***)
We could ask a consumer how much they would be willing to pay for something.
As long as you are willing to pay more than the market price, then you will purchase the good

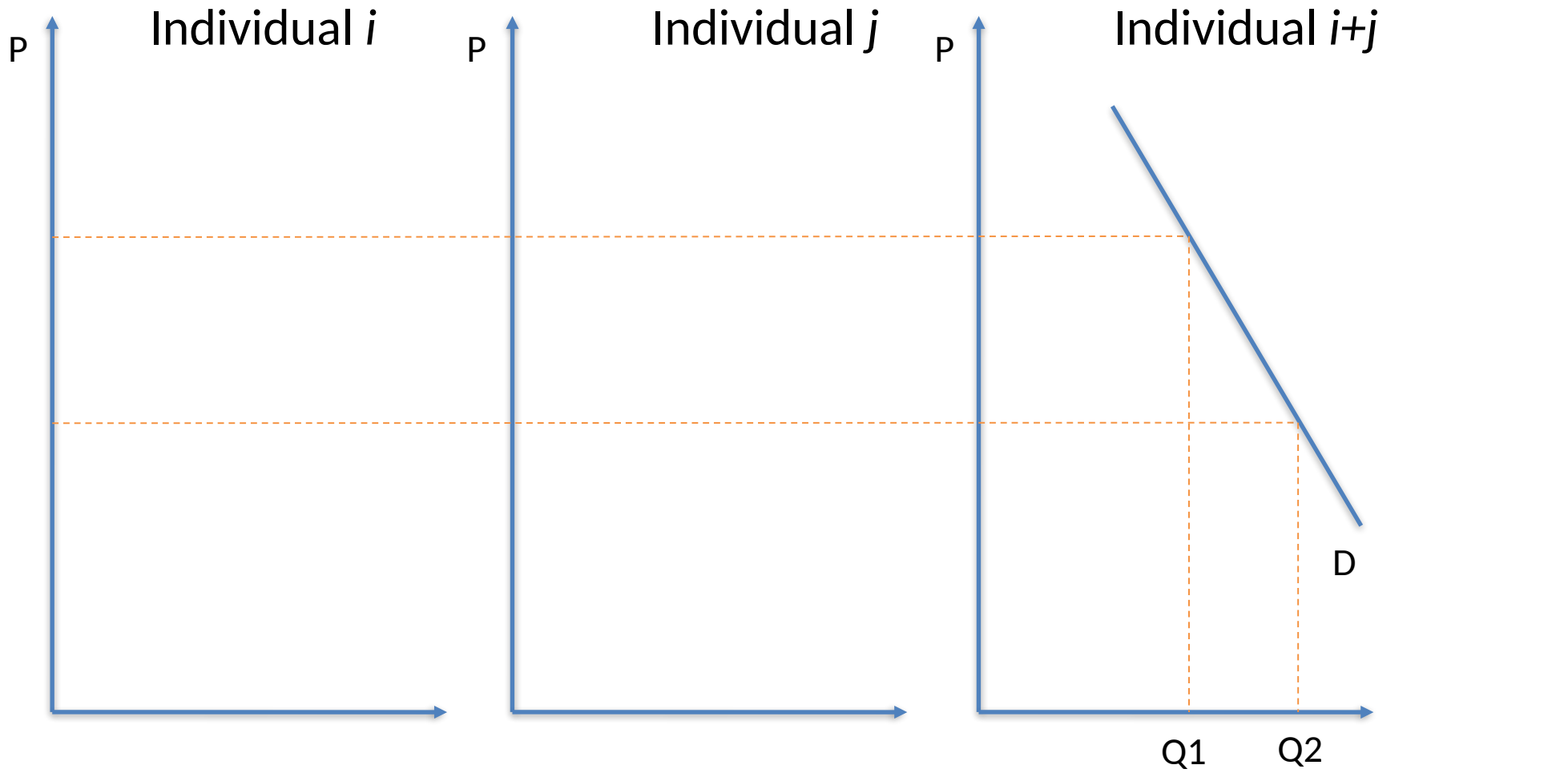
Consumer surplus



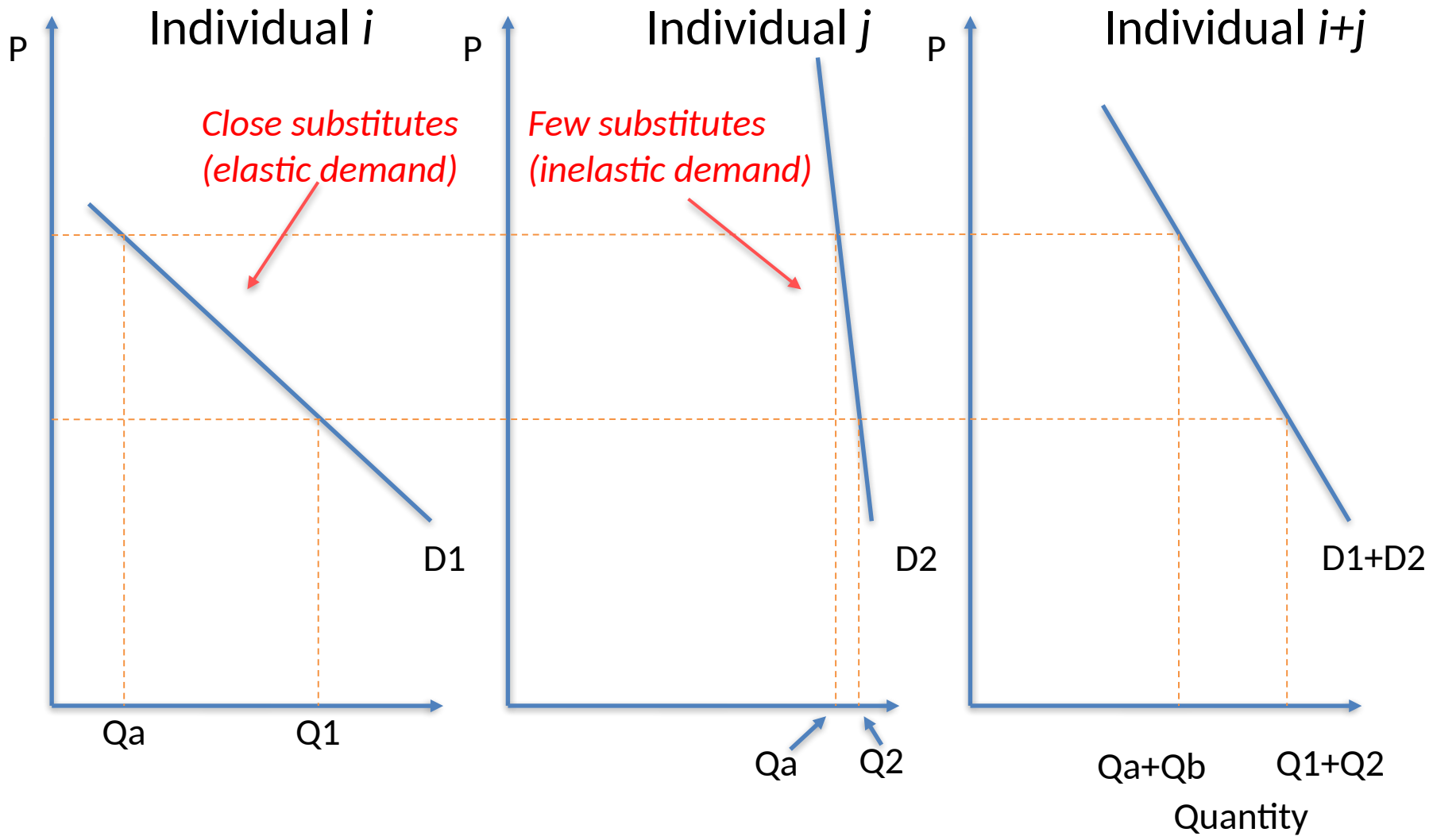
The difference between what you are willing to pay (*MU*) and the price that you actually pay is known as consumer surplus

As the price of a good falls, it is worth buying extra units, so long as the price is below the amount you are prepared to pay (MU). You will stop buying more when the MU falls below the asking price; hence, consumers will buy the amount where P=MU

Demand curve for a good



Demand curve for a good



Behavioural economics

Behavioural economics relaxes the assumption of rationality and looks at the ways people *actually* behave (merging of Economics & Psychology)

- Framing (e.g., sale) [‘Nudge’]
- Bounded rationality (‘heuristics’, i.e., satisficing, see below)
- Herding & ‘groupthink’ (e.g., fashion)
- Too much choice (e.g., habit, see below)
- Relativity matters (e.g., positioning, role of influencers)
- Emotional responses (offering credit raises the immediacy of consumption, and down plays future repayments – impatience and bias towards the present)

- The majority of customers have imperfect information about the products, but sometimes consumers don’t feel the benefits of the additional information is worth the costs, so they use heuristics (which are quick mental short cuts in thinking); this might not be optimal, but might be the best bet under the circumstances
- Too much choice can confuse consumers, and it can hinder their decision making and reduce the likelihood that they make a decision. Often consumers rely on their consumption habits instead

Estimating & predicting demand

- Successful firms have a good understanding of their market
- The more effectively a business can identify what their consumers want, then the more likely it is to increase its sales and be successful.

Market observations

- Almost all firms have detailed information about their sales (weekly / monthly / annually)
  - This information tells the manager how their sales varied over time
- Firms need to obtain data on how various determinants of demand (advertising, price of competitors' goods, etc.) have changed over time
- Firms could pay agencies to collect some information for them
- BUT, relationships that held in the past, may not hold in the future
  - Perceptions of products change
  - Tastes change / technologies change

Market surveys

- Market researchers approach you in the street, phone you up, knock at the door, send you postal surveys, etc. and ask you to answer questions about your consumer behaviour. E.g.:
  - Past / present / future patterns of expenditure
  - Your response to changing price
  - Your response to changing product specifications
    - Of a particular good and the competitors' goods

- Sometimes include market segregation
  - E.g. only consumers of luxuries / only students / only the over 50s, etc.

Market experiments

Rather than asking consumers to imagine how they would behave, market experiments observe consumer behaviour under simulated conditions

- Observe consumer reactions to a new product or at a new price
- “Blind taste tests” at fairs / markets, etc
- “Laboratory shops” simulate real shopping experiences, but observe consumers reactions to particular changes (e.g. store layout or prices, etc.)
  - People might behave differently because they are being observed – e.g. spend more time looking at prices than they ordinarily would

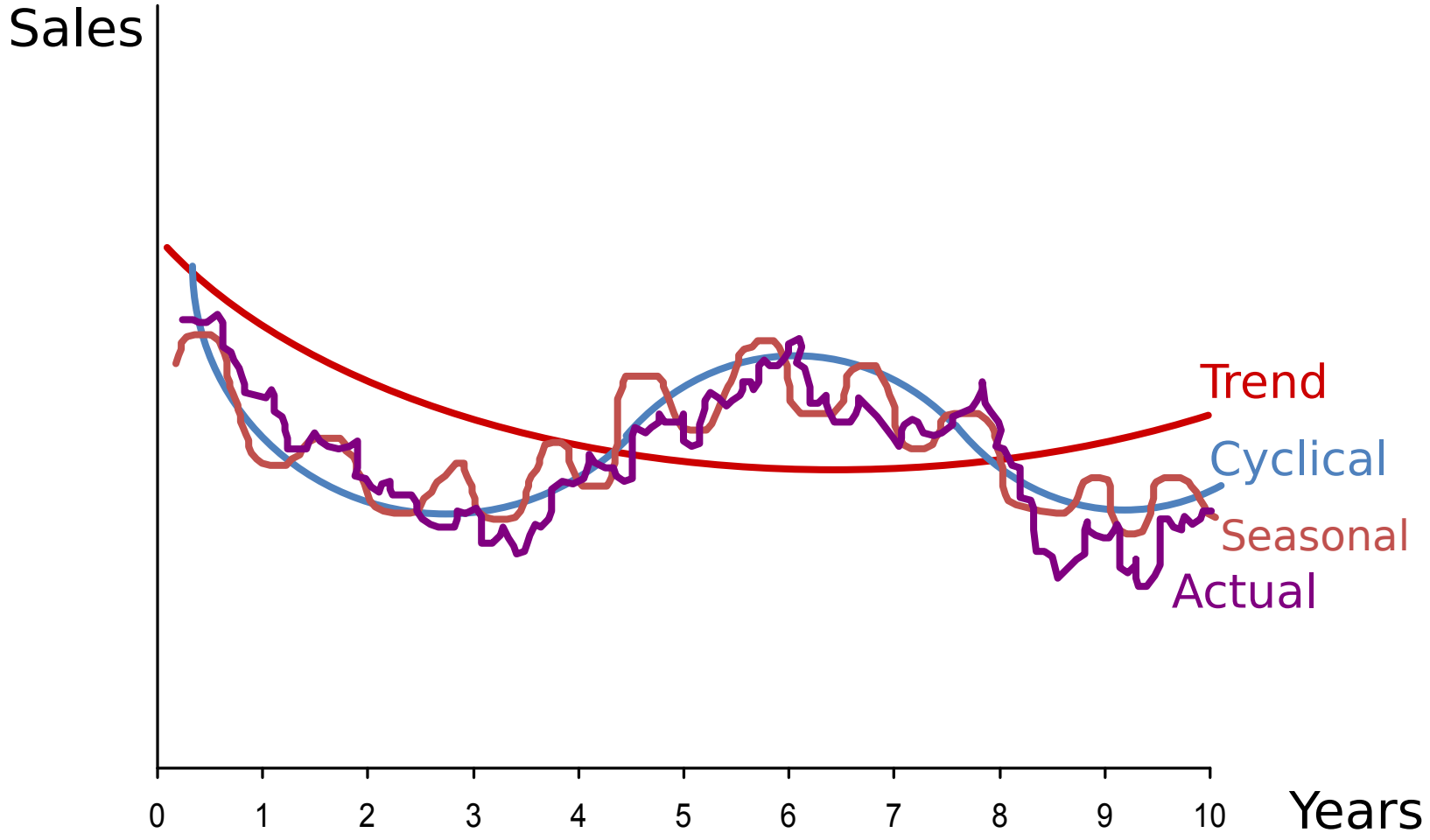
Forecasting demand

- Time series analysis
  - Extrapolation of past sales data to the future (e.g. growth, seasonal variations)
  - Assumes past behaviour continues into the future
    - But the determinants of demand changes over time!

- Decomposition of time paths
  - Elements in time paths
    - Trends / cyclical fluctuations / seasonal fluctuations
    - Past short-term shifts in demand or supply can be identified, e.g., shocks
  - Still limited by being based on historical data

- In both cases we can’t be sure what the data really reflects (we are making an “informed guess”)

Decomposition of time paths



Source: Sloman & Jones (2020), Fig. 3.3

Estimating & predicting demand

- Barometric forecasting uses a combination of indicators rather than a single trend
  - Use of ‘leading indicators’ (e.g. house building starts, number of pregnancies)
    - Reflects confidence in the economy
    - Reflects a ‘general’ indication of changes in demand and is not necessarily specific to a particular product/service
  - Limitations in terms of short time horizons (months), general direction only, and expectations still formed assuming historical relationships hold

Non-price competition

- Firms don’t simply take their market as given; they often wish to increase demand through non-price competition

  - Product development
    - Technical standards and attributes (e.g. laptop specifications)
    - Quality (durability / reliability)
    - Design (direct appeal [colour/style/packaging/etc.])

  - Product differentiation
    - Servicisation (servitisation) – after sales service and maintenance

  - Advertising and marketing (often persuasive)

  - Company loyalty

Product differentiation

- Vertical product differentiation
  - Quality / Price
- Horizontal product differentiation
  - Specific features but not quality / price based
- Market segmentation
  - Targeting specific parts of the market
  - Niche markets

Growth vector components

	Existing products	New products
Existing markets	Market penetration	Product development
New markets	Market development	Diversificatio n

Stimulating demand

- Four ways a firm can differentiate its product from a rival’s product (i.e. the marketing mix: the 4Ps):
  - **Product**
  - Price
  - Place
  - Promotion

- Product considerations: quality, reliability, branding, packaging, after-sales service

Stimulating demand

- Four ways a firm can differentiate its product from a rival's product (i.e. the marketing mix: the 4Ps):
  - Product
  - **Price**
  - Place
  - Promotion

- Price: product's own price, own price relative to competitors, price discrimination (charging different prices for the same/similar product), discounts to particular customers

Stimulating demand

- Four ways a firm can differentiate its product from a rival’s product (i.e. the marketing mix: the 4Ps):
    - Product
    - Price
    - **Place**
    - Promotion

- Place considerations: location of outlets, logistics, etc.

Stimulating demand

- Four ways a firm can differentiate its product from a rival's product (i.e. the marketing mix: the 4Ps):
    - Product
    - Price
    - Place
    - **Promotion**

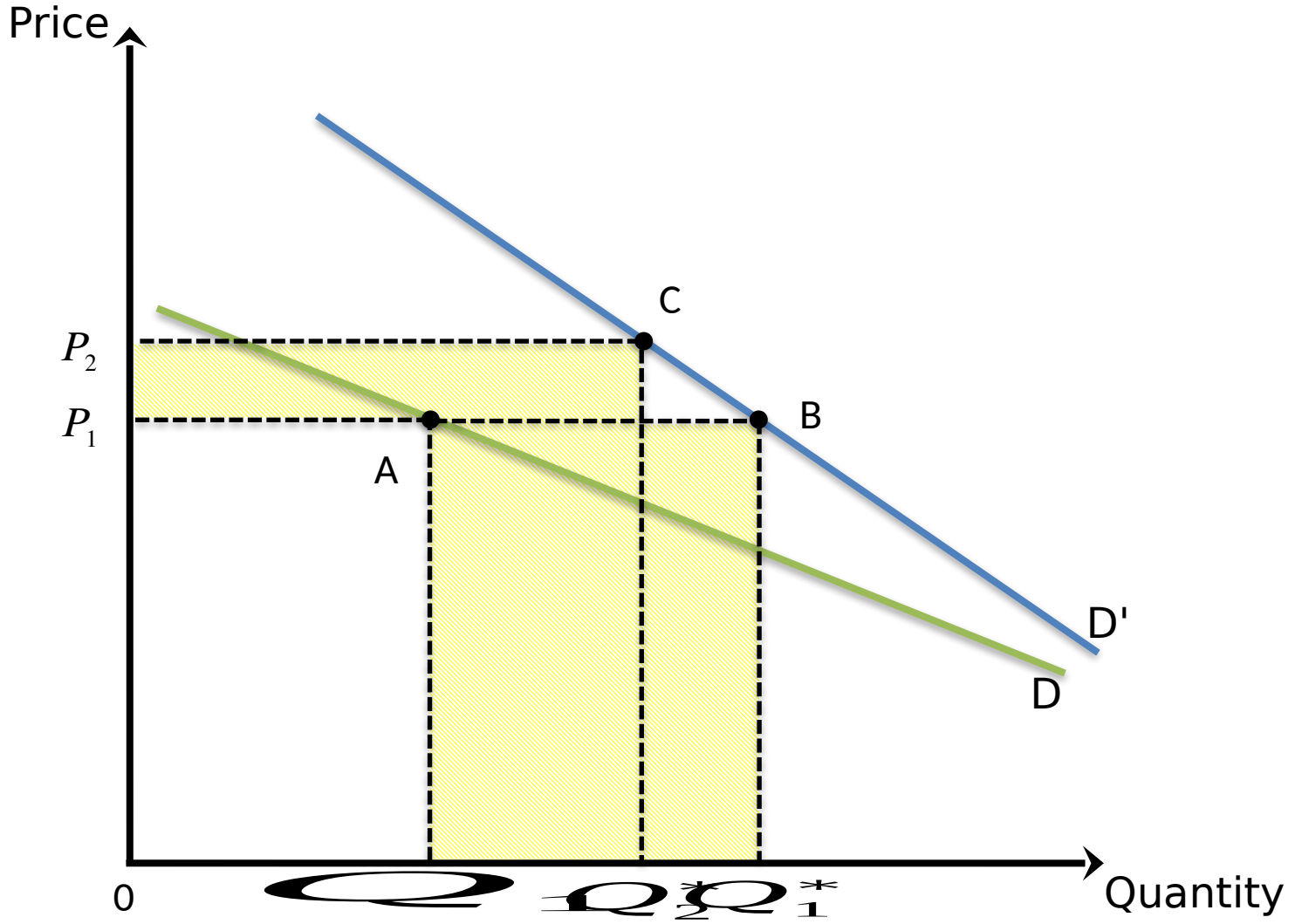
- Promotions: amount and type of advertising, selling techniques, special offers, trial discounts, etc. Note: each of the 4Ps cannot be in isolation, such as a focus on price without considering the product

Stimulating demand

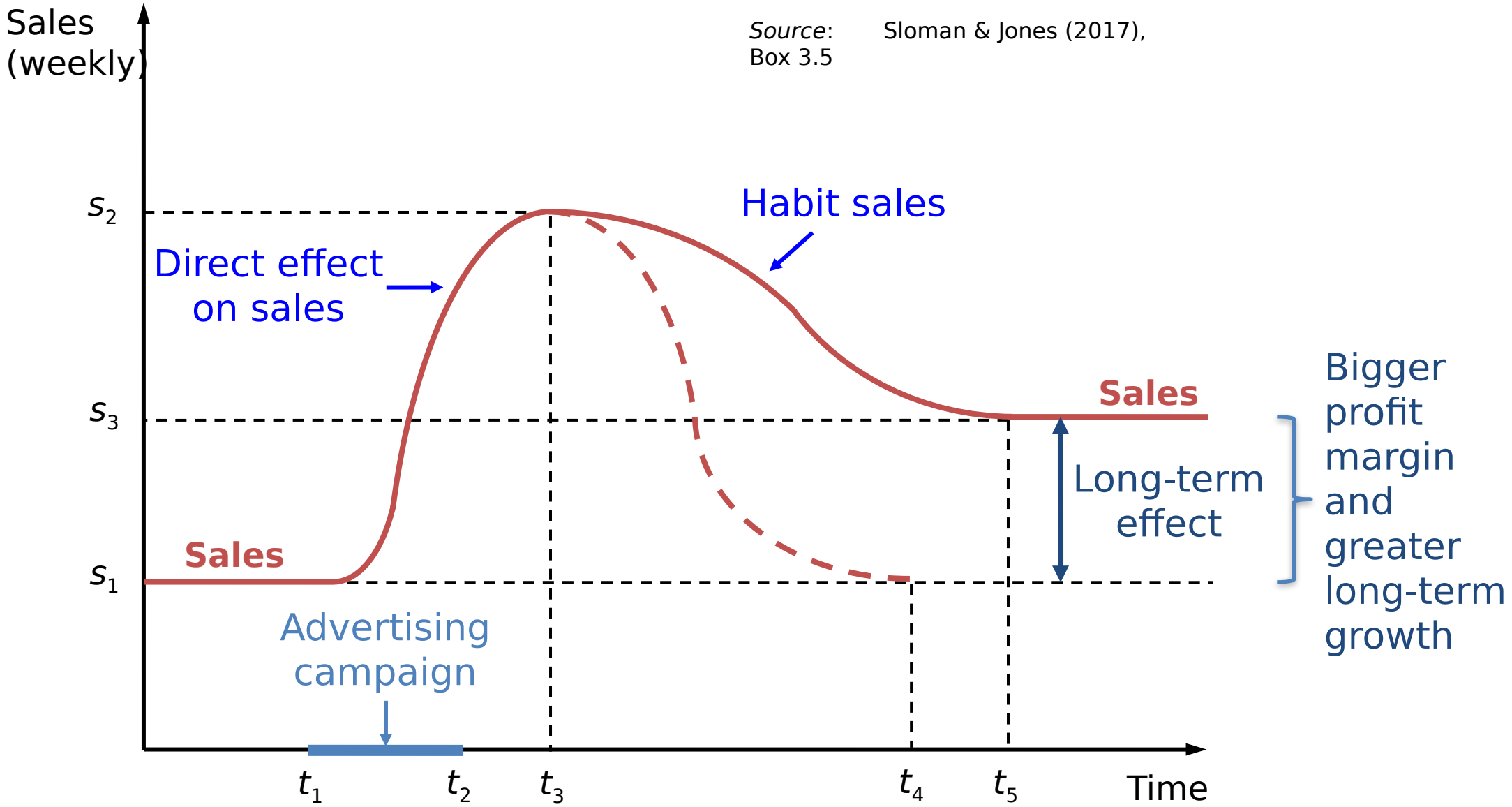
- Promotion can be via advertising
  - Aims of advertising
    - Shift the demand curve to the right (sell more)
    - Make demand less price elastic
      - Creating greater brand loyalty

- So a firm needs to identify how sensitive consumers are to advertising and each of the 4Ps, i.e. the more elastic (in other words, responsive) consumers are to a particular area (in other words, a particular P), the more a firm should focus on that particular P

Effect of advertising on the demand curve



Advertising and the long-run



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Topic 3: Supply Decisions in Perfectly Competitive Markets

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Short and long run

- Economists examine costs in the short and long run, where:

- The ***short run*** is a time period during which *at least one input* is **fixed**
  - E.g. a factory building to make custard
  - E.g. the number of workers due to contract lengths

- The ***long run*** is a time period long enough for *all of a firm's inputs* to be **variable**
  - E.g. a shipping company could buy a new ship (takes months/years for delivery)
  - E.g. a café may need to buy a new coffee machine (only takes days to delivery)

Production and costs in the short run

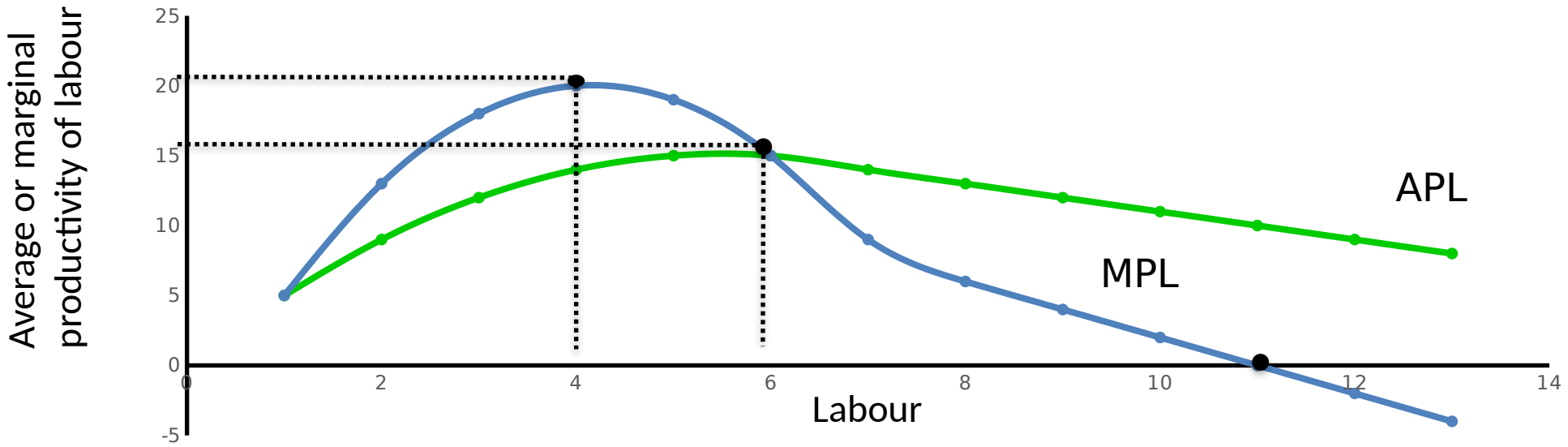
- The **production function** describes a relationship between the flow of inputs (labour, L, and capital, K,…) and the resulting flow of outputs (Q) during a specified period of time:

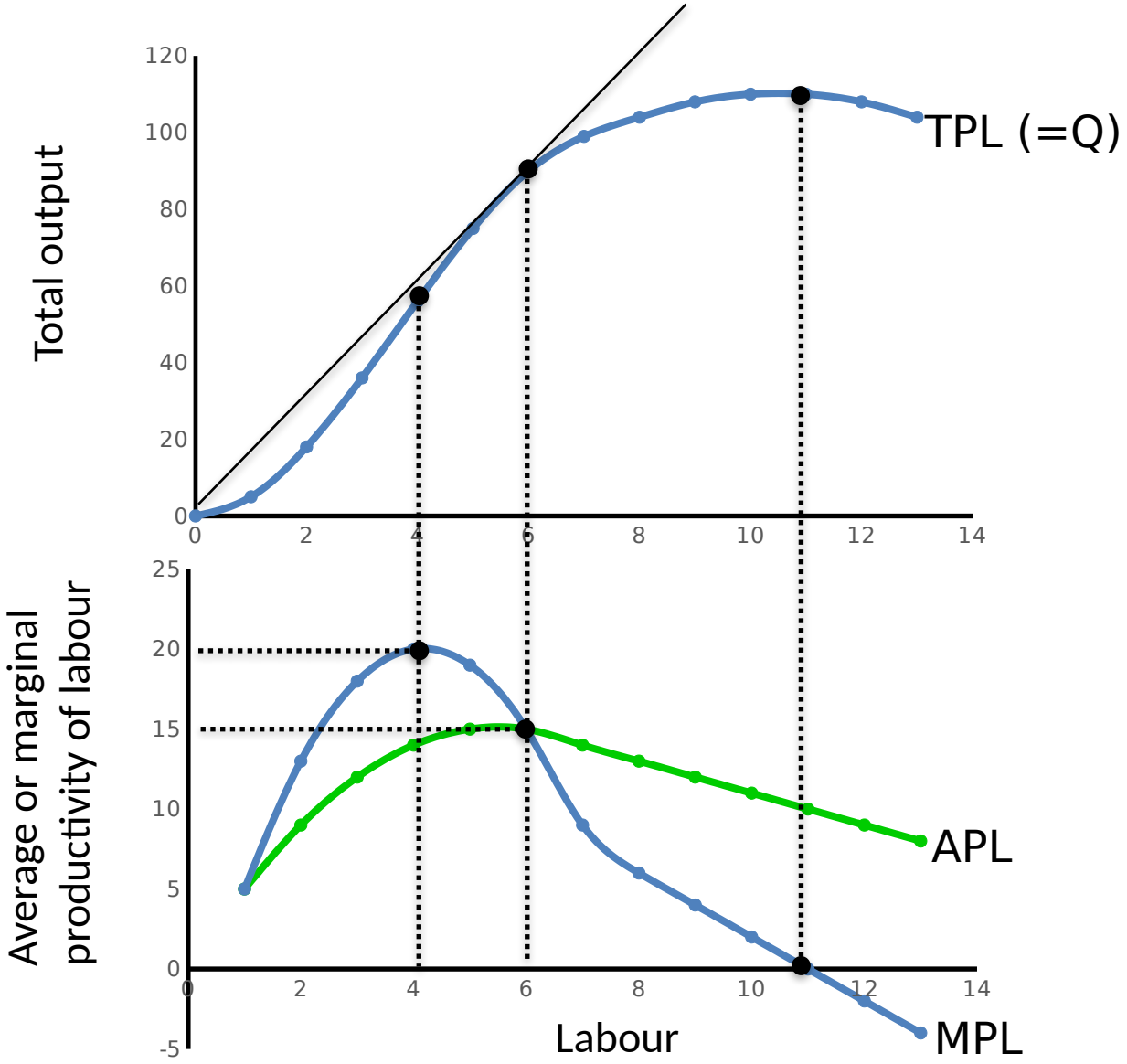
$$= TP$$

- The **short-run production function**, assuming capital fixed, is:

  - Total product of labour, *TPL*
  - Marginal product of labour: , holding K fixed
  - Average product of labour:

The ‘**law of diminishing marginal returns**’: when increasing amounts of a variable input are used with a given amount of a fixed input, there will come a point when each extra unit of the variable input will produce less extra output than the previous unit, and may even become negative





MPL measures slope of TPL curve; MPL at a maximum where TPL is steepest; thereafter falls due to '**law of diminishing marginal returns'**, and may become negative

TPL at its maximum where $MPL = 0$

Consider the APL using a ray from origin to the TPL curve. APL is at its maximum where the ray is tangential to the TPL. APL and MPL are equal at this point.

Opportunity cost

- When measuring costs, economists use the concept of "**opportunity costs**", which are the costs of an activity measured in terms of the next best foregone alternative
  - i.e., the sacrifice (if no alternative, then *OppCost = 0*)

- A firm's opportunity costs can be:
  - Implicit
    - i.e., earnings in alternative uses (e.g., loss of property rental income from running a business from that property; income the manager could have earned working for someone else)
  - Explicit
    - i.e., direct payments when the firm does not already own an input (includes electricity, car rental, etc.)

Opportunity cost

Sunk costs and replacement costs are not relevant here

i.e., not using a machine won't bring the money spent on that machine back, so a firm may as well use it. The cost of the machine is a sunk cost.

- A firm’s costs of production will depend on the inputs that it uses.

- Costs of production depend on:
  - Prices of inputs
  - Productivity of inputs as this influences input quantities

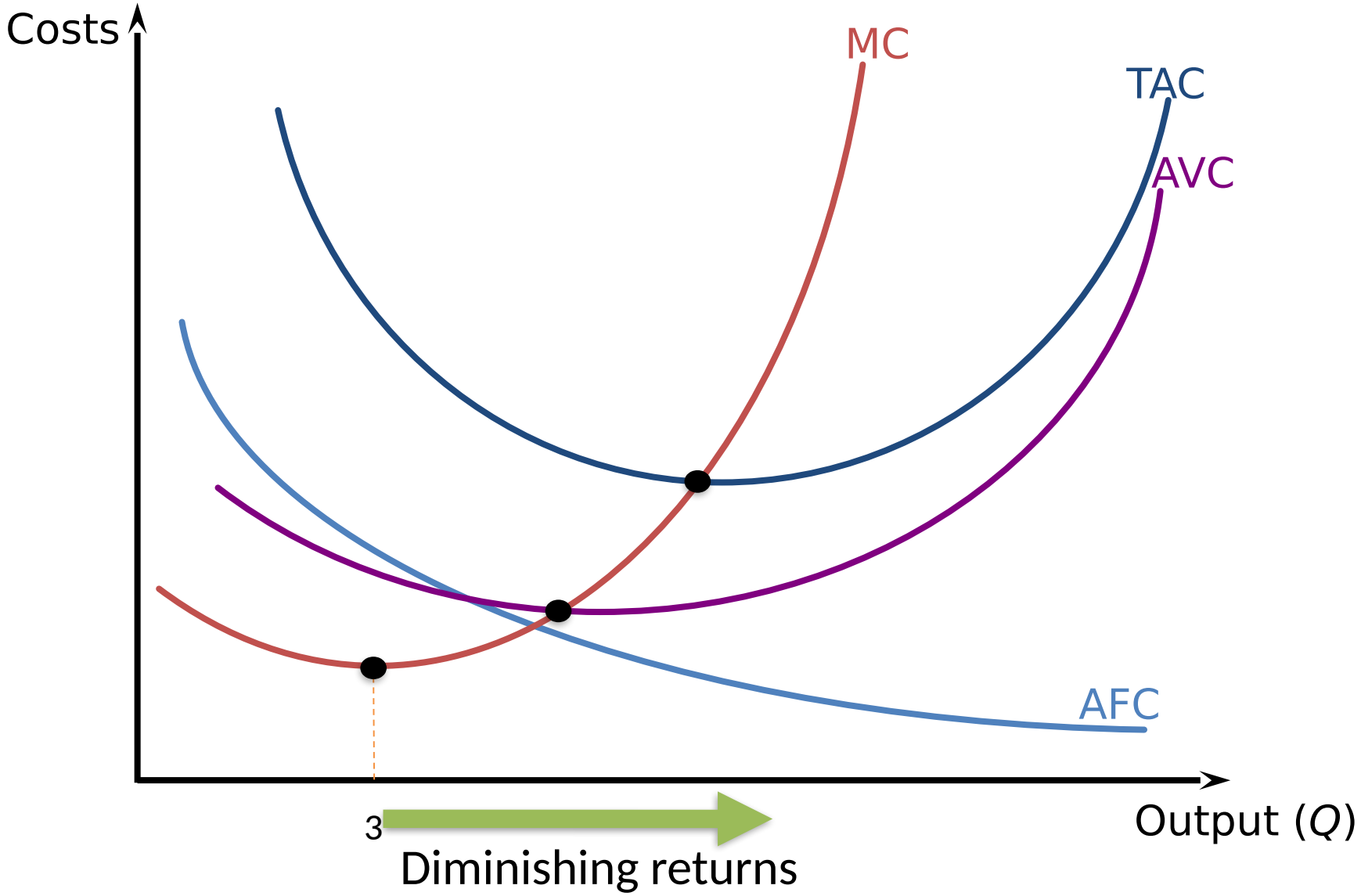
- In the short run, there will be:
  - Fixed costs
  - Variable costs

- Total cost (*TC*) equals fixed costs (*FC*) plus variable costs (*VC*), such that:

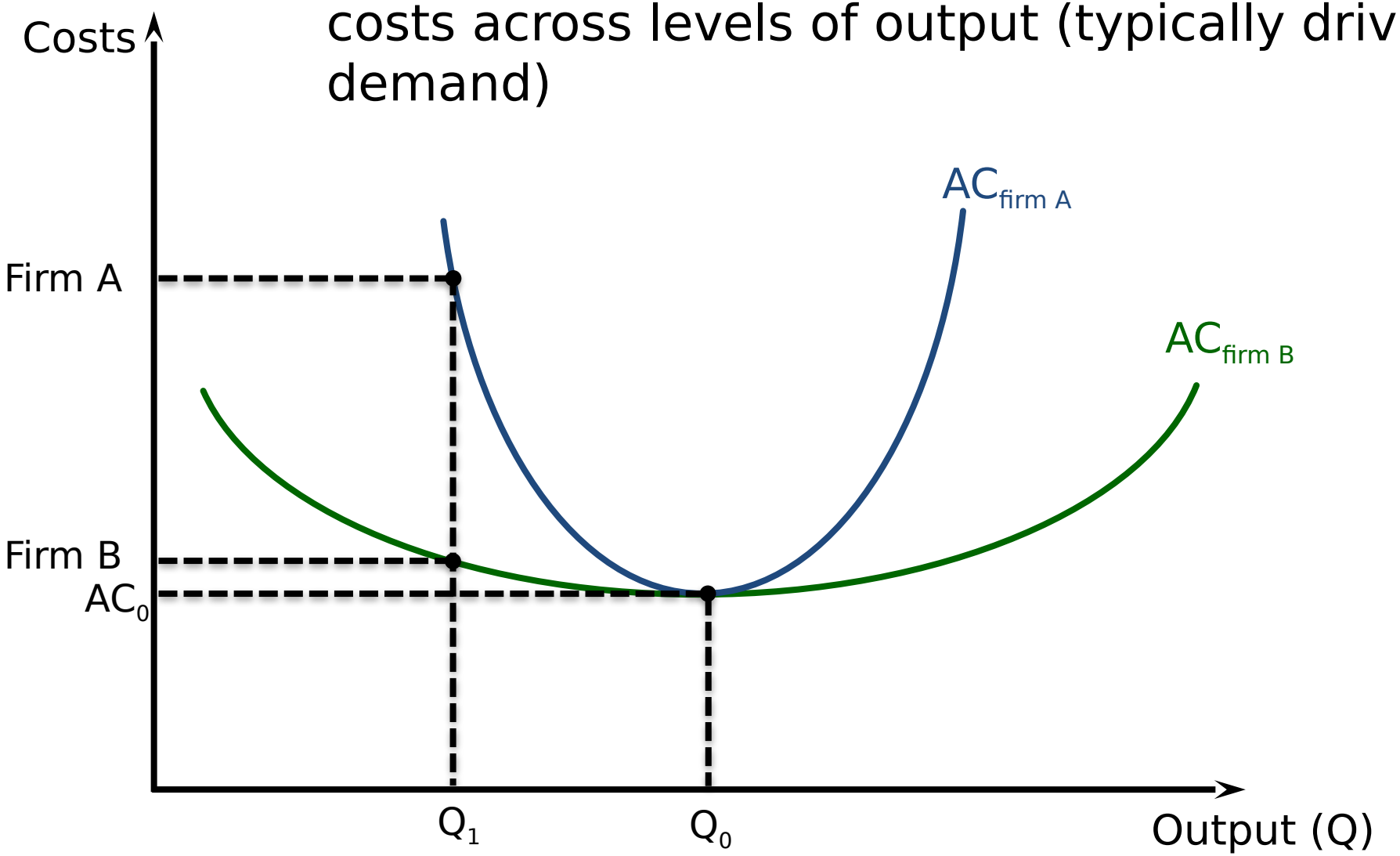
AC and MC

- Average cost (*AC*) is the cost per unit of production:
  - So *AC* equals average fixed cost () plus average variable cost ()
- Can define marginal cost () as the cost of an extra unit of output, i.e.,

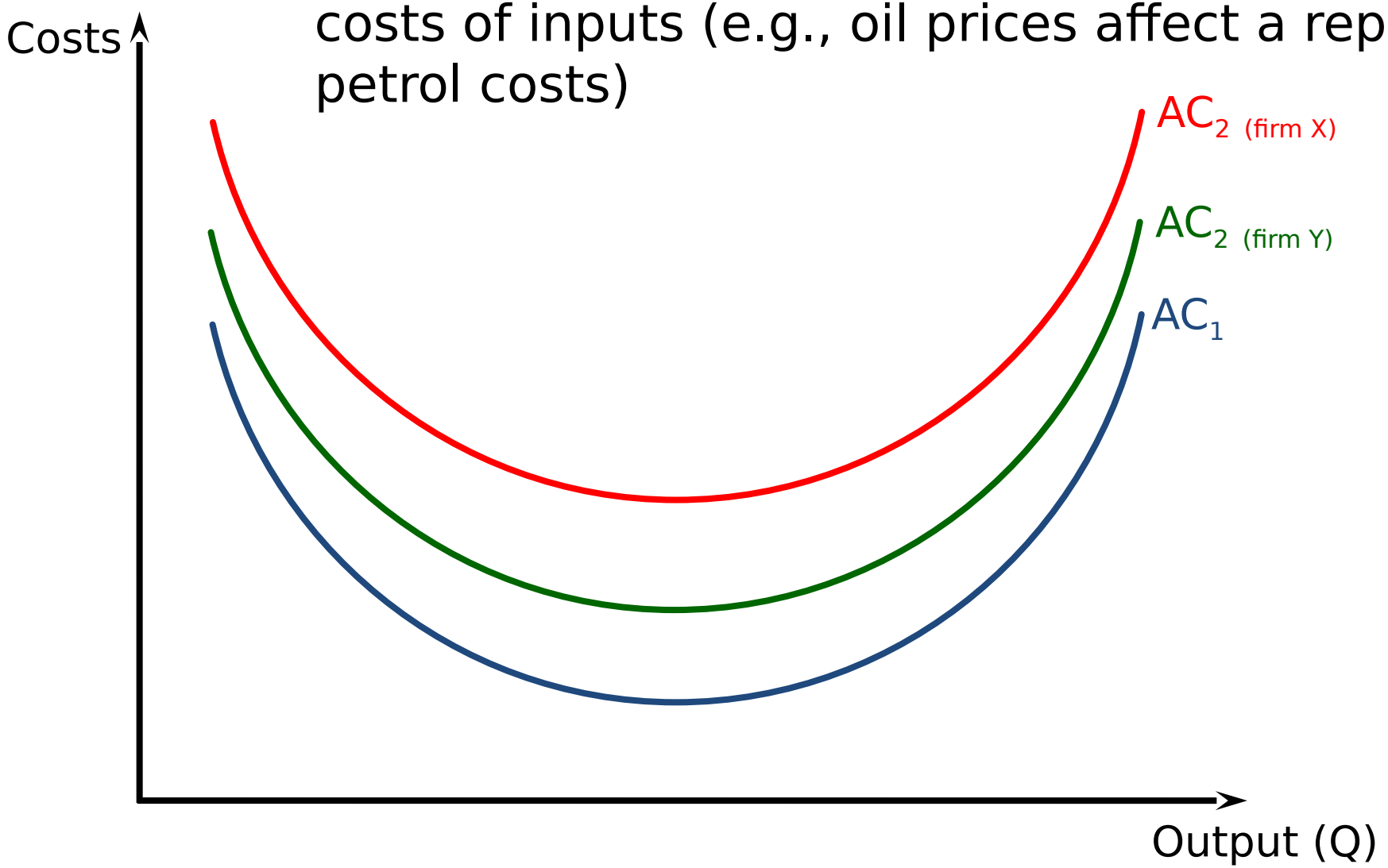
Average and marginal cost



Type 1 vulnerability:
Firms have different vulnerabilities to changes in costs across levels of output (typically driven by demand)



Type 2 vulnerability:
Firms have different vulnerabilities to changes in costs of inputs (e.g., oil prices affect a reps' petrol costs)



What is the effect on costs of increasing the scale of production?

- Increasing returns to scale
- Constant returns to scale
- Decreasing returns to scale

Short-run and long-run increases in output

Short run		
Input 1	Input 2	Q
3	1	25
3	2	45
3	3	60
3	4	70
3	5	75

Diminishing returns – a short run concept, when only one input increases in quantity

Short-run and long-run increases in output

Short run			Long run				
Input 1	Input 2	Q	Input 1	Input 2	Q1 (IRS)	Q2 (CRS)	Q3 (DRS)
3	1	25	1	1	15	15	15
3	2	45	2	2	35	30	27
3	3	60					
3	4	70	4	4	90	60	50
3	5	75					

Returns to scale – a long run concept, e.g., increasing returns to scale as outputs grow more than proportionally

Economies of scale

Economies of scale exist if costs per unit of output **fall** when the scale of production **increases**

- **Plant-level economies**
  - Specialisation and division of labour (repetition)
  - Indivisibilities (combine harvester)
  - The ‘container principle’ (or ‘cube law’)
  - Greater efficiency of large machines
  - By-products (joint supply)
  - Multi-stage production
- **Firm-level economies**
  - Organisational
  - Spreading overhead costs
  - Financial economies
  - Economies of scope

Diseconomies of scale

May be a level of output after which costs per unit of output start to **rise**

- Management problems of coordination (e.g., during peak demand)
- Worker ‘alienation’ and low motivation
- More challenging industrial relations
- Cost of hold-ups can be significant due to complex inter-dependencies in production processes

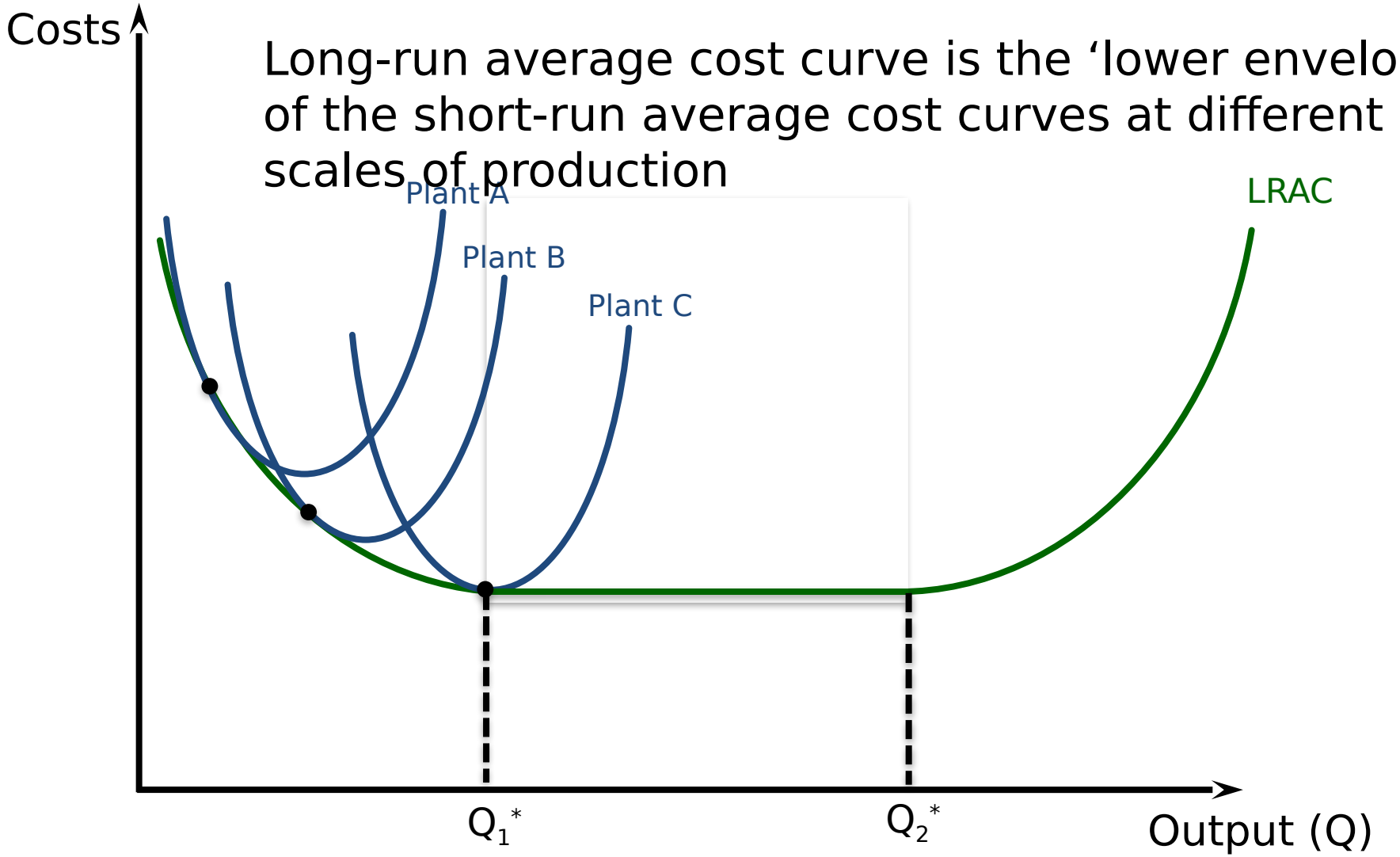
External economies and diseconomies

- External economies of scale
  - Benefits of whole industry size – industry infrastructure
    - Specialist suppliers of materials / components
    - Skilled labour with specialist skills / qualifications
    - Other specialist support services (e.g. R&D, finance, etc.)

- External **dis**economies of scale
  - Competition among suppliers for specialist resources and impact on input prices. This will lead to a rise in transactions costs.

Long-run average costs

Long-run average cost curve is the ‘lower envelope’ of the short-run average cost curves at different scales of production



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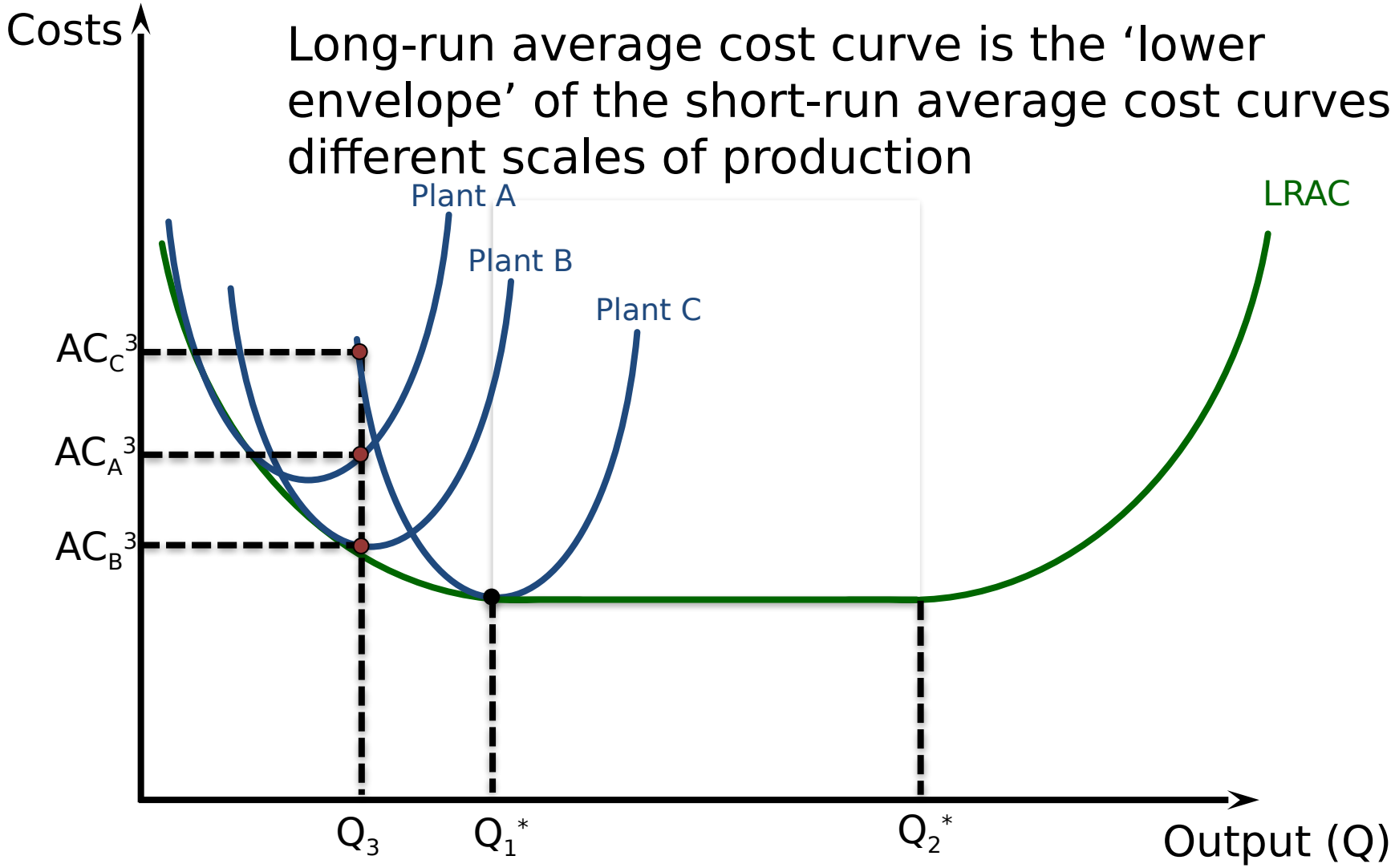
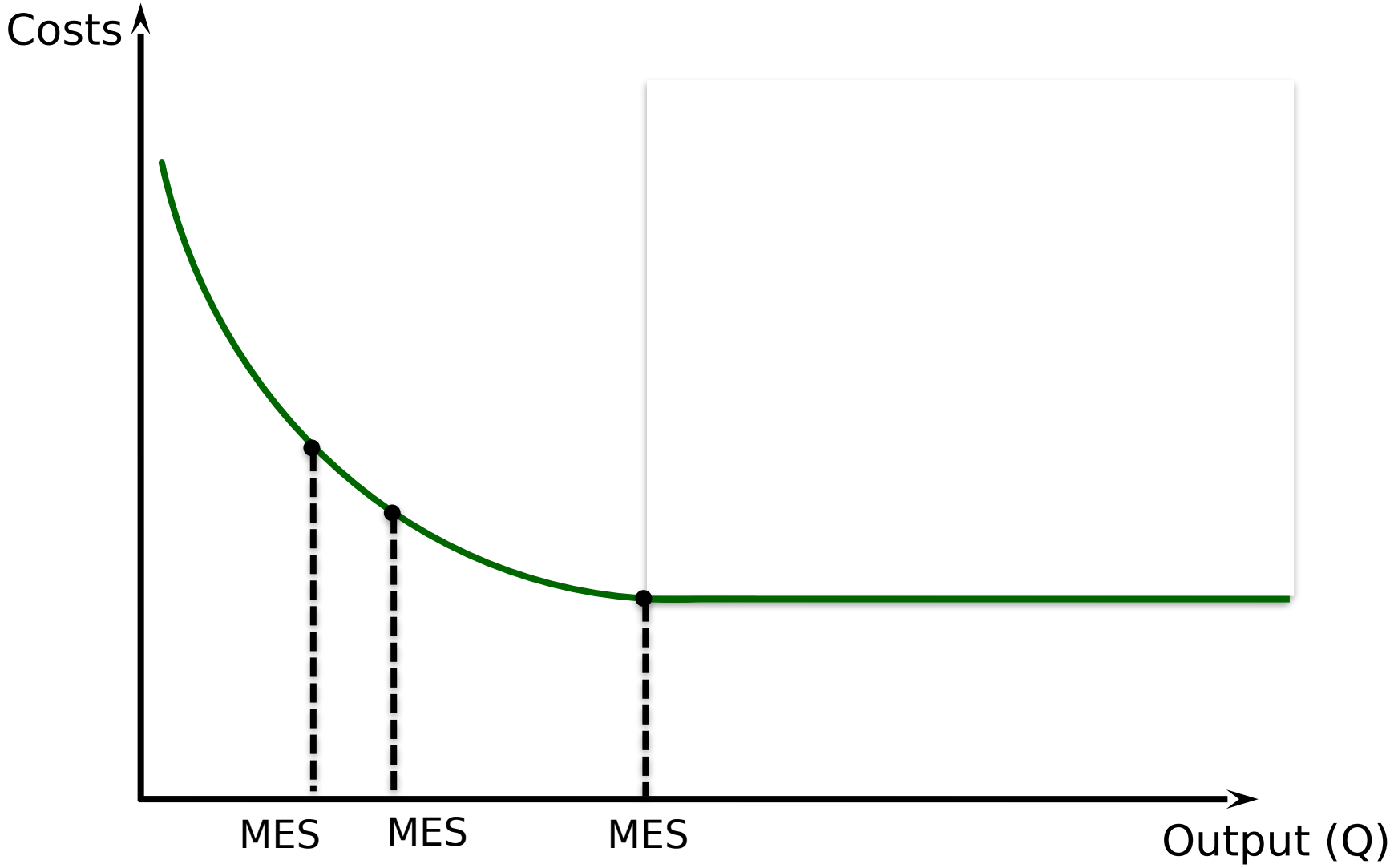
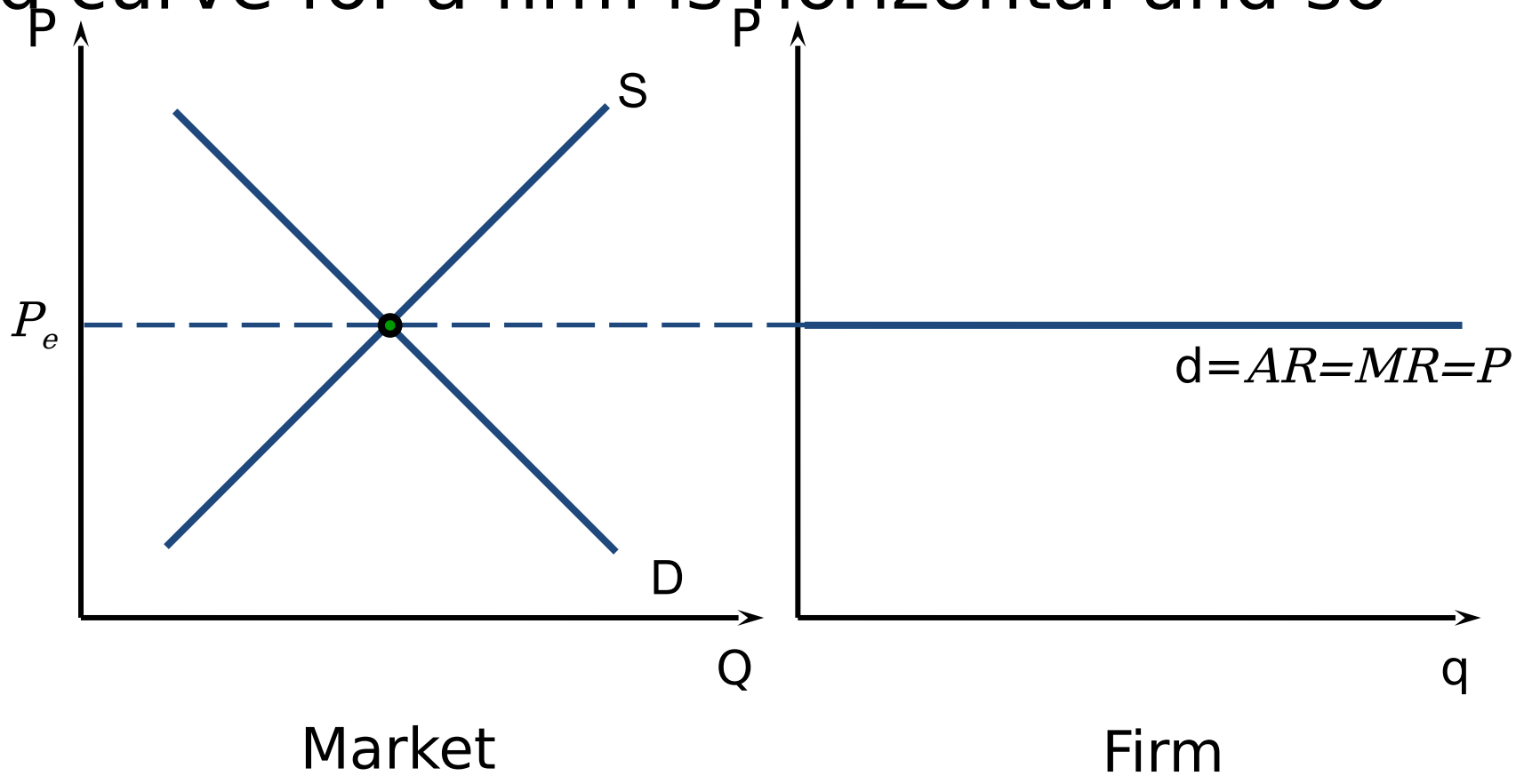


Minimum efficient scale (MES)



Under perfect competition, each firm is a ***price taker*** and can sell all it wants at the current market price

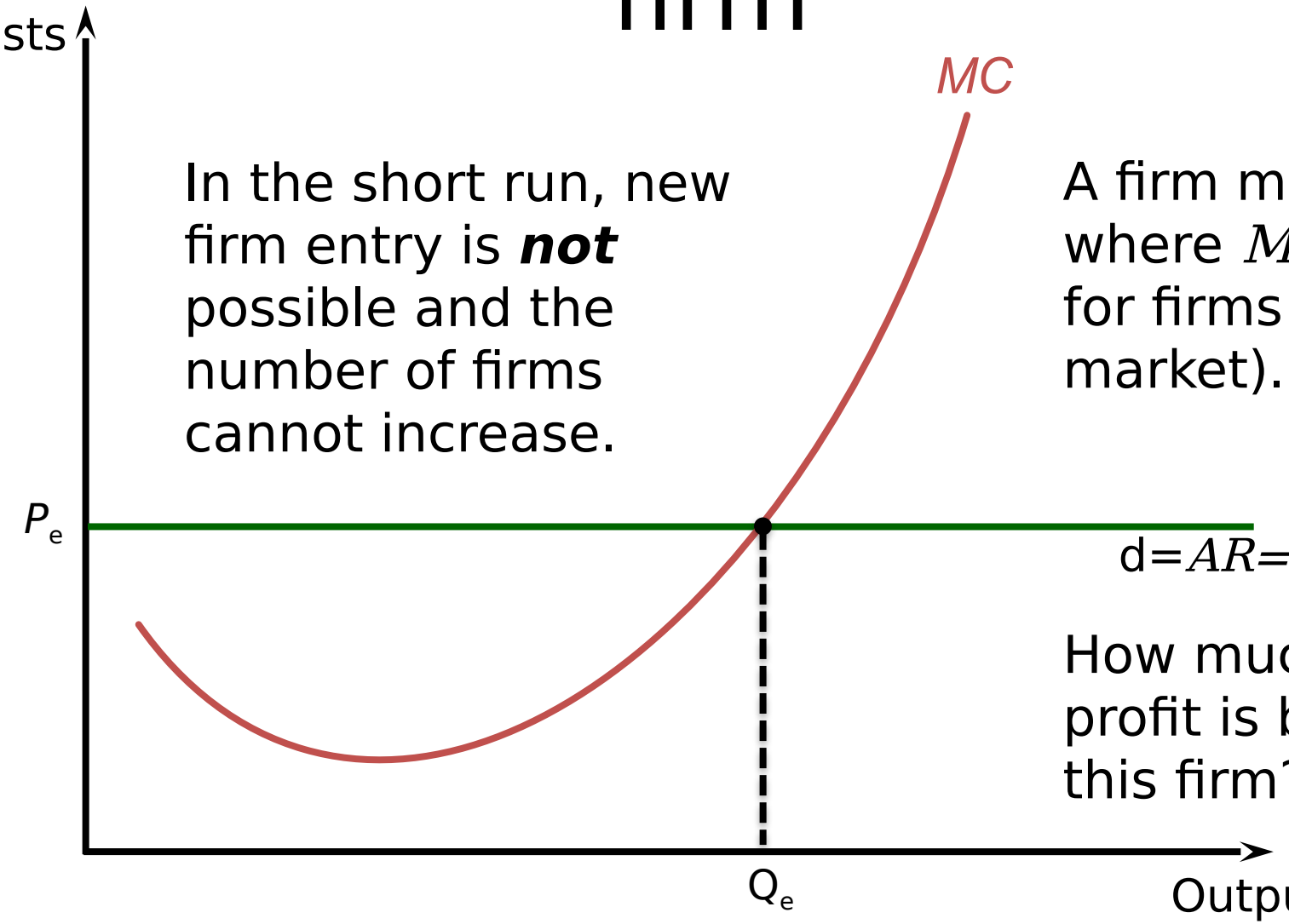
Demand curve for a firm is horizontal and so



Profit maximisation

- Meanings of profit
  - **Normal profit** = minimum return needed by owners of business (reflecting opportunity cost of investing in an alternative). What is this though? As a meaningful level of the minimum return needed, normal profit is often thought of as the minimum a firm needs to stay in business which is break-even for the firm
  - **Supernormal profit** = excess of profit over and above normal profit. Based on the above meaningful level of normal profit, supernormal profit is therefore positive profit

Short-run profit maximisation of a PC firm

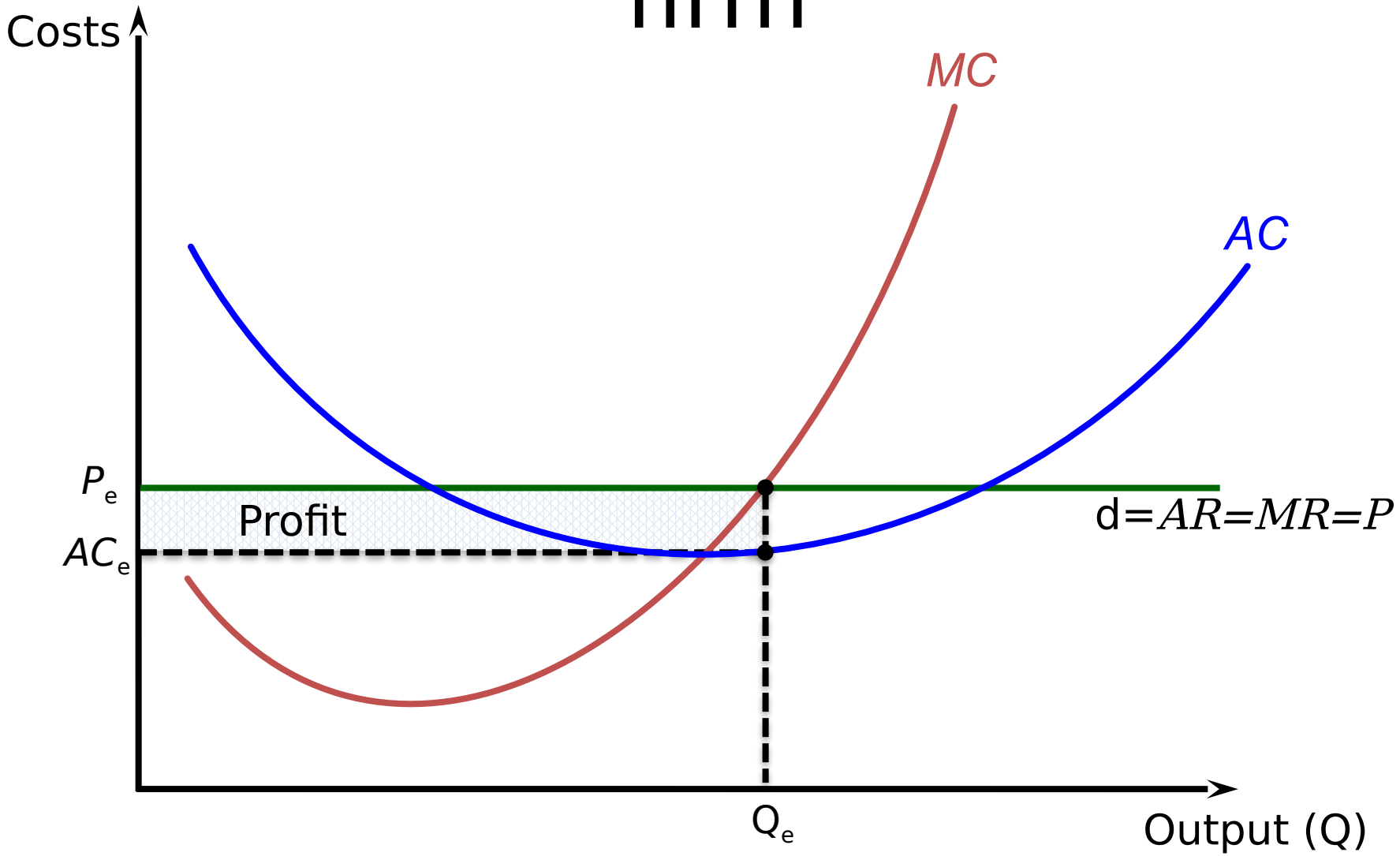


In the short run, new firm entry is ***not*** possible and the number of firms cannot increase.

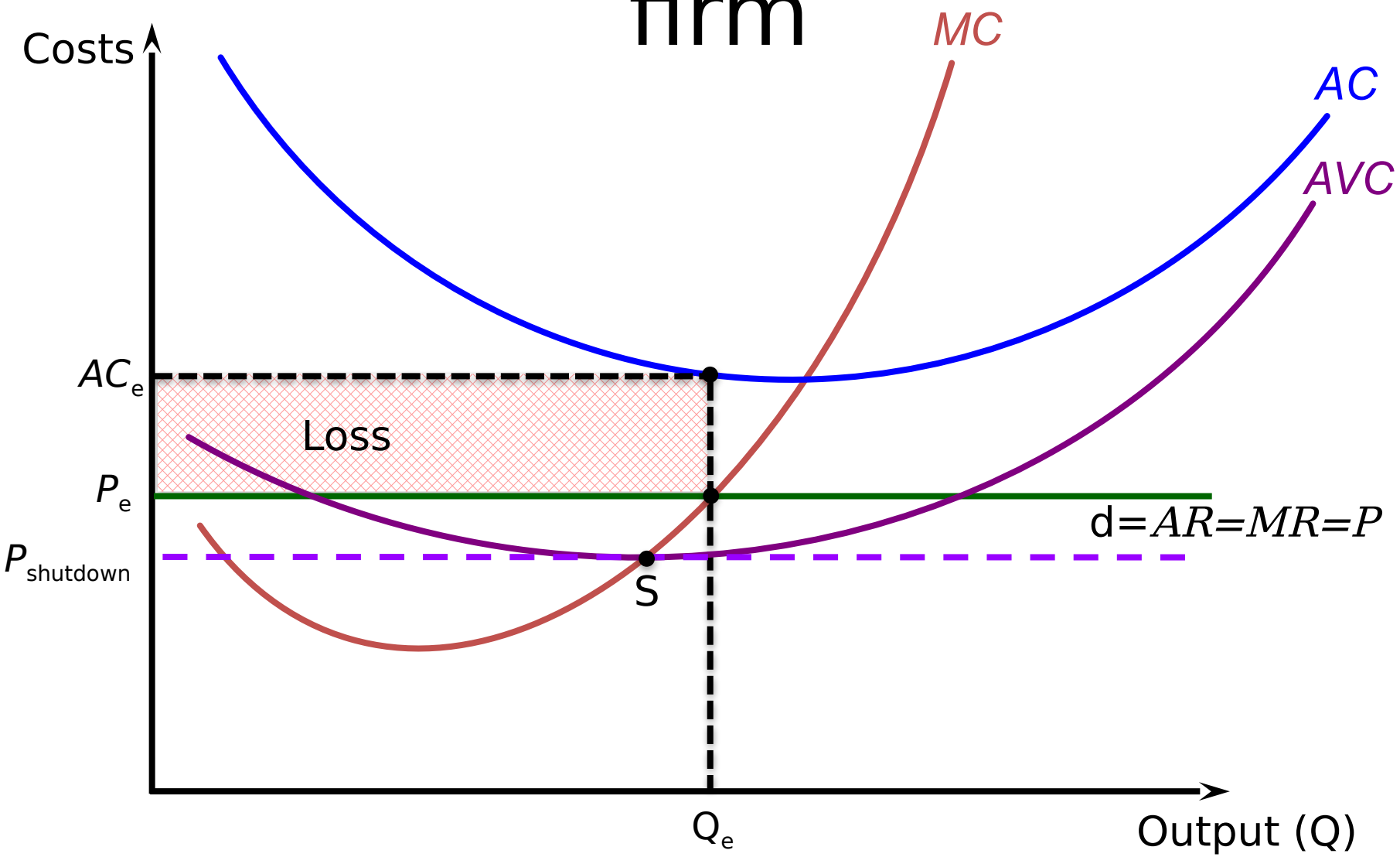
A firm maximises profit where $MR=MC$ (same rule for firms in all types of market).

How much supernormal profit is being made by this firm?

Short-run profit maximisation of a PC firm



Short-run loss minimisation of a PC firm



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Topic 4: Price and Output Decisions in Imperfectly Competitive Markets

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Alternative market structures

- Here we consider markets where firms have some ‘market power’
  - Thus, firms have downward sloping D curves, so they can change their prices without losing all of their customers
    - (compare to perfect competition, where if a firm raises its price then all of its customers switch consumption to the firm’s competitors)

- Four main determinants of the degree of competition:
  - Number of firms in industry (more firms ⇒ more competition)
  - Extent that the industry has barriers to entry and exit
  - Nature of the product (branding and differentiation)
  - Shape of the demand curve (less elastic ⇒ more control)

Types of market structure

	No. of firms	Entry cond-itions	Nature of product	Example
Perfect competition	Many	Free entry	Identical products	Apple farmers
Monopolistic competition	Many / several	Free entry	Some differentiation	Electricians in a small town
Oligopoly	Few	Barriers to entry	Identical products or some differentiation	Car manufacturers
Monopoly	One	No entry	Complete differentiation	Producer of patented drug

Monopoly

- One firm
- Unique product (complete product differentiation)
  - Location could be the defining characteristic
    ⇒ spatial monopoly
- Firm’s demand curve is the industry demand curve
  ⇒ downward sloping
- Insurmountable barriers to entry

Sources of barriers to entry

- Economies of scale
- Economies of scope
  - Including cross subsidisation
- ‘Natural monopoly’
  - E.g., water company with declining

  LRAC
- Ownership or control of key inputs
  - E.g., long term exclusive suppliers
- Ownership or control of key outlets
  - E.g., long term exclusive contracts
- Lower costs for established firm
  - E.g., access to superior technology
- Product differentiation and brand loyalty
- Threat of mergers / takeovers of new entrants
- Legal protection
  - E.g., patents
- Retained profits and aggressive tactics
  - E.g., sustained price wars / aggressive advertising

Average and marginal revenue

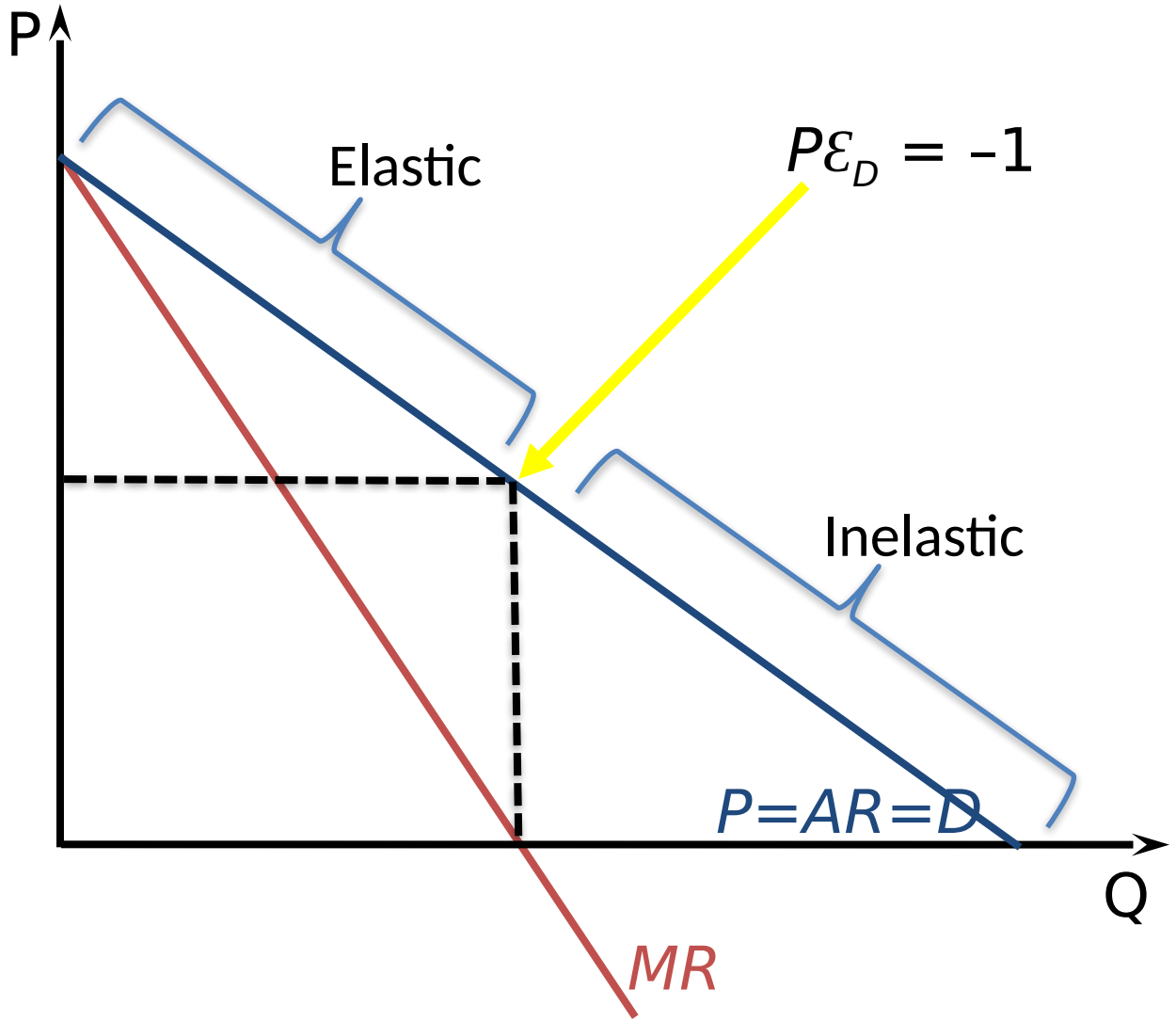
- Revenue is constrained by demand curve

- Downward sloping demand (=AR) curve

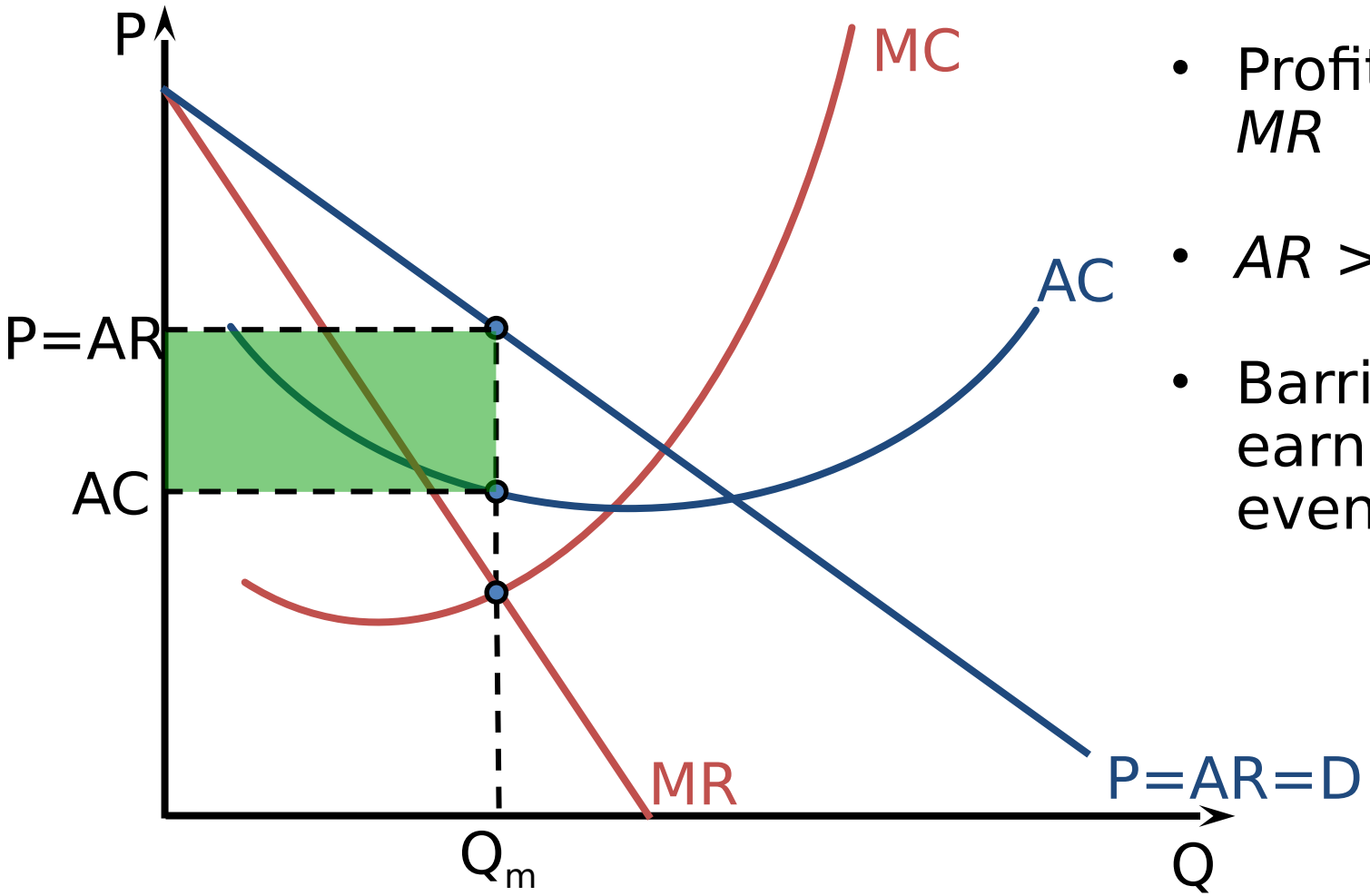
  $\Rightarrow$ marginal revenue (MR) also downward sloping

- $P = AR$ (=D), $MR < AR$ and the firm must cut price to sell more. Let's see this.

Average and marginal revenue



Monopoly: equilibrium



- Profits maximised where *MC* = *MR*
- *AR* > *AC* ⇒ supernormal profit
- Barriers to entry enable the earning of supernormal profits even in the long-run

Monopoly vs. perfect competition

- Generally, a monopolist charges a higher price (hence concern by regulators)
- Usually, monopolist's price is higher than the MC
- Barriers to entry mean there is no competition to drive down the price
- **Negatives** of a monopoly include:
  - A monopolist is not forced to operate at the bottom of their LRAC curve (inefficiencies?)
  - A monopolist's cost curves may be higher if they do not use the most efficient production technique ('X-inefficiency')
- **Positives** of a monopoly include:
  - Costs may be ***lower*** under monopoly due to **economies of scale** (if MC is low enough, they may even produce more and at a lower

Monopolistic competition

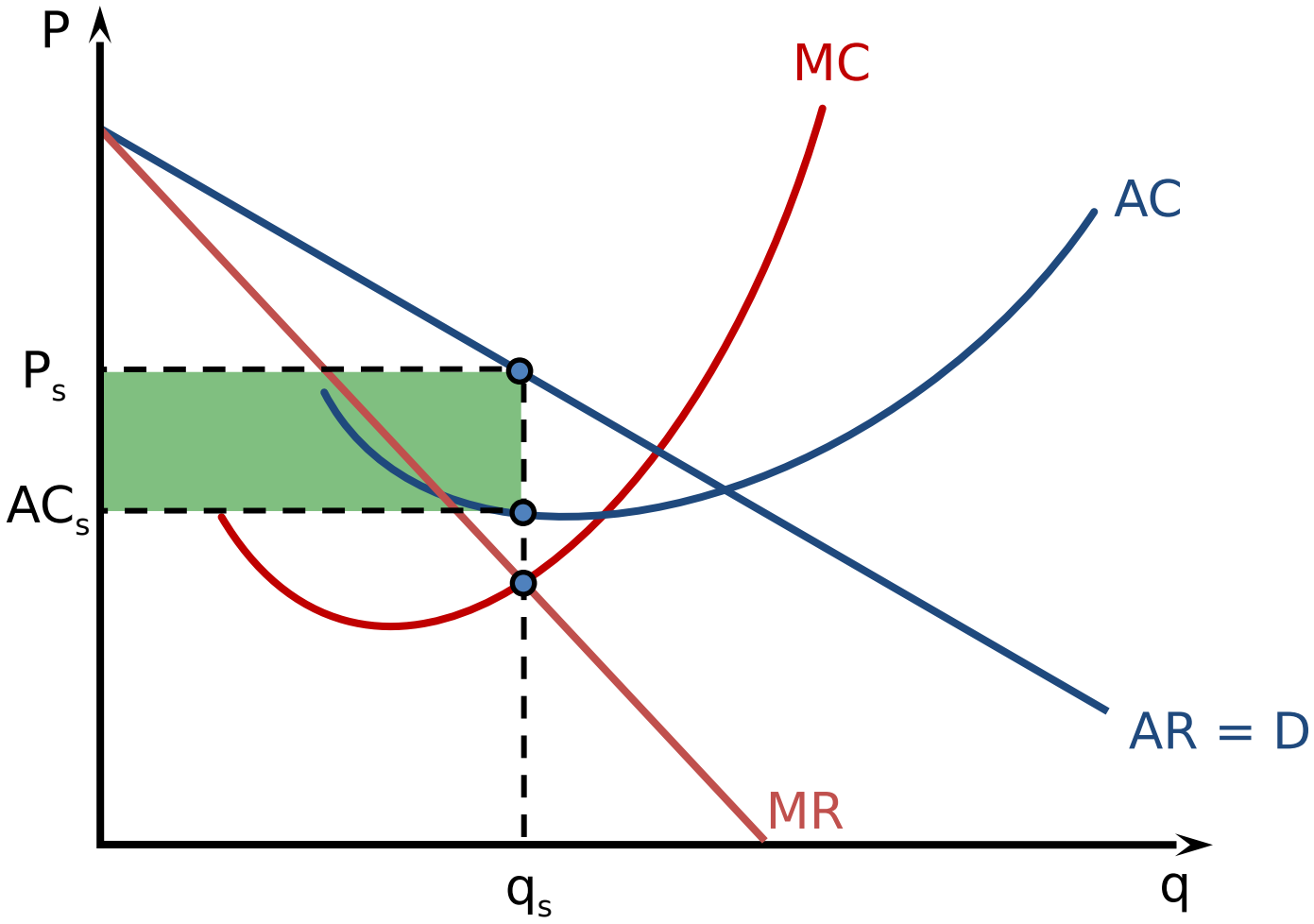
- Large numbers of buyers and sellers
- Free entry in long run
- Similar products (some product differentiation)
  - Product differentiation could be real or imagined
    ⇒ imperfect information
  - Location could be the differentiating characteristic
    ⇒ imperfect mobility
- Brand loyalties ensure each firm’s demand curve is downward sloping
    ⇒ firms are not price takers

Monopolistic competition

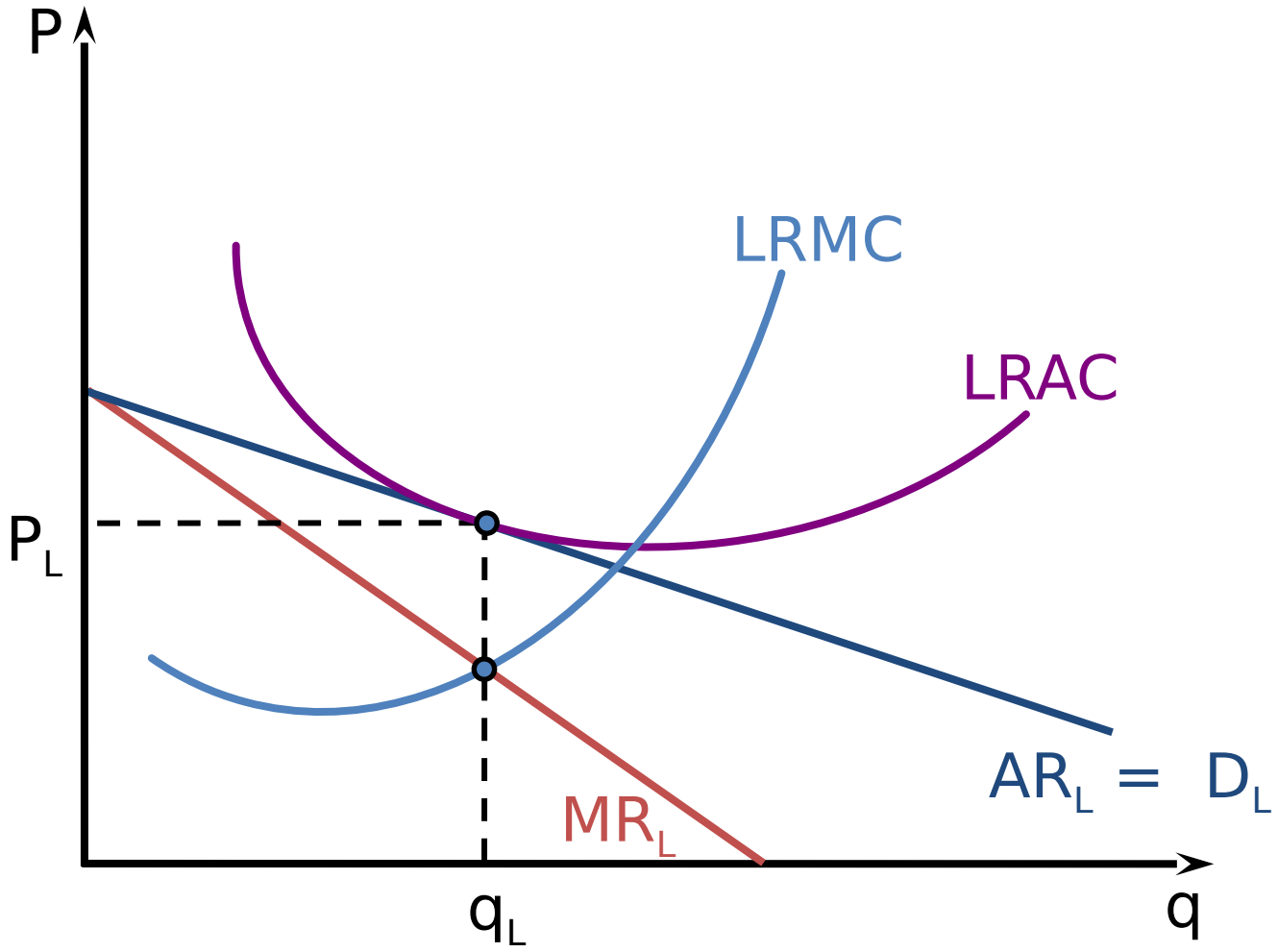
- As with all market structures, profits maximised when $MR = MC$
- Firm makes supernormal profits in the short-run
- However, market entry takes place so that in the long run all firms produce at $P = AC$ (tangency solution)

  $\Rightarrow$ no supernormal profit in the long run
- Production not necessarily at the minimum point on AC
  $\Rightarrow$ technical inefficiency
- $P > MC \Rightarrow$ social inefficiency

Monopolistic competition: short-run equilibrium



Monopolistic competition: ***long-run*** equilibrium



Oligopoly

- Small number of firms (case of 2 firms referred to as ‘duopoly’), often with large market shares
- May be differentiated or homogeneous products
- Firm’s D curve is the industry D curve
  ⇒ downward sloping (⇒ not price takers)
- Barriers to entry exist
- https://www.cnbc.com/2019/01/25/why-the-**airbus-boeing**-companies-dominate-99percent-of-the-large-**plane-market**.html

Oligopoly

- No ***unique theory of price and output determination***, due to problem of *interdependence*: decisions of one firm have implications for decisions of others

  - *"I can't decide my best move until I know what you are going to do; but equally, you can't decide your best move until you know what I am going to do"*

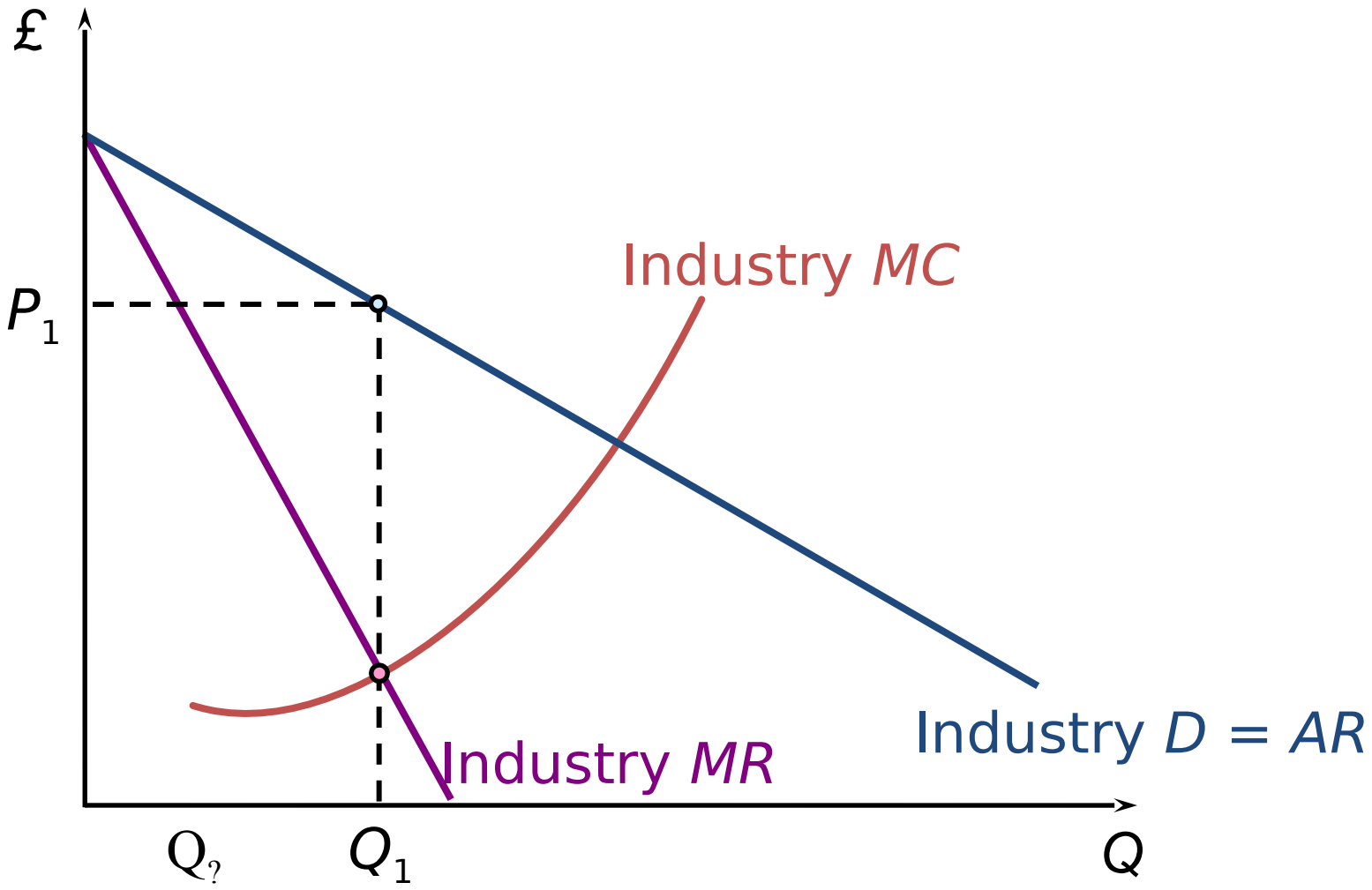
- So, what should an oligopoly charge for their output?
  - Solution depends on assumptions made concerning how firms behave / react to each other (i.e., in an oligopoly there are ***interdependencies*** between firms)

Collusive oligopoly

- Sales of one firm affects sales of the other.

- Firms engaging in collusion may agree on prices, market share, advertising expenditure, etc.
  - Formal collusive agreements known as cartels
    - Maximise profits by setting monopoly price and output, dividing output via non-price competition or via quotas
    - Most famous cartel is OPEC (Organization of the Petroleum Exporting Countries)
    - Generally illegal
    - Antitrust: Commission fines truck producers for cartel (europa.eu)
    - Truck cartel: BT and Royal Mail win £17.5m in damages from DAF | Truck News (commercialfleet.org)

Profit-maximising cartel



Collusive oligopoly

- Firms may collude ***secretly***, or via tacit (implied/understood) collusion
  - E.g. (i) agreed mark-ups over cost, as firms may have very similar costs; (ii) price leadership, perhaps by dominant firm.

- What makes this likely?
  - Factors favouring collusion:
    - Few firms, known to each other
    - Similar products so agreements easier
    - Openness about costs and production methods
    - Similar production methods and average costs
    - Market stable
    - Presence of dominant firm
    - Significant barriers to entry

Non-collusive oligopoly

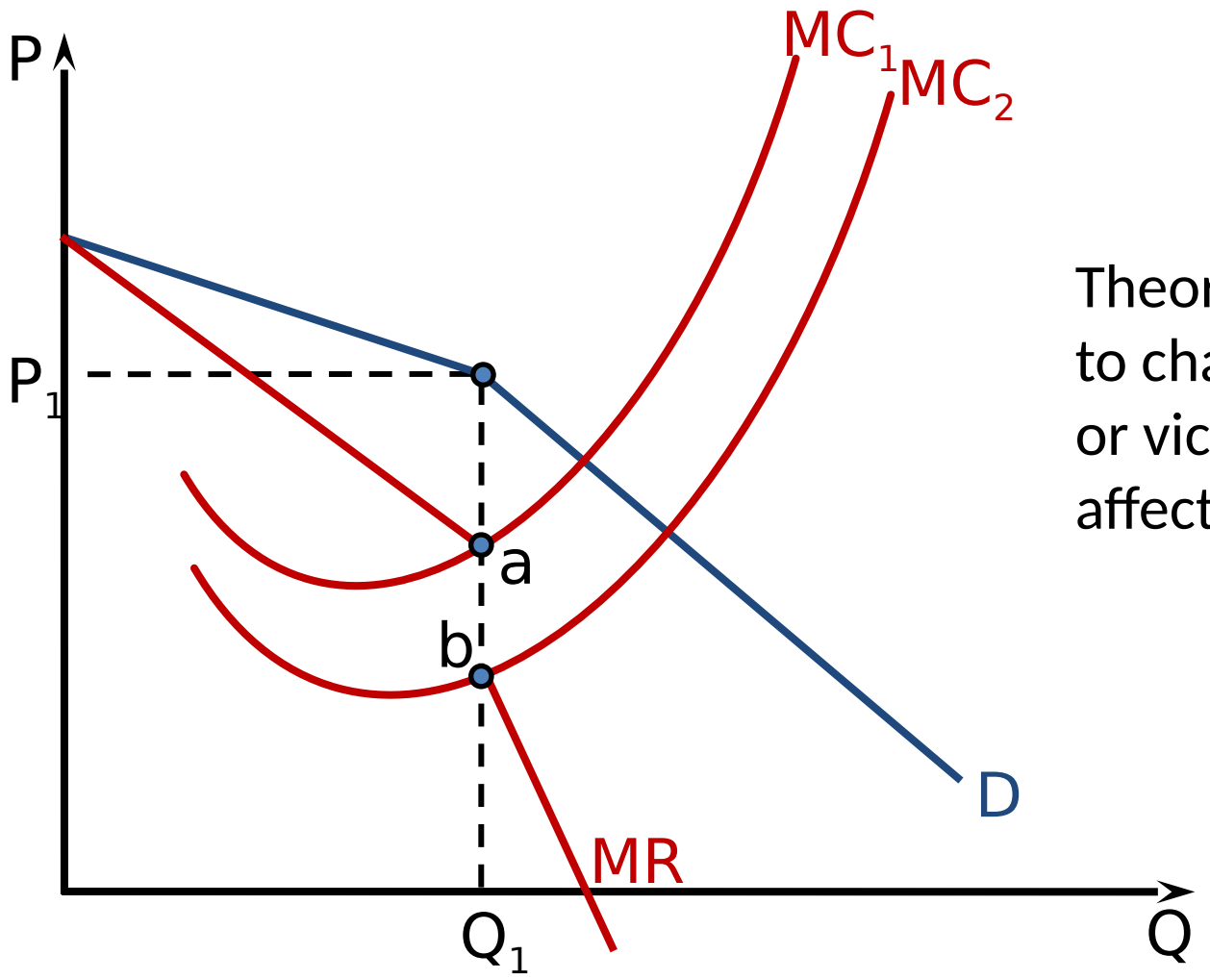
- Where factors do not favour collusion, then the likelihood of price competition is greater

- Even without collusion, price is often relatively stable

  ⇒ Kinked D curve

  - Price cuts by one firm are matched by the other firm to avoid loss of market share
  - Price rises are infrequent due to the associated reduction in market share, and hence price rises are not usually matched by the other firm where they do occur

Kinked demand curve for firm under oligopoly



Theoretically possible for MC to change (from MC1 to MC2, or vice versa) without affecting price of output.

Prisoner's dilemma payoff matrix

Prisoner A \ Prisoner B	Confess (Non-co-operative)	Deny (Co-operative)
Confess (Non-co-operative)	6 / 6	9 / 0
Deny (Co-operative)	0 / 9	1 / 1

Only Strong Nash Equilibrium

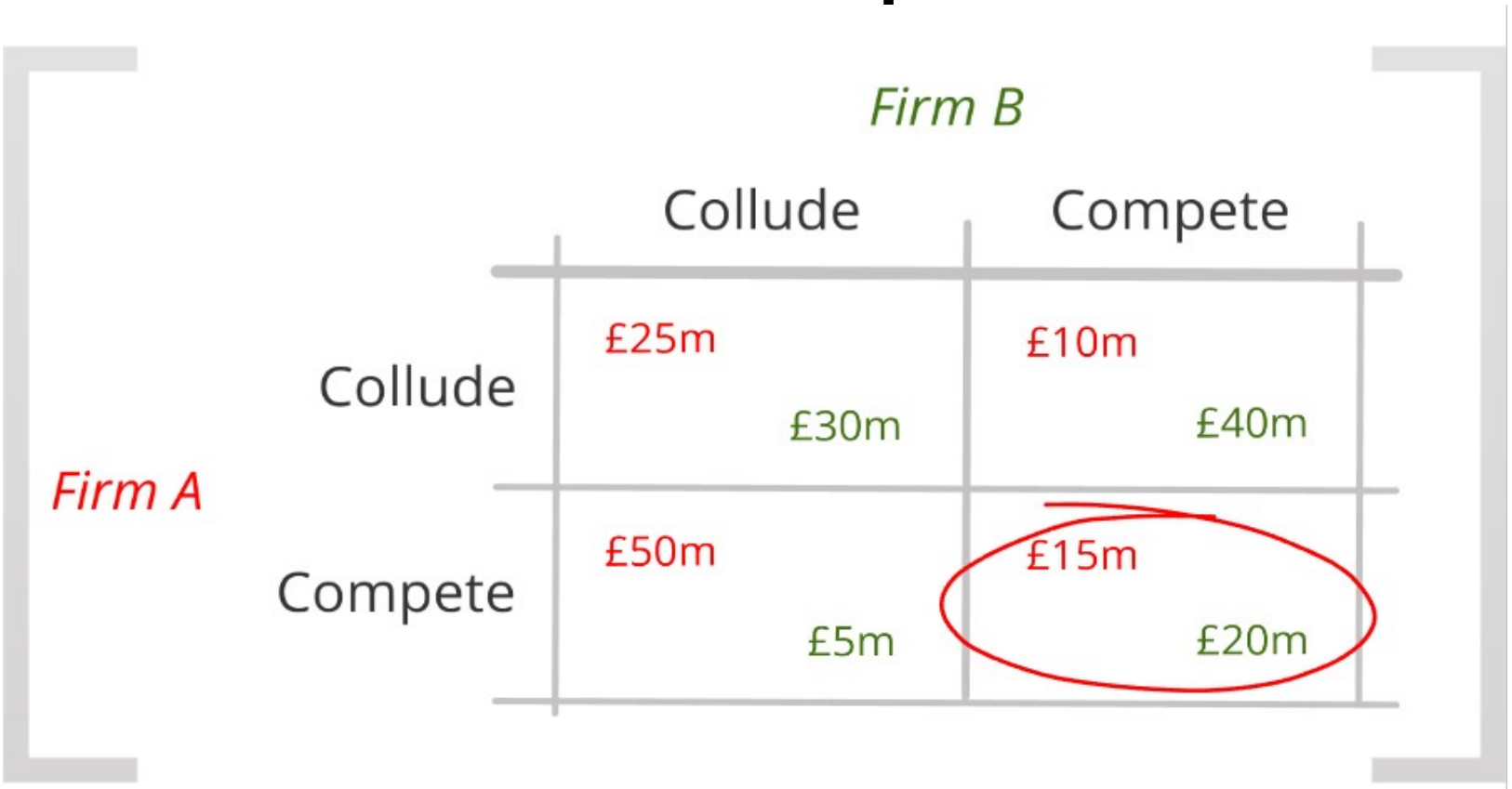
Lower pay-off is better here. Both prisoners choosing to Confess is only Strong Nash Equilibrium because for each player Confess always results in a better pay-off than Deny, regardless of the other player's choice, it is a dominant strategy

- Confess by both players is the only strong Nash Equilibrium, i.e., the only outcome from which each player could only do worse if a player changed strategy, while the other player's strategy remains unchanged.

- The dilemma is that if both deny (co-operative) then the payoff is the best joint outcome rather than if both confess (non-co-operative).

- But denying is not the (self-interested) rational outcome.

A business problem



- Higher pay-off is better here. Dominant strategy equilibrium is for each firm to Compete. Yet in business there are still cases of collusion between firms (even in the face of large fines)

Taxonomy of games

- How much conflict is there between players?

  Zero sum versus non-zero-sum games

- Can binding agreements be signed?

  Co-operative versus non-co-operative games

- Are there differences in available information?

  Common knowledge versus asymmetric information games

- Is there a sequence in which players take decisions?

  Simultaneous versus sequential games

- How many times can the game be played?

  One shot versus repeated games (finite versus infinite)

Summing up

- Cartels/collusion may be unstable – but can exist in practice due to ‘repeated games’

- Game theory is useful for the study of many models of strategic business decision-making:

  - models of entry deterrence: a potential rival must choose whether to enter or not; this decision will be based on how the incumbent firm is expected to respond. i.e., fight or accept entry

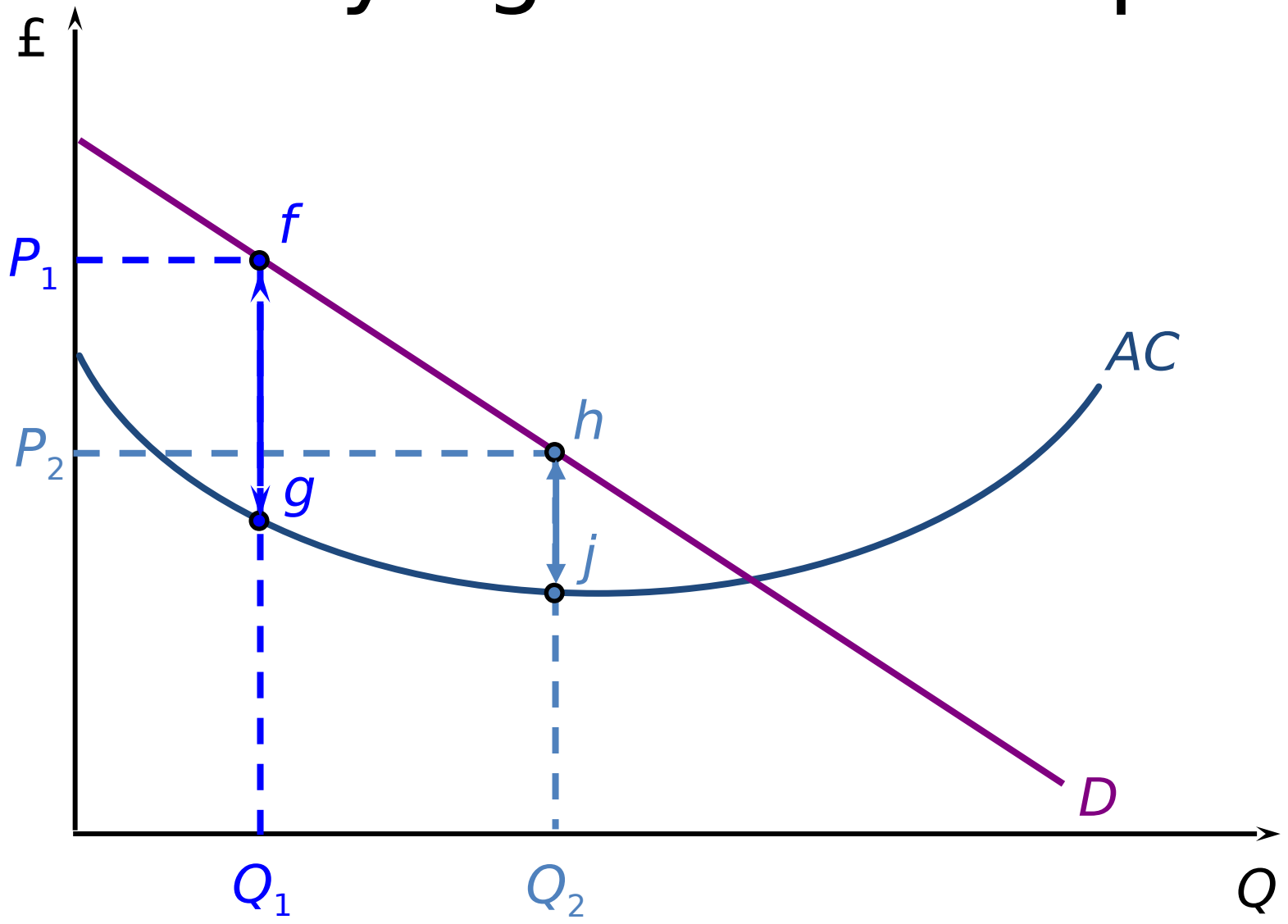
  - R&D strategies: similar to the above case of entry deterrence, a firm’s R&D strategy will depend on how it expects a rival to respond

- Games have various structures / forms – many more complex than the simple ones we have considered here

Pricing in practice

- Cost-based pricing
  - Average cost based or mark-up pricing
  - Variations in the mark up

Varying the mark-up



Pricing in practice

- Price discrimination
  - Necessary conditions
    - Market power (able to set price)
    - Possible to segment consumers and no resale
    - Willingness to pay and elasticity differ between markets/market segments
      - Higher price charged in less elastic market/segment
  - Advantages to firm
    - Generates higher revenues
    - Drives competitors from market (anti-competitive)
    - Enhances ability to enter other markets (pro-competitive)

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Topic 5: Business growth and strategy

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Ability & desire for growth

- Desire for growth
  - Competitive (dynamic) pressure
  - Managerial motives
    - Links between pay / status (levels), security etc. & firm size
    - Alternative objectives (e.g. Baumol, 1962; Marris, 1964)
- Traditional theories – constraints due to
  - Supply-side – LRAC rises beyond some output level due to managerial diseconomies of scale
  - Demand-side – market exhaustion / saturation
- Ability
  - Unused resources
    - Indivisibilities in production process
    - Managerial experience / organisational structures (M-form)
  - Opportunities from new products / markets

Vertical integration

- The ‘vertical chain’ – all activities associated with the flow of production from inputs to output
- Vertical integration (VI): co-ordination of 2 or more stages of production in vertical chain within a single firm (backwards/upstream or forwards/downstream)
- Co-ordination of activities can occur within firm or through market transacting
  - e.g. upstream VI ⇒ Do we “make” (i.e. “produce in-house”/“vertically integrate”) OR do we “buy” (i.e. “obtain from the market” / “outsource”)?

Motives for vertical integration

- Efficiency (technical & agency)
- Security & control of market environment
- Acquisition of monopoly power

Technical efficiency

- Lowest cost method of physically producing the good or service
  - Savings from VI might arise due to reducing fuel / transport costs by combining complementary stages of production in a single business unit (e.g. smelting and rolling of steel)

Agency efficiency (1)

- Lowest cost method to secure & co-ordinate inputs
  - Costs of external sourcing include:
    - Coasian ‘transactions costs’ (Coase, 1937)
      - Cost of locating suppliers
      - Obtaining information on prices and product specification
      - Negotiating & concluding contracts
      - Monitoring & enforcement of contracts
    - Plus wider agency costs including (Williamson, 1986):
      - Safeguarding against ‘holdup’ problem & under-investments in relationship specific assets
      - Lost opportunities due to mistrust, inability to share sensitive data
      - Costs associated with breakdowns in coordination & synchronization

Agency efficiency (2)

- Costs to vertically integrate or make:
  - Costs associated with slack effort by employees & of administrative controls put in place to overcome this
  - Internal influence costs – politics & decision-making criteria (transfer prices problem & inefficiency)

Efficiency

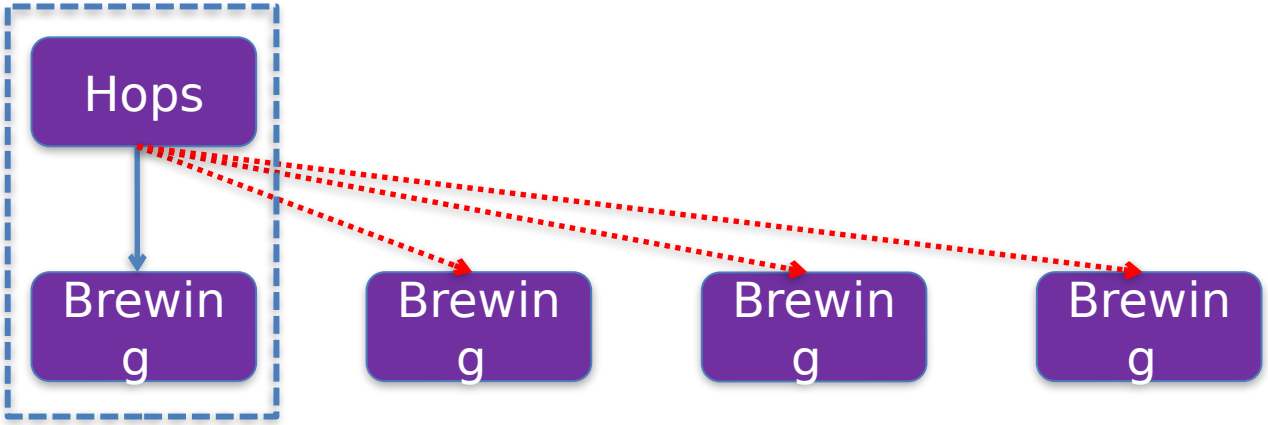
- May be trade-offs between technical & agency efficiency
  - Firm must thus compare costs – balance depends on circumstances (characteristics of industry, firm and transactions costs)
  - “…a firm will tend to expand until the cost of organising an extra transaction within the firm becomes equal to the cost of carrying out the same transaction by means of an exchange in the open market” (Coase, 1937)

Conditions favouring VI vs. use of the market

- Conditions favouring market procurement (of inputs) vs. VI depend on:
  - Frequency of contracting
  - Standardisation / specialisation of inputs
  - Extent of supplier competition
  - Economies of scale & scope in supply
  - Presence or absence of specific investments

Security & control of market environment

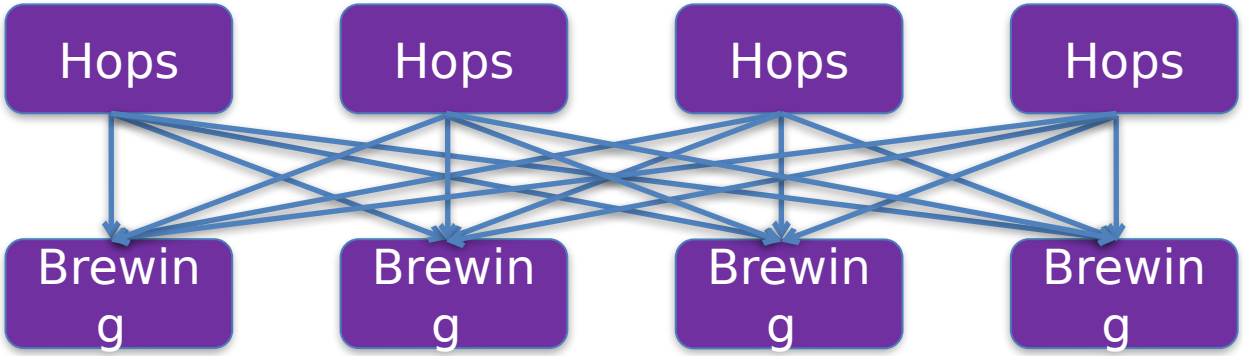
- Few upstream suppliers ⇒ fear of monopoly pricing & also of ‘holdup’



Adapted from Begg and Ward (2004) *Economics for Business*, McGraw Hill

Security & control of market environment

- No longer a problem here though



Adapted from Begg and Ward (2004) *Economics for Business*, McGraw Hill

Security & control of market environment (cont.)

- Non-integrated firms may suffer a double blow:
  - Reduction in number of independent suppliers
  - Danger of price discrimination
- Incentive to integrate affected by:
  - Pre-existing downstream and upstream competition
  - State of trade upstream and downstream
  - Desire for ‘quality’ and knowledge of source materials

Monopoly power

VI may permit anti-competitive practices against non-integrated competitors in form of:

- Price squeeze
- Price discrimination
- Refusal to supply

Monopoly power

- Consequences:
  - Raising entry barriers
    - Entrants compelled to enter as integrated firms (capital & managerial requirements raised)
  - Promoting industry discipline
    - Discourages price-cutting by non-integrated firms downstream
  - Increased market concentration at upstream stage
    - Can impose price squeeze on non-integrated downstream competitors; this may cause independent upstream suppliers to lose market share

Mitigating factors

- Long-term relationships & reputation / trust
  - e.g. ‘customer markets’ (Okun, 1981)
- Bargaining power of large buyers
  - Large orders
  - Dual sourcing
  - Threat of backward integration
  - Tapered integration, i.e. a mix of VI and market procurement

The entry environment

Bain (1956) – 4 scenarios:

- Easy entry
  - Incumbent(s) cannot deter entry
- Ineffectively impeded entry
  - Incumbent(s) can deter entry, but it is not profitable to do so
- Effectively impeded entry
  - Incumbent(s) can deter entry, and it is profitable to do so
- Blockaded entry
  - Incumbent does not face entry

Entry responses

Two main types of behaviour / response:

- Price strategies
- Non-price strategies

May be used either to:

- Raise entry costs
- Alter entrant's expectations of post-entry competition & profitability

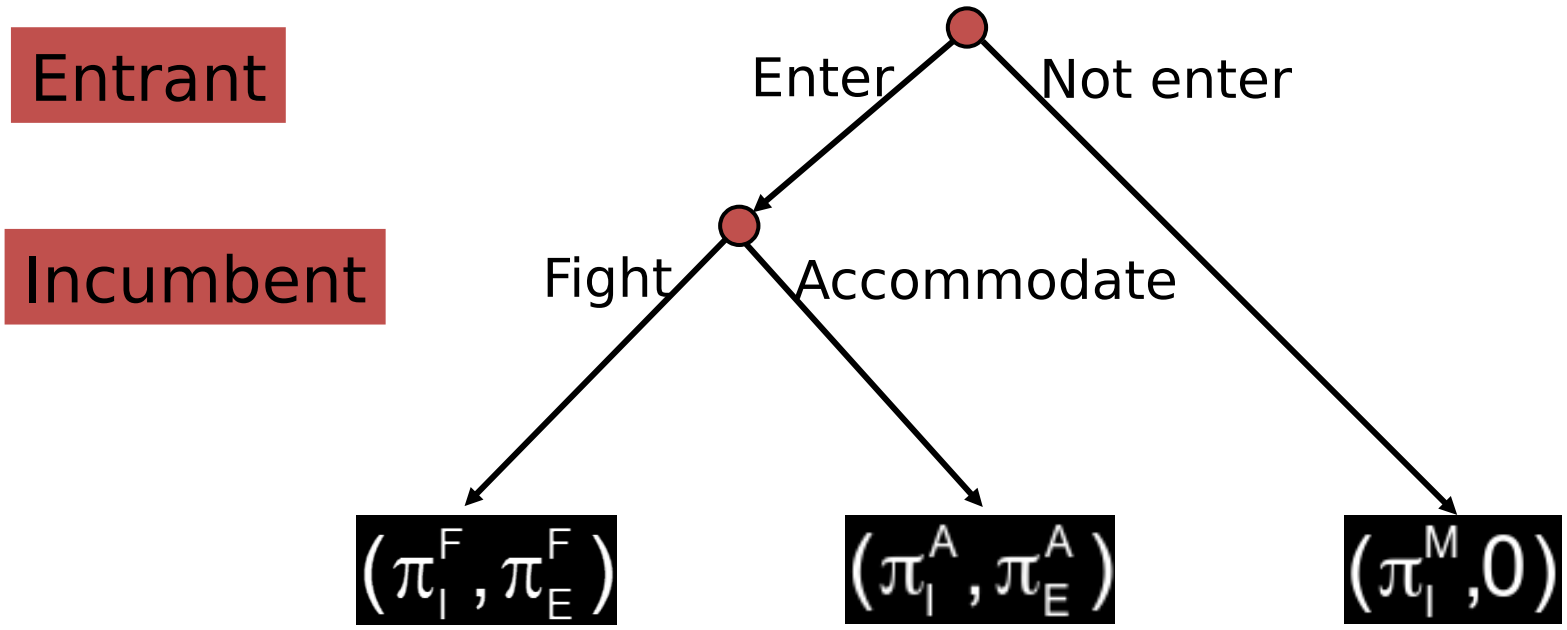
Pricing strategies

- *Entry deterring prices ('limit pricing')*
  - Incumbents set price so entry is deemed unprofitable
  - Rely on Sylos-Labini postulate here (i.e. entrants expect incumbent(s) to maintain pre-entry output levels)
  - Ability to price in this way may come from
    - Absolute cost advantages
    - Economies of scale

Pricing strategies

- Problems with entry-deterring pricing strategy include
  - Only applies to uniform pricing and even then there may be problems with stability and there are questions about how long an incumbent can afford to continue entry-deterring pricing for
  - Loss of short run profits - may have to use limit pricing continuously which makes the strategy not viable
  - Diversifying entrants may not be at any significant cost disadvantage
  - Reliance on Sylos-Labini postulate (unrealistic & naïve) – credibility issues

Limit pricing – extensive form



Pricing strategies

- *Predatory pricing*
  - Prices cut below costs to eliminate fringe competitors/entrants; subsequently price is raised to recover losses
  - Critique (McGee, 1958):
    - Cost to predator (large output must be produced)
    - Victim shut-down & restart response
    - Replacement rivals
    - Superior cost-effectiveness of not fighting entry and acquiring the entrant

Pricing strategies

- Predatory pricing is useful however as:
  - A tool to weaken rivals, which enables elimination by vertical or horizontal integration / acquisition strategy
  - Disciplinary / signalling device
- Most attractive when:
  - A potential predatory pricing firm has a large cost advantage
  - Market is segmented
- Credibility vital – game theory needed (infinite repetitions / asymmetric information)

Non-pricing strategies

- *Excess capacity* (Spence, 1977)
  - Spare capacity increases the effectiveness & credibility of the threatened response to entry (i.e., an irreversible commitment to fight entry)
  - Problems of:
    - Length of profit sacrifice
    - Judging the level of spare capacity that is required
    - Technological change may mean that a firm's spare capacity may not be a credible threat to fight entry
    - Due to the technical change, there may be a fall in demand
    - A fall in demand will lead to even greater spare capacity
      - What is needed here is spare capacity that is a credible threat to fight entry and not spare capacity that is due to inefficiency. These two should not be confused. In other words, we need to know the reasons why a firm has spare capacity (i.e., has it strategically positioned itself to have spare capacity as a credible threat to fight entry)

Non-pricing strategies

- *Product differentiation*
  - Lancaster's (1966) 'characteristics' approach
  - Differentiation (packing-product-space) may be used to eliminate existing rivals or to pre-empt entry

Non-pricing strategies

- *Advertising*
  - Raises capital requirements of entry if significant brand loyalty has been established
- *R&D / innovation*
  - Stockpiling of innovations as a form of excess capacity – innovations are launched if there is a sufficient threat of entry
    - E.g. IBM developed a reputation of entering a market ‘second’. This sends a message to potential entrants that it is prepared to compete with a firms in a market and would retaliate in response to entry as it is ‘protective’ of its R&D
    - This does though highlight the wastefulness of ‘sleeping patents’

Non-pricing strategies

- *Acquisition / merger*
  - May be used to eliminate competitors or to secure upstream / downstream control (VI)

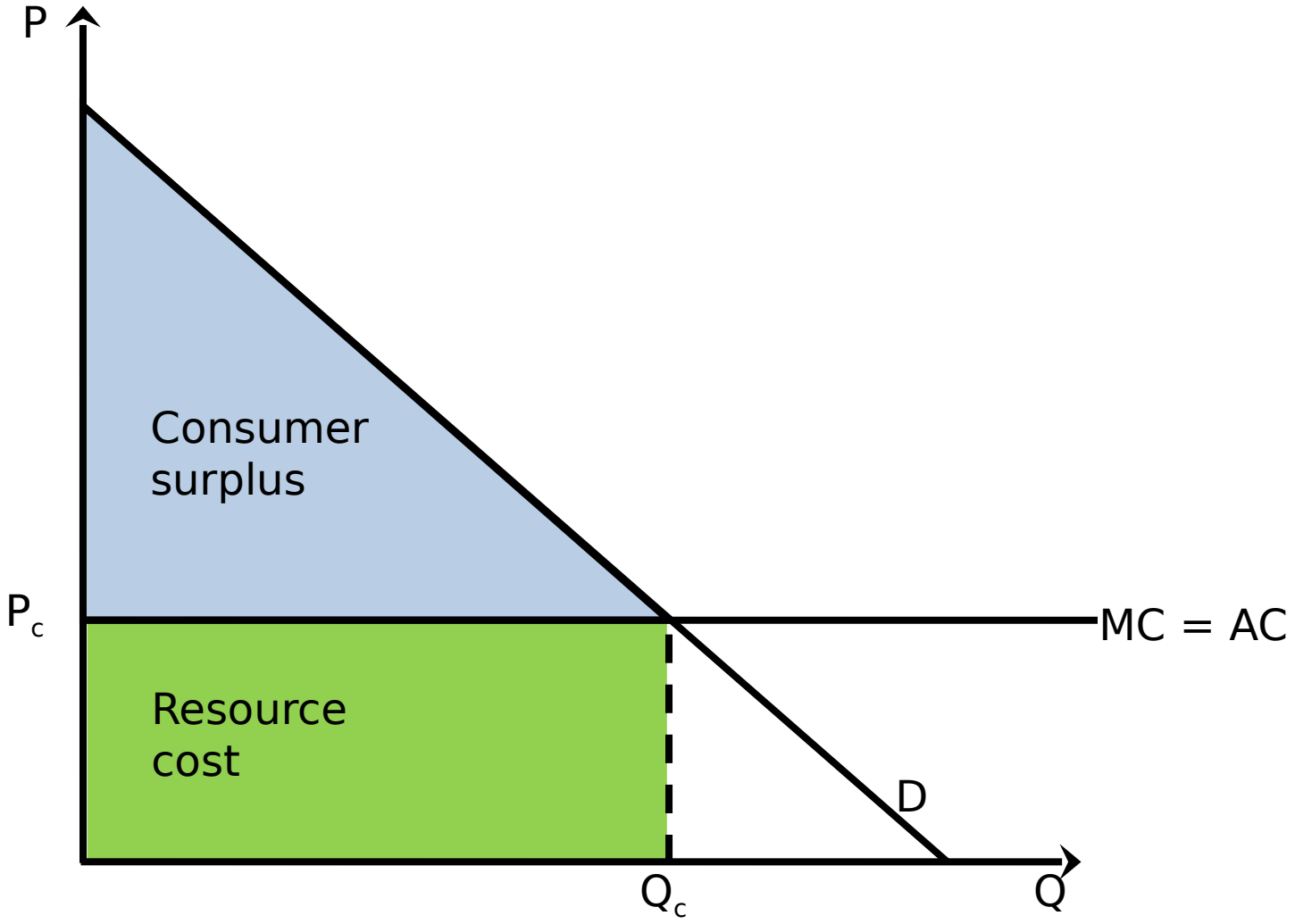
Government intervention

- Government intervention / regulation is usually to correct ‘market failures’ – 3 main types:
  - Externalities (external benefits / costs on other parties)
    - Social & private optima may not coincide
      - Former requires marginal social benefit = marginal social cost (MSB=MSC); latter has marginal private benefit = marginal private cost
      - May be overproduction (e.g. pollution) or underproduction (e.g. R&D) or externalities in consumption (e.g. congestion)
  - Public goods (free market may not produce at all)
    - Non-rivalrous & non-excludable
    - Potential ‘free-rider’ problem

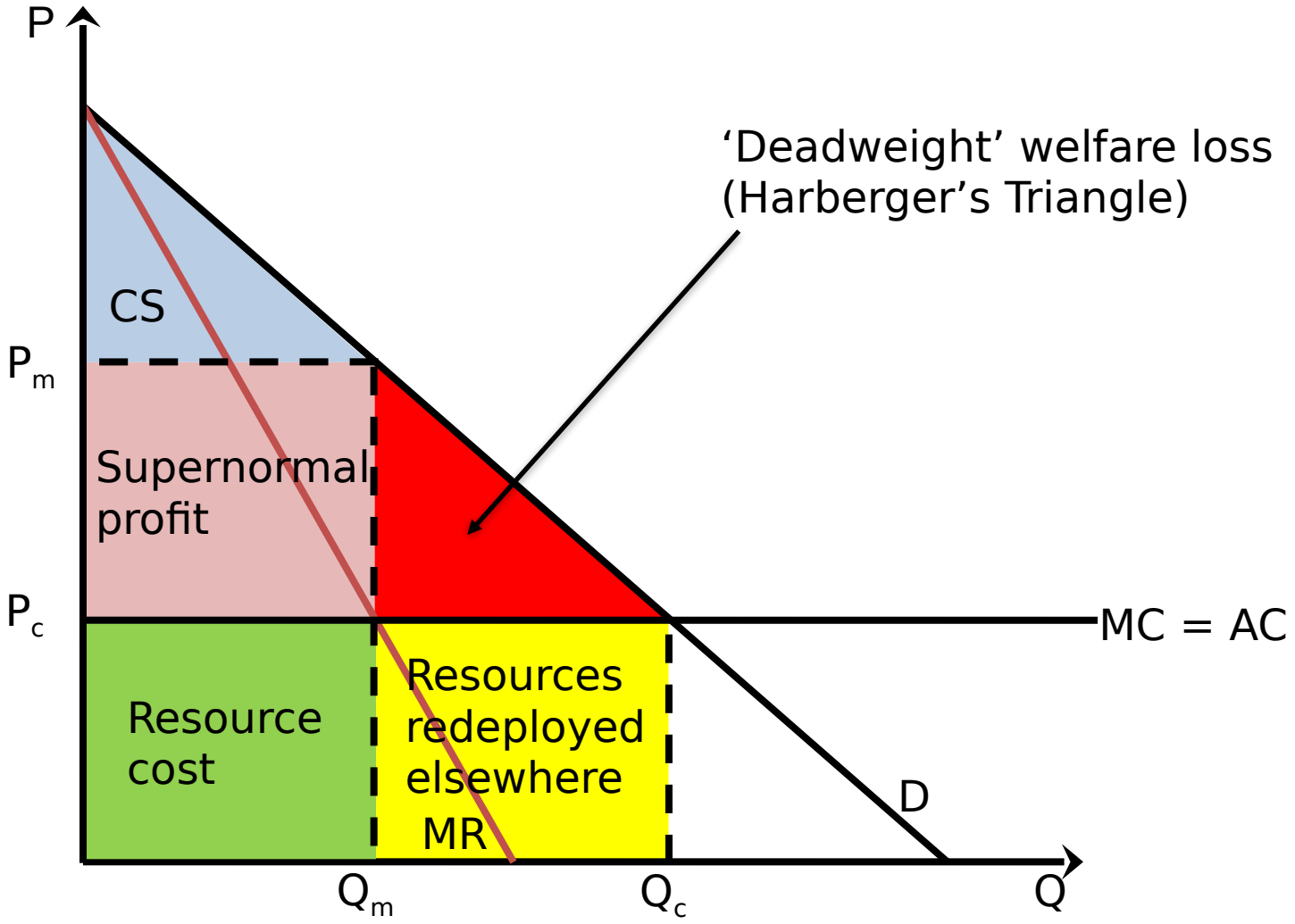
Government intervention

- Market power (ability of firms to raise P above MC)
  - Concern about firms with “large” market power rather than firms with a big market share
  - Proxied by Lerner Index (*LI*):
  - *LI* is the percentage mark up of P above MC. *LI* has often been used as a measure of a firm’s market power
  - *LI* for competing single product firms will take a value between 0 and 1. For a perfectly competitive firm P=MC so its *LI* is 0. The larger a firm’s *LI* the more market power it has.
  - Regulatory concern about the impact of a large amount of market power on *welfare* & *efficiency*
  - Showed previously that a monopolist produces less & charges more than the equivalent perfectly competitive industry
    - MSB = MSC ⇒ in absence of externalities, perfect competition delivers socially optimal output (& price)
    - Under similar cost conditions, monopoly (market power) gives rises to a ‘deadweight’ welfare loss due to ‘allocative inefficiency’ because P is greater than MC
    - In addition, monopoly might also give rise to productive (economic and technical) inefficiency

Perfect competition & welfare



Allocative inefficiency in monopoly



Productive efficiency

- Monopoly may have higher costs than if it were competitive. Why?
  - Managerial slack – no incentives for employees to put effort in to reduce costs → “X-inefficiency”
  - Similarly there are no incentives to innovate
  - Darwinian argument – only the best survives under competition; same pressure absent under monopoly

Productive (in)efficiency

- But too much competition may not be good – duplication of fixed costs
  - Socially optimal number of firms in an industry?
  - Trade-off:

    - Allocative efficiency: increase number of firms

    - Productive inefficiency: fixed costs duplication

(In)efficiencies in monopoly

- Under similar cost conditions (perfectly competitive firm and monopolist), inefficiencies of monopoly give rise to welfare loss
- But where monopolist can operate at costs *below* those of perfectly competitive firms, (total) welfare under monopoly could be greater
  - Can be extended to cases of natural monopolies (provision of utilities such as gas, electricity & water etc.)
- Thus, theoretical evidence as to whether monopoly leads to a reduction in efficiency & social welfare is inconclusive

Dynamic efficiency

- Dynamic efficiency could arise due to innovation, and so the case for monopoly may further strengthened if we consider dynamic efficiency aspects, i.e. extent to which a firm introduces new products & processes (R&D)
- Essentially ‘Schumpeterian’ view:
  - Expectation of monopoly power (patents) gives incentives for investment in R&D; monopoly power and profits may provide ability to invest
  - Under competition firms do not have the resources to invest in R&D and cannot ringfence the benefit of innovation for themselves as the innovative products will be copied

Where do we stand?

- Not enough justification for elimination of market power to be an objective of competition policy
- Hence, case for or against continuation of monopoly has to be assessed on an individual basis
- Ultimate criterion:
  - Ensuring that competition in the market place is not restricted in any way that is detrimental to society
  - Essentially focuses on social welfare underpinned by elements of structure-conduct-

What role does competition policy play?

- Aim of competition policy is to promote ‘workable and effective competition’
- Competition / antitrust objectives:
  - Aims to promote competition and to control abuse of market power by firms
  - Also seeks to increase efficiency, promote innovation, and/or improve consumer choice
  - (N.B. competition policy is, by design, selective in nature)

Competition policy: scope

- Competition policy principally covers three areas:
  - Monopoly policy:
    - Excessive prices
    - Price discrimination
    - Predatory pricing
    - Vertical restraints
  - Merger policy
  - Restrictive practices policy:
    - Cartel agreements (price fixing; limiting supply; market division; collusive tendering, etc.)
    - Vertical price-fixing (e.g. ‘resale price maintenance’)
    - Exchange of information that could reduce competition

Competition laws: USA

A. Sherman Act (1980)

- Prohibits contracts, combinations and conspiracies which restrain trade
- Prohibits monopolization, attempts and conspiracies to monopolize any part of trade or commerce

B. Clayton Act (1914)

- Regulates mergers
- Prohibits price discrimination among others

Competition laws: Europe

Treaty of Rome: Articles 81 and 82

- Prohibits agreements and practices between firms that restrict normal competition within the common market
- Prohibits any abuse of a dominant position

Competition policy: UK

- In the UK, there have been two rmajor acts of legislation – Competition Act (1998) & Enterprise Act (2002)
  - Brought EC's prohibition system to UK, but no longer the case following Brexit
  - Competition & Markets Authority (CMA) in the UK
    - "[works] to promote competition for the benefit of consumers, both within and outside the UK.. [aiming] to make markets work well for consumers, businesses and the economy"
    - Can see findings of various cases at: https://www.gov.uk/cma-cases
  - Various industry regulators (e.g. OFCOM, OFGEM, OFWAT etc)
    - To deal with privatised former nationalised industries
    - Price regulation typically works on an "RPI – X%" basis or possibly "RPI+X%"

MGT6128: Managerial Economics
2024-25

Topic 7: The macroeconomic environment 1

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The government's macroeconomic objectives

- The government's macroeconomic objectives fall into the following 6 categories. The first four are macroeconomic aggregate variables.
  - High and stable economic growth
  - Low unemployment
  - Low and stable inflation
  - Avoidance of balance of payments deficits and excessive exchange rate fluctuations
  - Financial well-being: avoidance of excessively financially distressed sectors of the economy
  - Financial stability: stable financial system

High and stable economic growth

- Percentage change in the level of the economy's output from one period to the next – usually from one year to the next.
- Government's aim is for economic growth over the long term (say 5 years although it is not clear what the exact length of the long term is).
- The government will aim for a stable rate of economic growth that avoids short term rapid growth that cannot be sustained and periods of recession.
- However, in reality the government cannot achieve this aim of a completely stable rate of growth and will in reality aim for as stable a rate of growth as is possible.
- In reality it cannot achieve this aim of a completely stable rate of growth because the economy will naturally exhibit periods of instability and so growth rates will fluctuate

Low unemployment

- Number of unemployed people are those of working age who are without work, but who are available to work
- Rate of unemployment is the number of people that are unemployed as a percentage of the total workforce:

$$\text{ROU (\%)} = \frac{\text{Number unemployed}}{\text{Total workforce}} \times 100$$

- In many developed economies there has been a move in more recent years towards flexible contracts. This has raised the issue of underemployment. This is not where people are completely unemployed, but rather people have fewer hours to work than they would like

Low and stable inflation

- Refers to a rise in the general level of prices in the economy
- Rate of inflation is the percentage increase in the general level of prices from one year to the next
- Since 2013 the Consumer Price Index (CPI) has been used to measure inflation in the UK. The CPI, as with any index, is 100 in the base year (year against which changes are measured). Any increase in the CPI constitutes inflation and any decrease represents deflation.
- CPI measures the cost of a representative sample (i.e., basket) of goods and services that reflects peoples' buying habits.
- The goods and services included in the basket can change over time as buying habits change. E.g., due to a change in buying habits during the pandemic loungewear (male jogging bottoms and female sweatshirts) were added to the basket.
- See https://www.bbc.co.uk/news/business-56395533
- The government (or independent central bank) will aim to keep inflation low and stable, as this will aid economic decision making by creating a more certain economic environment, i.e., more certainty about what level prices will be at.

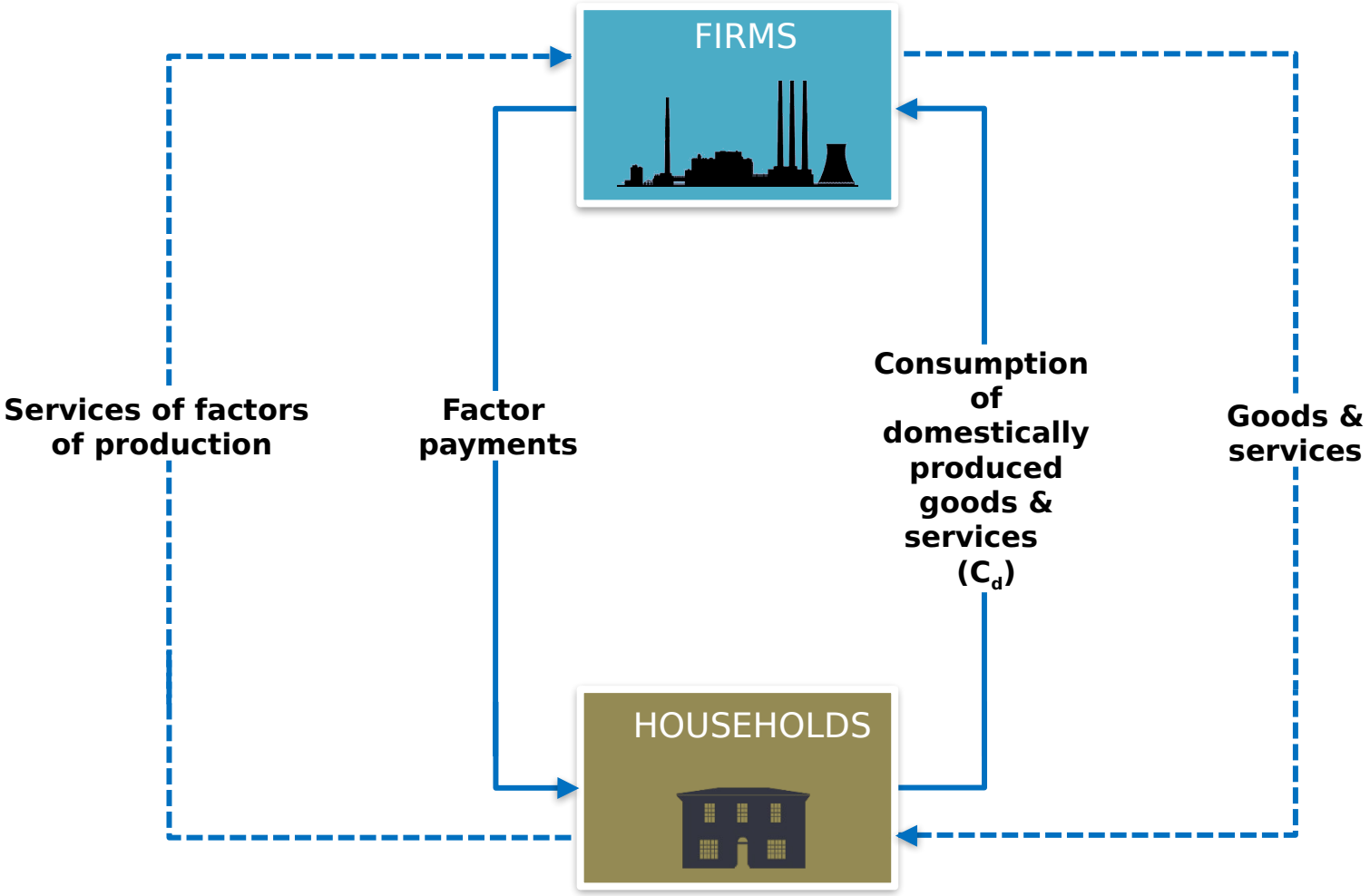
Balance of payments (BOP) deficits

- Records all transactions between the residents of a country and the rest of the world
- The government's aim is to provide an environment in which exports can grow without an excessive growth in imports.
- The government will also aim to make the economy attractive to inward investment (i.e., foreign direct investment). Hence the government's aim is for the country's earnings of foreign currency to at least match, or preferably exceed, the country's demand for foreign currency. This will achieve a BOP surplus.
- If earnings of foreign currency are less than demand for foreign currency, then there will be a BOP deficit. There are 2 impacts of this:
  - Government must cover the deficit by borrowing foreign currencies from abroad or drawing on its foreign currency reserves. If the deficit goes on for too long, the deficit will rise as will the interest that must be paid on the deficit, and foreign currency reserves will run low.
  - The deficit will lead to the exchange rate, which is the price of one currency in terms of another, to fall. This is due to greater demand for foreign currency relative to the domestic currency. A lower exchange rate will make domestic goods cheaper abroad leading to a rise in exports (good thing). Imports will become more expensive which can fuel domestic inflation (bad thing). Fluctuating exchange rates also create uncertainty (bad thing).

Financial well-being (FWB) & and financial stability (FS)

- The previous 4 macroeconomic objectives have long since been objectives. A much newer one is FWB.
- Increasingly now recognised (likely to be in response to the 2008 financial crisis) that the behaviour of agents (consumers, businesses, etc.) is affected by their FWB.
- If consumers and firms are worried about their FWB they will be more cautious and thus may reduce their spending, debts and investment.
- If the government is worried about its FWB it will likely try to reduce its spending and increase taxes.
- Aim of the government and independent central bank (Bank of England in the UK) is to ensure stability of the financial system. This is because all financial markets and institutions are an integrated part of economies.

Inner flow of the circular flow of income



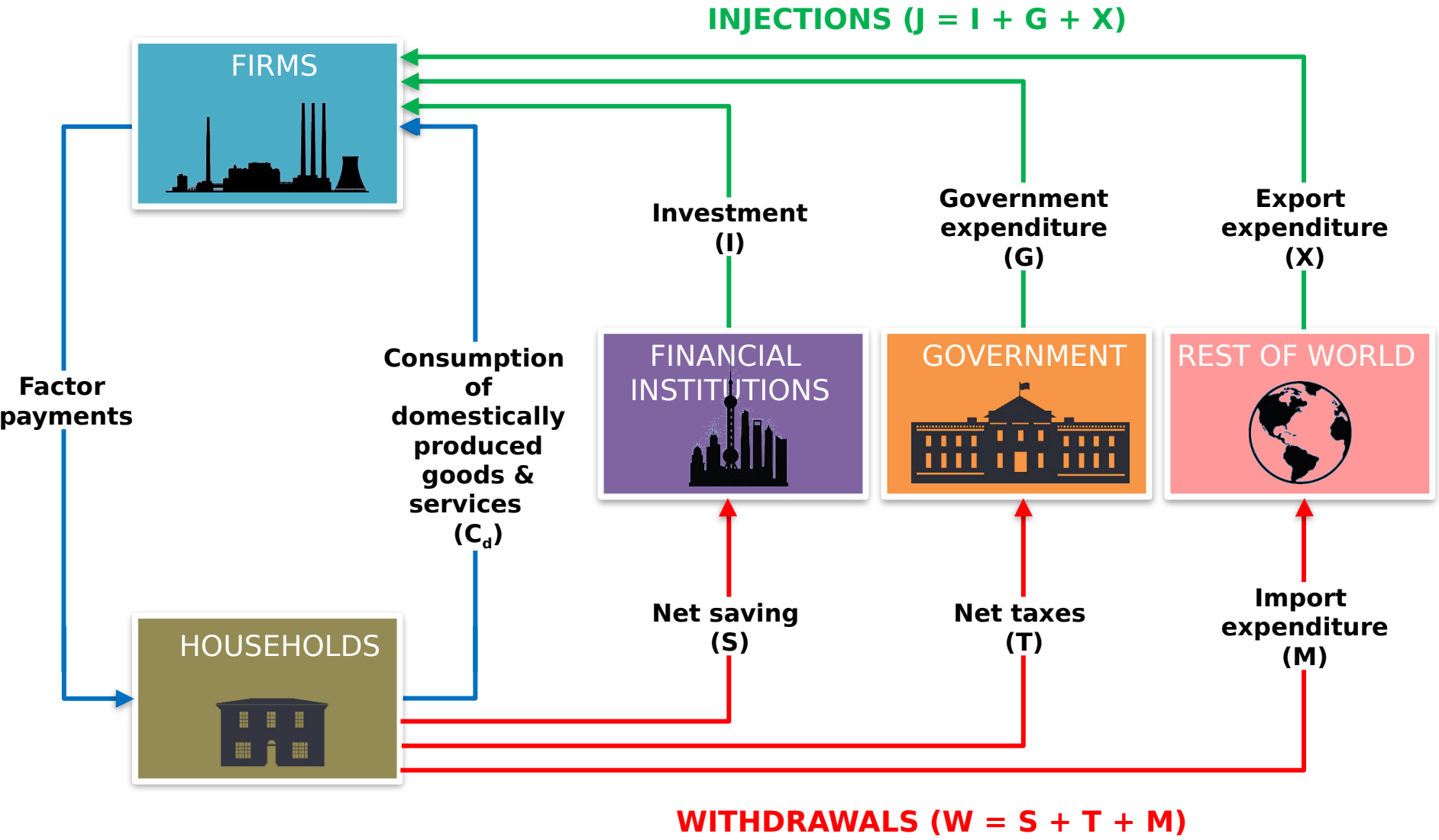
Outer flows of the circular flow of income (1)

- In the real world things are not as simple as all income being passed on round the inner flow. Not all this income will be spent on domestic goods and services as some will be withdrawn from the inner flow, and some is injected to this inner flow
- Leakages / withdrawals (W) from the circular flow (in the outer flow) can occur in the form of:
  - Net Savings (S) by households / families, i.e., savings minus borrowings. Positive net savings is a flow from households to banks, while negative net savings / positive net borrowings is a flow from banks to households.
  - Net taxes (T) on households' incomes, i.e., taxes minus government benefits / transfer payments
  - Spending on imports (M)
  - Total withdrawals, W = S + T + M

Outer flows of the circular flow of income (2)

- Only parts of the demand for firms' output (AD) arise from consumers' expenditure. Remainder comes from other sources outside the inner flow and are known as injections (J)
- Injections to the circular flow (in the outer flow) can occur in the form of:
  - Investment by firms (I)
  - Government spending on domestic goods and services (G)
  - Spending on exports (X)
  - Total injections, J = I + G + X

The circular flow of income



Measuring economic activity (1)

- Gross Domestic Product (GDP) is the total market value of all final goods & services produced within a country in a given period of time (usually a year but sometimes a quarter)
  - Final goods are goods purchased by their ultimate user (e.g., consumption or capital goods)
  - Intermediate goods are partly finished goods that are used up in the production process (e.g., raw materials)
- Can be measured using output (as value added, to avoid double counting), income or expenditure

Measuring economic activity (2)

- Using the expenditure method, GDP (Y) is given by:

  $Y \equiv C + I + G + (X - M)$

  - C is consumer spending on domestically produced goods and services; I is investment within the country by firms (e.g., plant & equipment); G is government expenditure on domestically produced goods and services (e.g., health); X is expenditure by residents abroad on this country's exports; M is expenditure by consumers and firms on imports; and X-M is net exports
  - Need to adjust nominal GDP (i.e., at current prices) to real GDP (i.e., at constant prices) by using the GDP deflator:

  Real GDP

  - As a measure of economic well-being, GDP per capita is better for comparisons
    - But note excludes other factors affecting well-being, such as value of leisure, clean environment, non-market activities, etc.
    - See ONS on measuring well-being https://bit.ly/2utolT9

Economic fluctuations

- Economies exhibit variations in key economic indicators over time
  - Fluctuations are generally irregular & unpredictable.
  - Most macroeconomic quantities are positively or negatively correlated
  - E.g., unemployment rises as output falls, so there will be a negative correlation between these two variables

Business / Trade cycle (3)

- Potential output grows over time for 2 reasons:
  - (1) Resources may increase, e.g., increase in working population
  - (2) Resources may become more productive, e.g., technical progress
- 4 phases of the business cycle:
  - (1) Upturn: Stagnant economy begins to recover and growth in GDP resumes
  - (2) Expansion: Rapid growth; economy is booming.
  - (3) Peaking-out: Growth slows down or even ceases.
  - (4) Slowdown: Little or no growth, or even a contraction of the economy; economy is in recession
- The solid straight red line represents the long-run trend of GDP over time, i.e., when we ignore all the cyclical fluctuations
- In practice (i.e., with real world data), business cycles are not smooth and regular. No one phase is therefore going to be the same from one cycle to another. This is for 2 reasons:
  - (1) Length of one phase can vary from one cycle to another
  - (2) The size of the changes in growth in a phase can vary from one cycle to another

The aggregate demand & supply model

- Is a model that can be used to find the equilibrium level of national output
- Aggregate demand (AD): total demand for all goods & services in the economy at a particular price level
- Aggregate supply (AS): total of goods & services supplied in the economy at a particular price level
- In the short run there are similarities between the AD and AS curves and the market demand and supply curves which you have previously seen

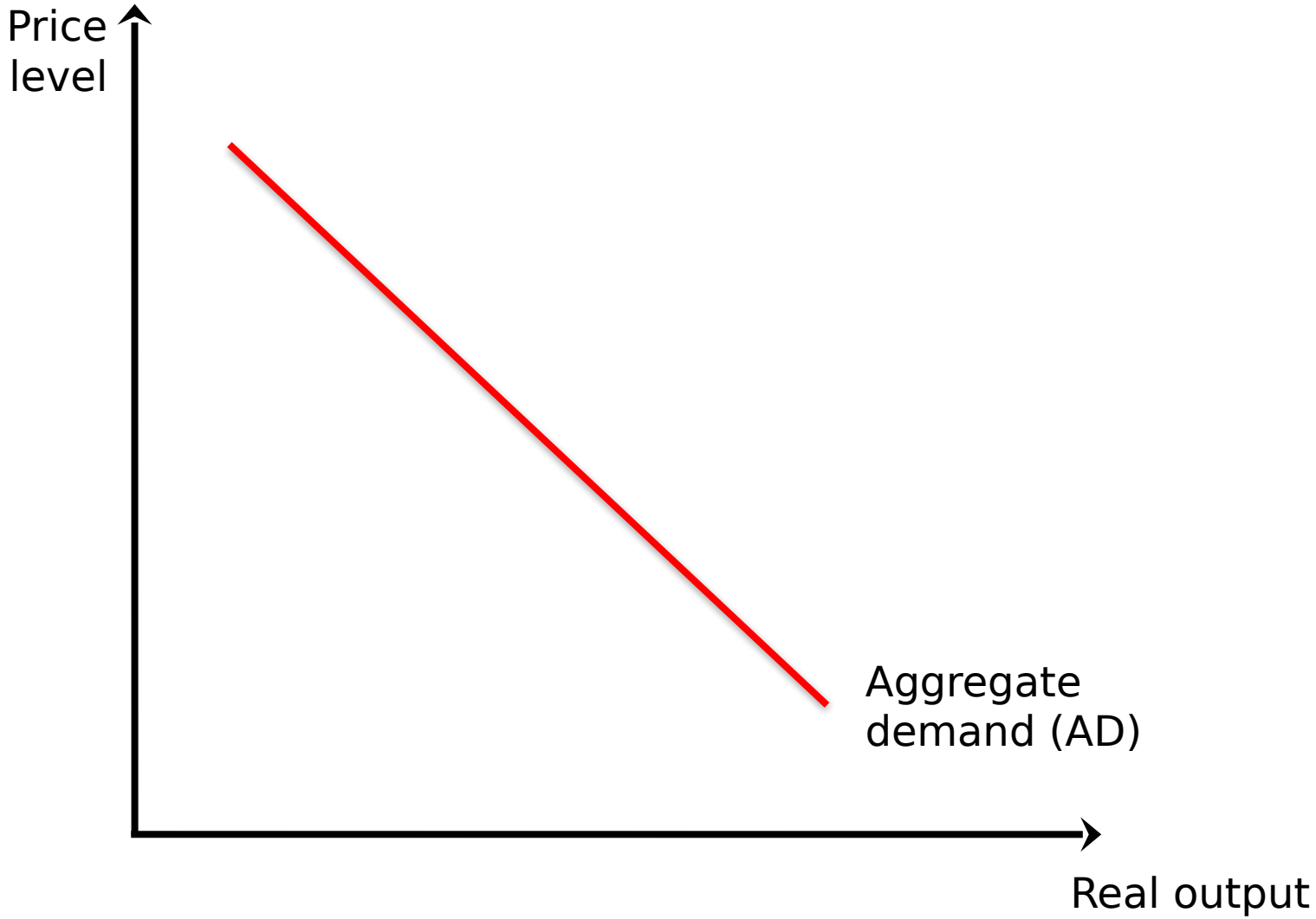
The AD curve (1)

- AD: total spending on goods & services at a particular overall price level:

$$AD = C + I + G + (X - M)$$

- Plotted with overall price on the vertical axis & real GDP on the horizontal

The AD curve (2)



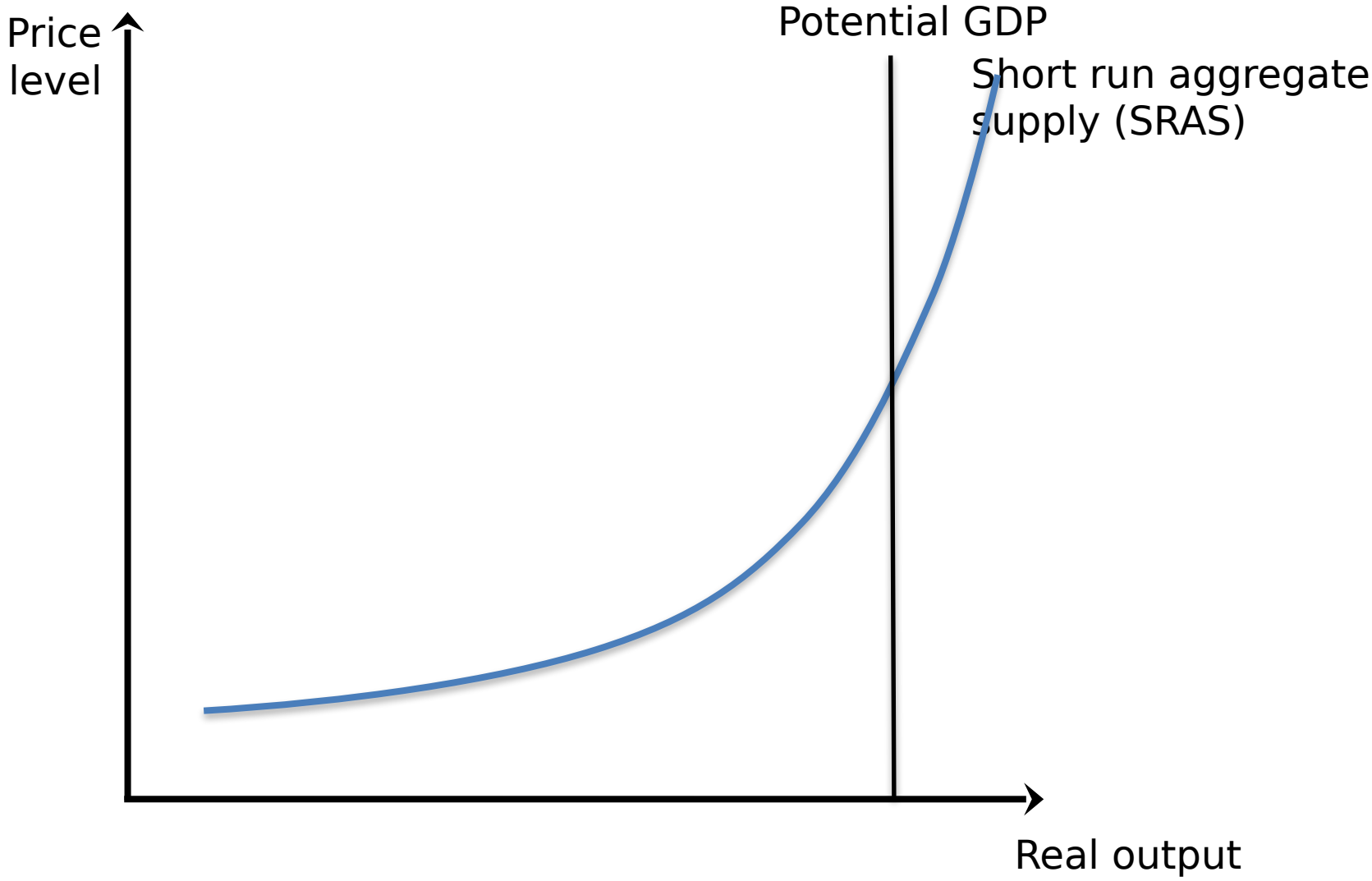
The AD curve (3)

- AD curve shows how much national output (real GDP) will be demanded at each overall price level
- Downward sloping: reductions in the overall price level increase the quantity of goods & services demanded due to:
  - Wealth effect (↑C)
  - Interest rate effect (↑I)
  - Foreign price effect (↑ net exports, i.e., (X – M))
- The key thing here is that reductions in the overall price level trigger the increase in the quantity of goods & services demanded.

The short run AS (SRAS) curve (1)

- Also plotted with overall price on the vertical axis and real GDP on the horizontal
- Upward sloping: increases in the overall price level increase the quantity of goods & services supplied as firms respond to rises in the overall price of final goods.
- When the overall price of final goods increases, the profit margin for firms goes up, so they are incentivised to supply more to make even more profit

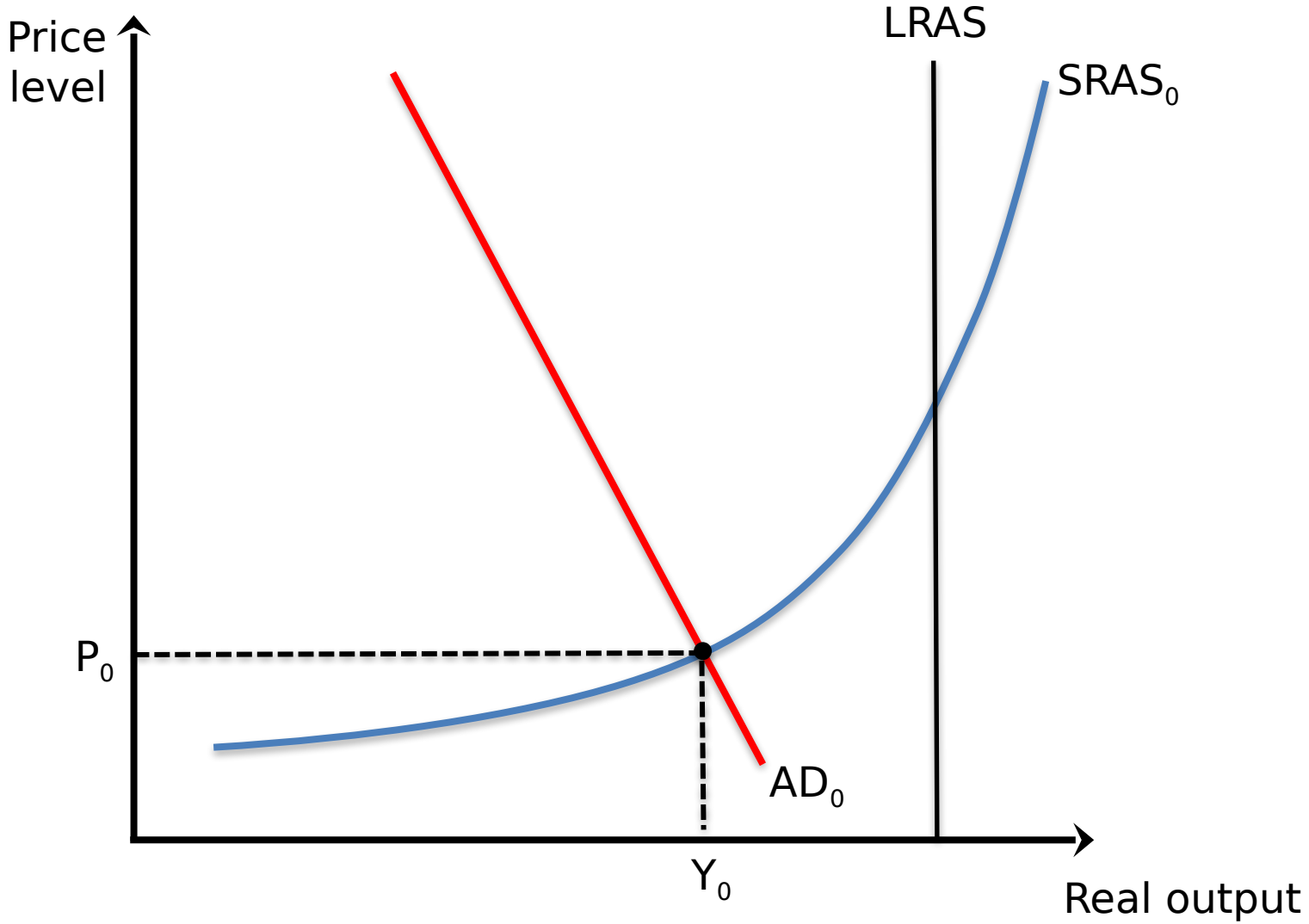
The short run (SRAS) curve (2)



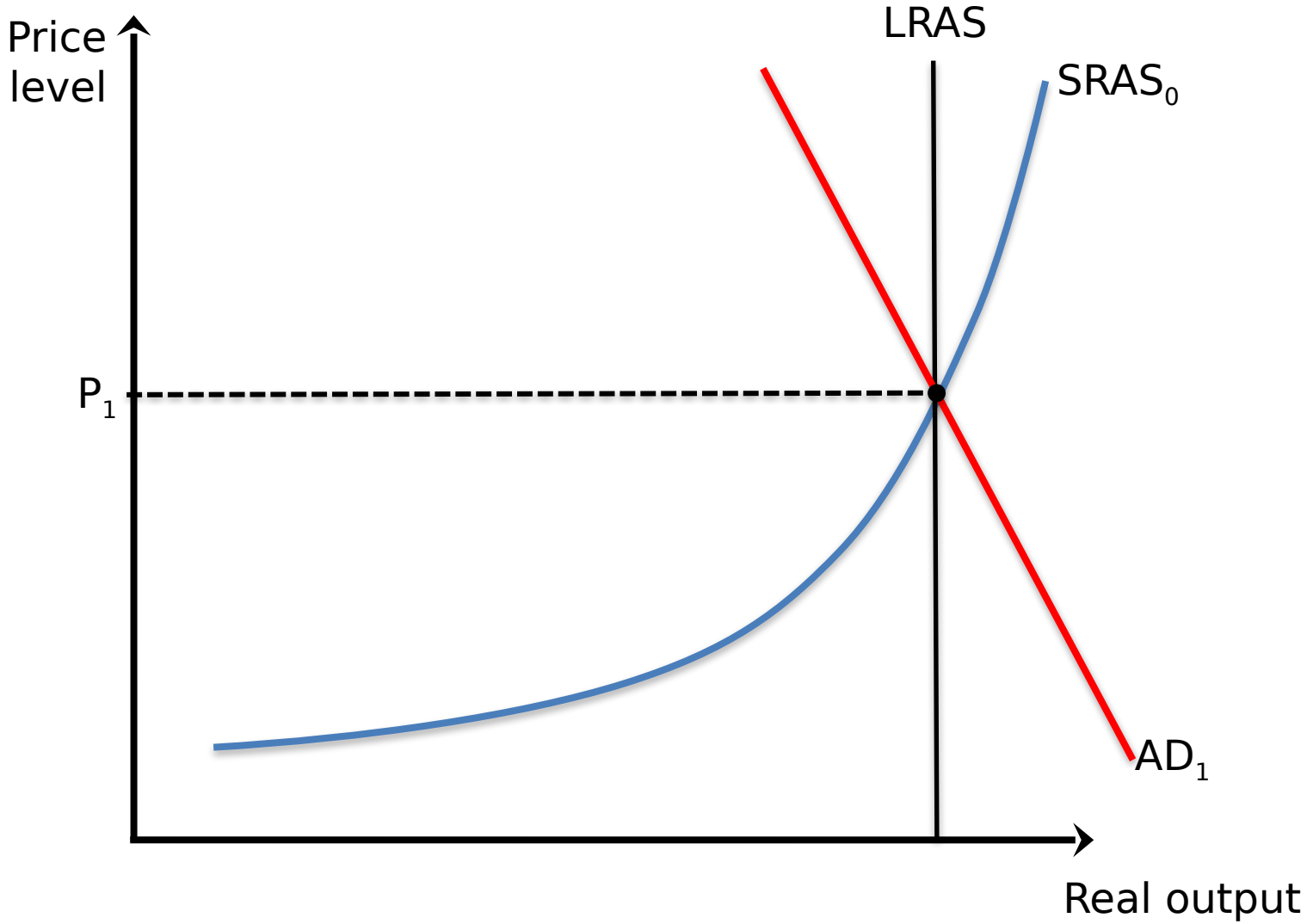
The short run (SRAS) curve (3)

- Slope of the SRAS curve increases as the overall price level rises and as a result the SRAS curve progresses towards being vertical close to potential output
  - In the short run, producers may supply less / more than potential output. Hence why SRAS can be to the left or right of potential output in the diagram on the previous slide
  - The vertical line at potential output represents the long run AS (LRAS) curve

Short run equilibrium in the AD-AS model



Long run equilibrium in the AD-AS model



MGT6128: Managerial Economics
2024-25

Anthony Glass

a.j.glass@sheffield.ac.uk

Sheffield University Management School.

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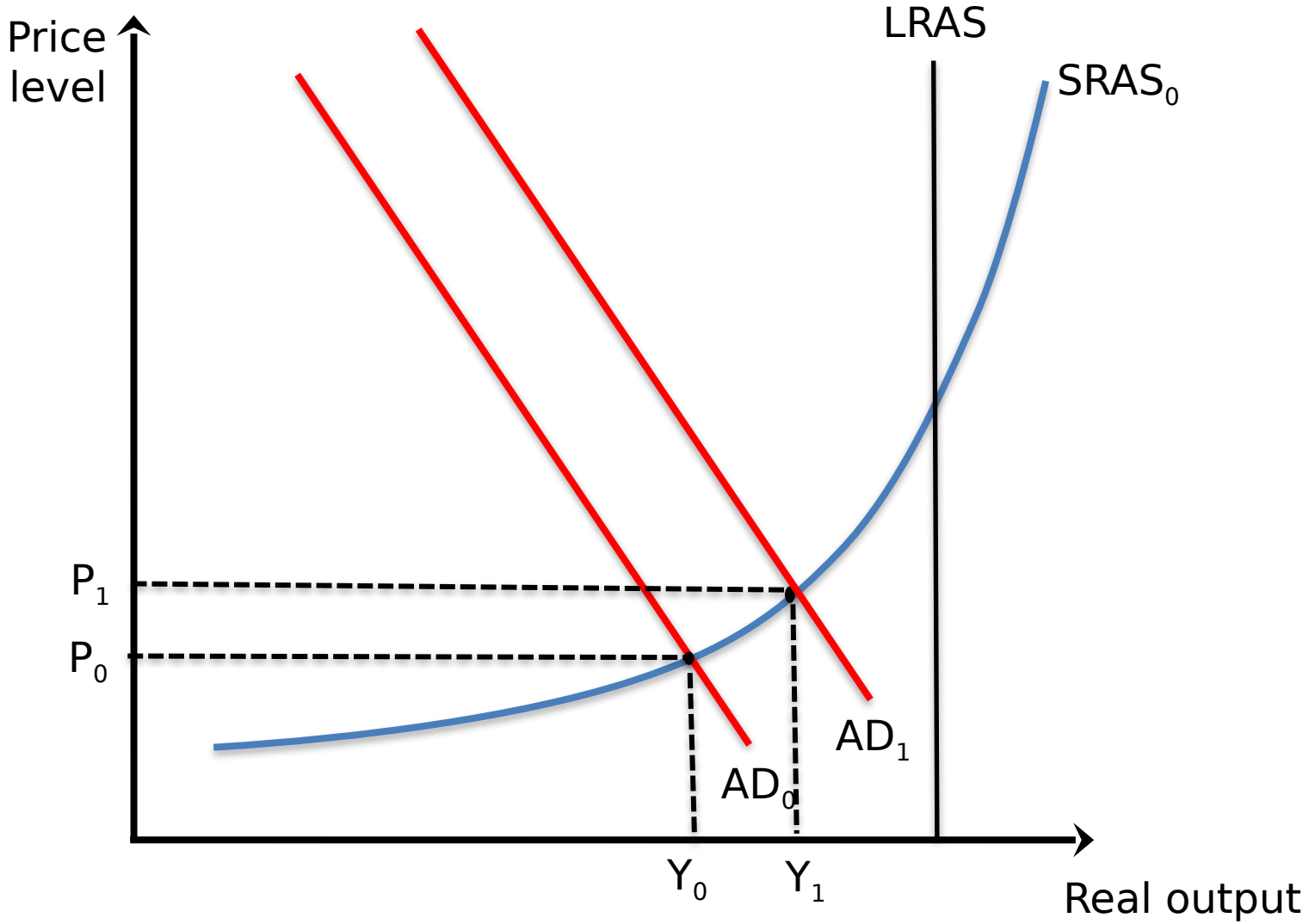
Factors that cause the AD curve to shift

- Now let us assume that initially the overall price level does not change and consider the factors that cause an increase / decrease in AD, i.e., the AD curve shifts because the change in AD is not triggered by a change in the overall price level.
- Shifts in the AD curve arise due to
  - Fiscal policy: the control of the economy by the government through the levels of government expenditure (G) and taxes (T). ↑G or ↓T shift the AD curve to right, i.e., in both cases there is an increase in AD.
  - Monetary policy: the control of the economy through the levels of money supply (MS) and / or the rate of interest (r). In the UK monetary policy is the responsibility of the Bank of England which is independent of the government. ↑MS or ↓ r shift the AD curve to right.
  - Changes in consumer / firm behaviour. Examples include ↑C or ↑I due to more optimistic expectations about the economic climate. The increase in consumption / increase in investment will shift the AD curve to right

Impact of a rightward shift in the AD curve on the SR equilibrium



Factors that cause the SRAS and LRAS curves to shift

- Shifts in AS arise due to:
  - A rise / decline in productivity. Labour productivity is measured as GDP per worker. A rise in productivity shifts both the SRAS & LRAS schedules to the right, i.e., increases in SRAS and LRAS. LRAS shifts to the right because an increase in productivity raises potential GDP.
  - Changes in input prices (e.g., oil). ↑ in input prices shifts the SRAS schedule to the left, i.e., a decrease in SRAS. A change in input prices has no effect on LRAS so the LRAS schedule does not shift. There is no effect on LRAS because following an increase in input prices firms will be able to produce the same maximum output. It would be their choice to produce less output, but the potential output would remain unchanged.

Effect in practice of factors that shift the AD and AS schedules (1)

- In the AD-AS model we assume that when one factor that causes a shift in the AD / AS curve changes, all the other factors that can simultaneously cause either of these curves to shift remain unchanged. This is so we can isolate the effect on the model of the factor that has changed, rather than when two factors change not being able to distinguish between the impact on the model of each one of the two changes.
- In reality factors change one after another. This is because a change in one factor affects at least one other factor. This is analogous to a domino rally.

Effect in practice of factors that shift the AD and AS schedules (2)

- To see how a change in one factor leads to changes in other factors, suppose there is an ↑I by firms. The initial effect of the ↑I is to increase AD, but there will be further increases in AD and also AS because of the impact that the ↑I has on other factors. This is known as the **multiplier effect** on national output.
- The initial effect (↑I leads to increase in AD) has further effects: firms will use more labour and other resources and thus pay more to households; households will then consume more so firms will sell more; firms will produce more and use more labour and other resources; households' incomes will rise again; and this process continues in the same way.

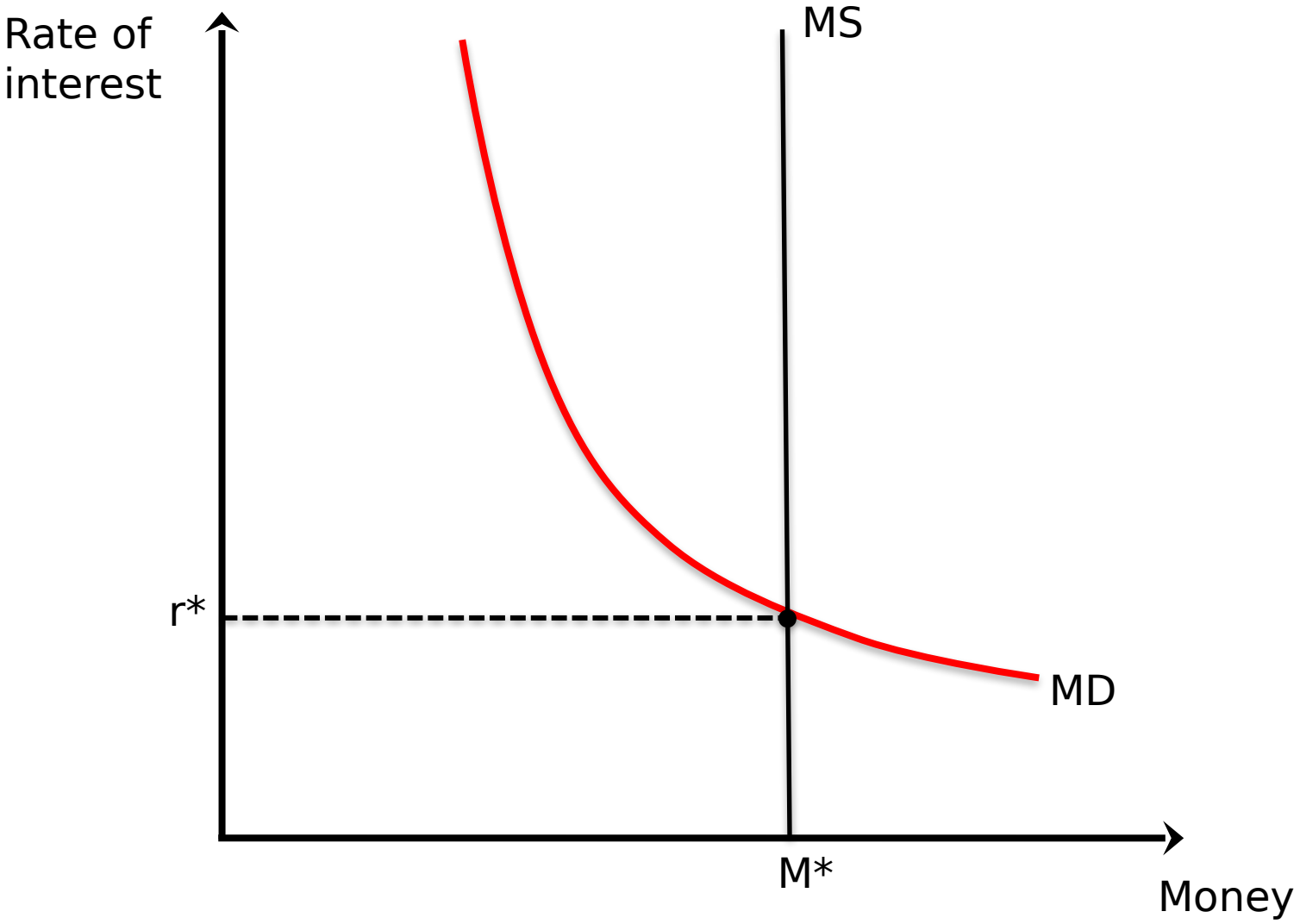
Relevance of interest rates

- Relevant to business credit, firms' retained profits and consumer loans
- Availability of credit to businesses and consumers, and the level of the rate of interest on this credit, is key for the growth of firms and the economy
- Equilibrium interest rate in a free market is determined by demand for and supply of money
- In practice an independent central bank (Bank of England) may view the equilibrium interest rate as being too low / high, and will manage the economy through its setting of the base rate of interest
- We focus for the moment on the determination of the free market rate of interest

Definitions of money supply (MS) and money demand (MD)

- Typically use 2 measures of MS: (i) Narrow money – cash in circulation (i.e., outside that at the central bank); and (ii) Broad money – cash in circulation with the public (but not with banks) plus all deposits in banks and building societies (by far the largest of the two components)
- In the UK this measure of broad money is known as M4
- MD refers to the desire to hold money; to keep your wealth in the form of money, rather than spending it on good and services or using it to purchase financial assets such as bonds or shares. Such demand is because of consumer spending in the month between two salary payments and precautionary demand for money, e.g., cash to buy a new boiler.

Equilibrium rate of interest



MS schedule

- For simplicity it is assumed that MS is independent of the level of r, i.e., the MS schedule is a vertical line
- Main monetary policy tool of a central bank (e.g., Bank of England) is changing the base rate of interest.
- Banks increase the MS by not holding all savers' deposits in cash. E.g., if there is a £10m increase in bank deposits; assuming a cash ratio of 10%, banks will hold £1m of the increase in deposits in cash; lend the other £9m which is spent in shops, etc., which is then paid by shops, etc., into banks; bank deposits will increase by a further £9m; banks will hold 10% of the new deposits in cash (£0.9m) and lend the other £8.1m.
- This process continues until the bank has created £100m of new deposits (it can create no more than £100m as it needs to adhere to its cash ratio which we assume is 10%). Of these new deposits £10m would be held in cash to adhere to the 10% cash ratio, and there would be £90m of non-cash deposits
- This process is known as the **bank / deposits multiplier**
- Deposits multiplier = 1 / cash ratio, E.g., 1/10% = 1/0.1 = 10
- Deposit multiplier * initial increase in deposits = new deposits created, E.g., 10 * £10m = £100m

MD schedule

- MD schedule is downward sloping because the lower r is, the lower the interest on savings and interest bearing financial assets (bonds and gilts), and thus the more inclined people will be to hold cash, i.e., higher MD
- The MD will shift if:
  - Peoples' incomes increase, because the more you earn the more money you are likely to hold in the bank i.e., increase in MD and shift to the right
  - People think share prices or the price of other securities (e.g., derivatives) are likely to fall, i.e., increase in MD and shift to the right
  - Financial innovations that lead to increased use of alternatives to M4 for payments, e.g., crypto currencies, i.e., decrease in MD and shift to the left

Unemployment: definition and measures

- When the economy is booming employment will be high and unemployment low
- **Number unemployed (U)** are those of working age who are without work, but who are available for work at current wages
- **Rate of unemployment (ROU)** is the number of unemployed as a percentage of the total labour force (labour force is all those employed and unemployed). E.g., if 32.7m were employed and 1.3m unemployed:

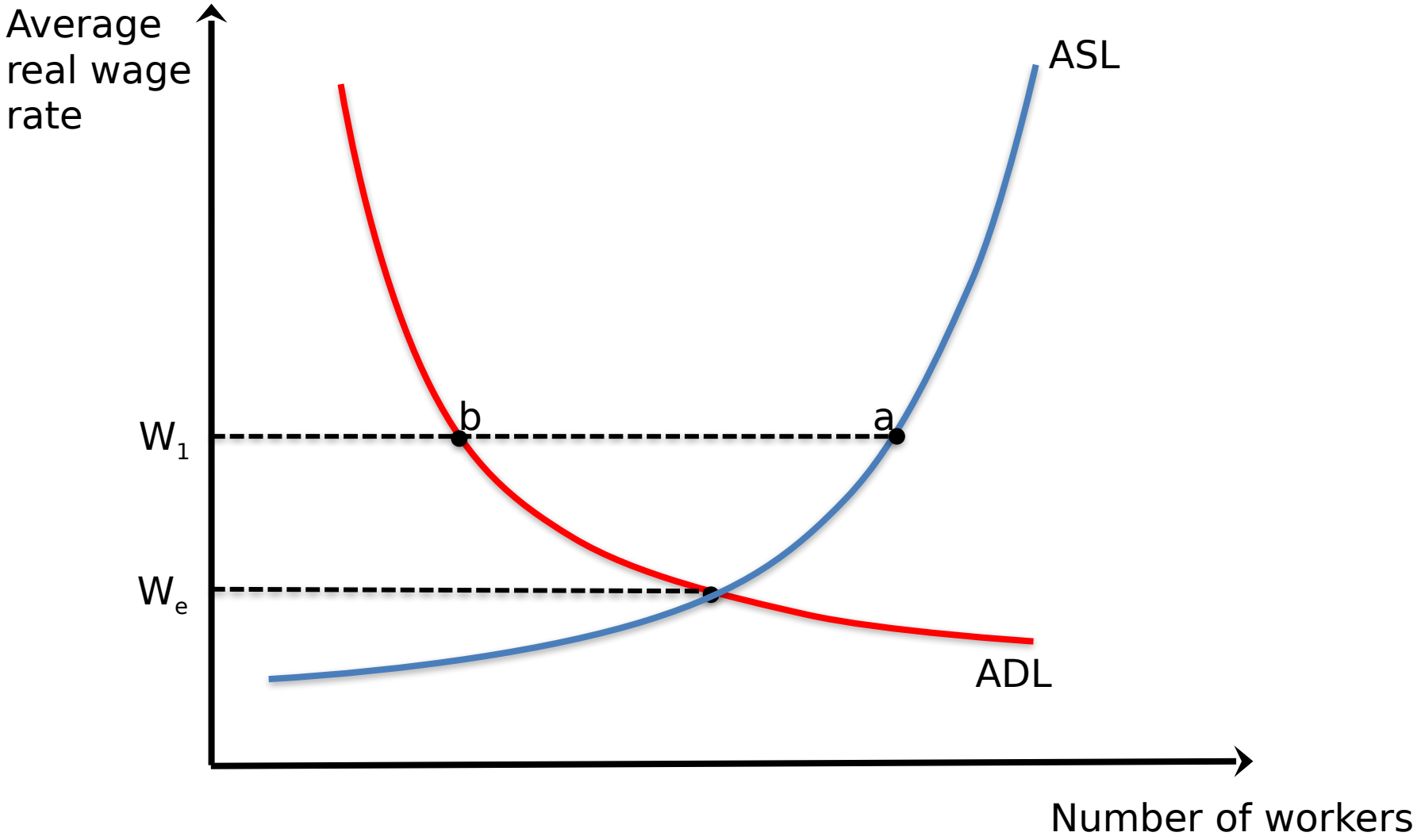
$$\text{ROU} = \text{x } 100 = \text{ x } 100 = 0.0382 \text{ x } 100 = 3.82\%$$

- **Measure of U:** Claimant unemployment is the number of people in receipt of unemployment related benefits
- **Measure of ROU**: Standardised unemployment rate is from the quarterly UK labour force survey and defines the unemployed as people of working age who are without work, available to start work within two weeks and actively seeking employment or waiting to take up a job.
- Of the measures of U and ROU, since 1998 the ROU is the main measure used by the UK government.

Causes of unemployment (1)

- Two categories of causes
- (i) Disequilibrium unemployment: unemployment resulting from real wages being above the equilibrium level.
- (ii) Equilibrium (‘natural’) unemployment: The difference between the labour force (i.e., those employed plus those unemployed) and the total number of people who have accepted a job plus those who are willing accept one at the prevailing wage. This gives those who would not accept a job at the prevailing wage.
- To consider (i) and (ii) further we need analyse the ADL-ASL model. The horizontal axis for this model is number of workers and the vertical axis is average real wage rate (i.e., average wage rate in terms of purchasing power, which means after taking out the effect of inflation)
- ASL schedule slopes up and shows the number of workers willing to accept jobs at each wage rate
- ADL schedule slopes down and shows that the higher the wage, the fewer workers firms will want to employ

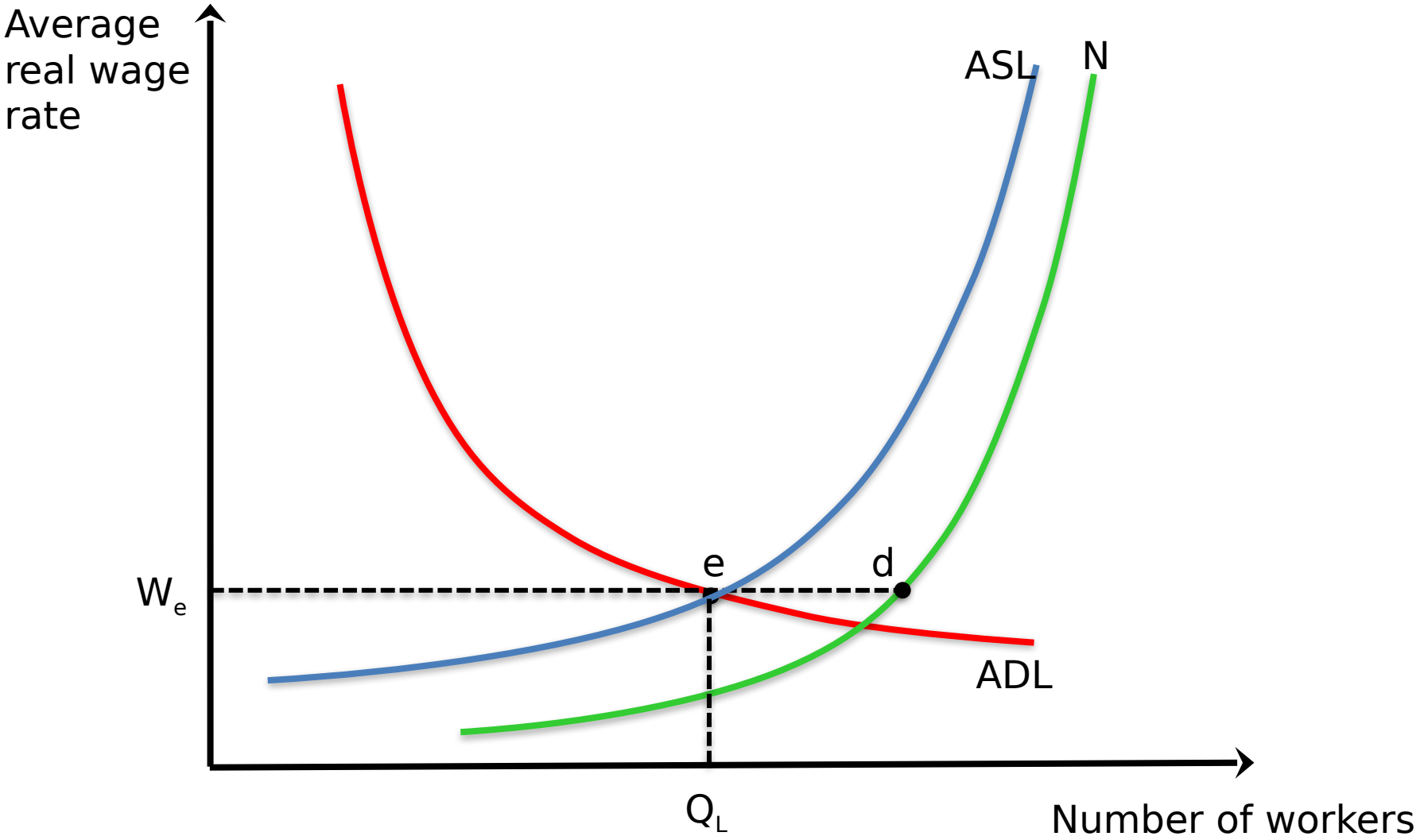
Disequilibrium unemployment



Causes of unemployment (2)

- Disequilibrium unemployment occurs when the following two conditions hold:
  - ASL (e.g., point a) must exceed the ADL (e.g., point b)
  - There must be ‘stickiness’ in wages so the wage rate does not immediately fall to W_e in the diagram on the previous slide
- In equilibrium, everyone looking for work will not be employed, i.e., some will wait to try and find a better job. In equilibrium, the unemployed will be the difference between the labour force (schedule N on the next slide) and those willing to accept work (denoted Q_L at point e in the next diagram) at the prevailing wage (equilibrium level of employment). This difference is d – e (equilibrium level of unemployment)
- If there is a low rate of unemployment, there may still be high underemployment: when workers want to work more hours than the hours firms give them

Equilibrium unemployment



Types of disequilibrium unemployment

- Two main types of disequilibrium unemployment
- (i) **Real wage unemployment**: where wages are set above the equilibrium level at, for example, W_1 in the previous diagram but one. Wages may be set at this level due to minimum wages or the impact of trade unions.
- (ii) **Demand deficient unemployment** is associated with economic recessions or slowdowns. This causes the ADL curve in the previous diagram but one to shift to the left. Real wage is sticky above the new equilibrium real wage. As an economy recovers this demand deficient unemployment will start to fall. This unemployment varies across the business cycle and is often referred to as cyclical unemployment

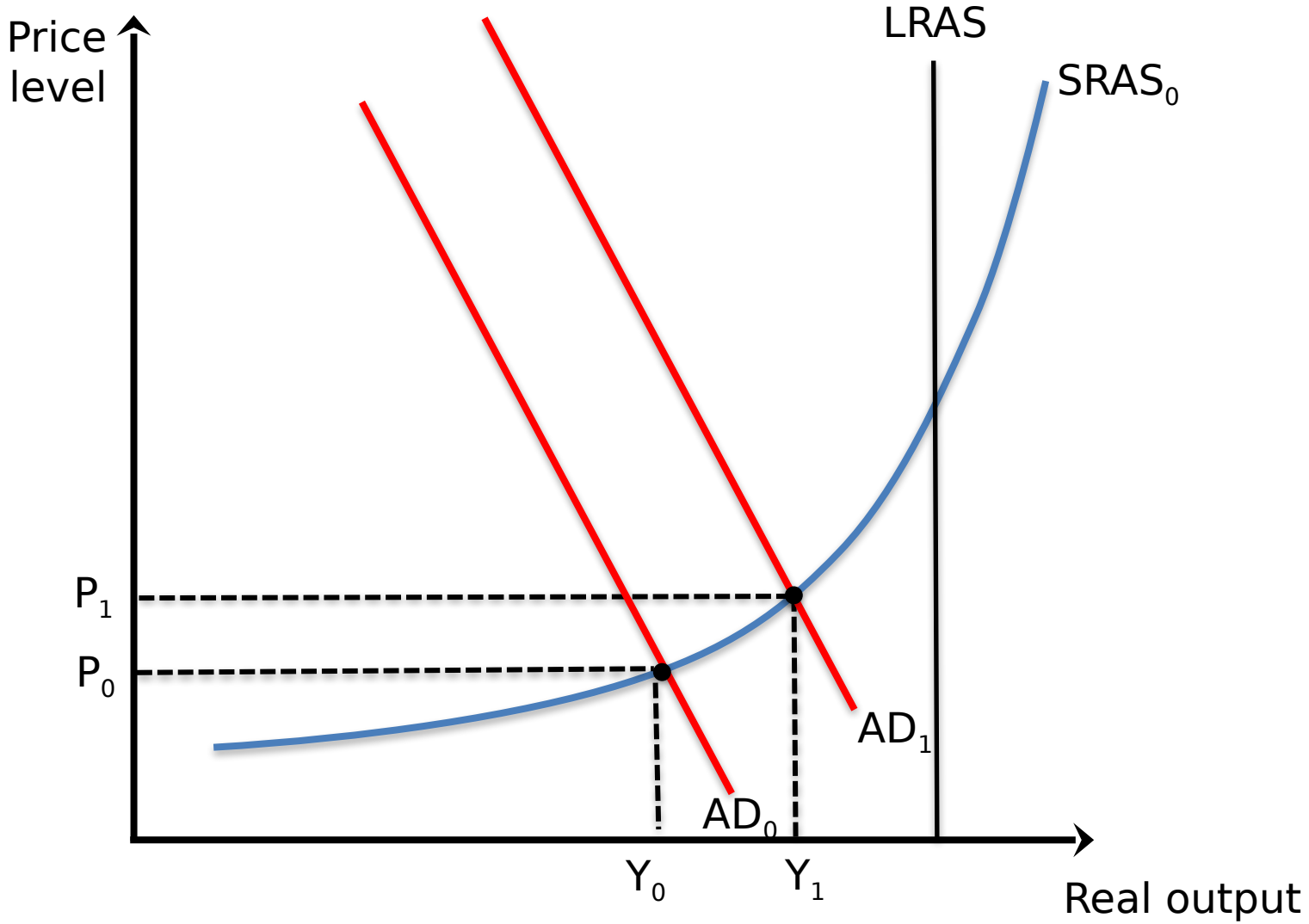
Types of equilibrium unemployment

- Even if there is overall macroeconomic equilibrium, i.e., ADL=ASL, and thus no disequilibrium unemployment, at the microeconomic level Ls and Ld may not always be equal, i.e., job vacancies in some parts of the economy and unemployment in others
- Three types of equilibrium unemployment:
- **(i) Frictional (search) unemployment:** when people leave their jobs, either voluntarily or otherwise, and are unemployed until they find another job
- **(ii) Structural unemployment**: when the structure of the economy changes, employment rises in some industries and falls in others. **(a) Change in pattern of demand**, which may be due to change in tastes or competition from other industries (e.g., unemployment in mining areas due to competition for coal from other types of energy). **(b) Change in methods of production (technological unemployment)**, which often means fewer workers are needed (e.g., in banking) and often leads to regional unemployment (e.g., historically there has been a decline in the steel industry in the UK which raised unemployment in South Yorkshire)
- (iii) **Seasonal unemployment:** demand for labour varies between the seasons of year (e.g., higher unemployment in Cornwall in the winter)

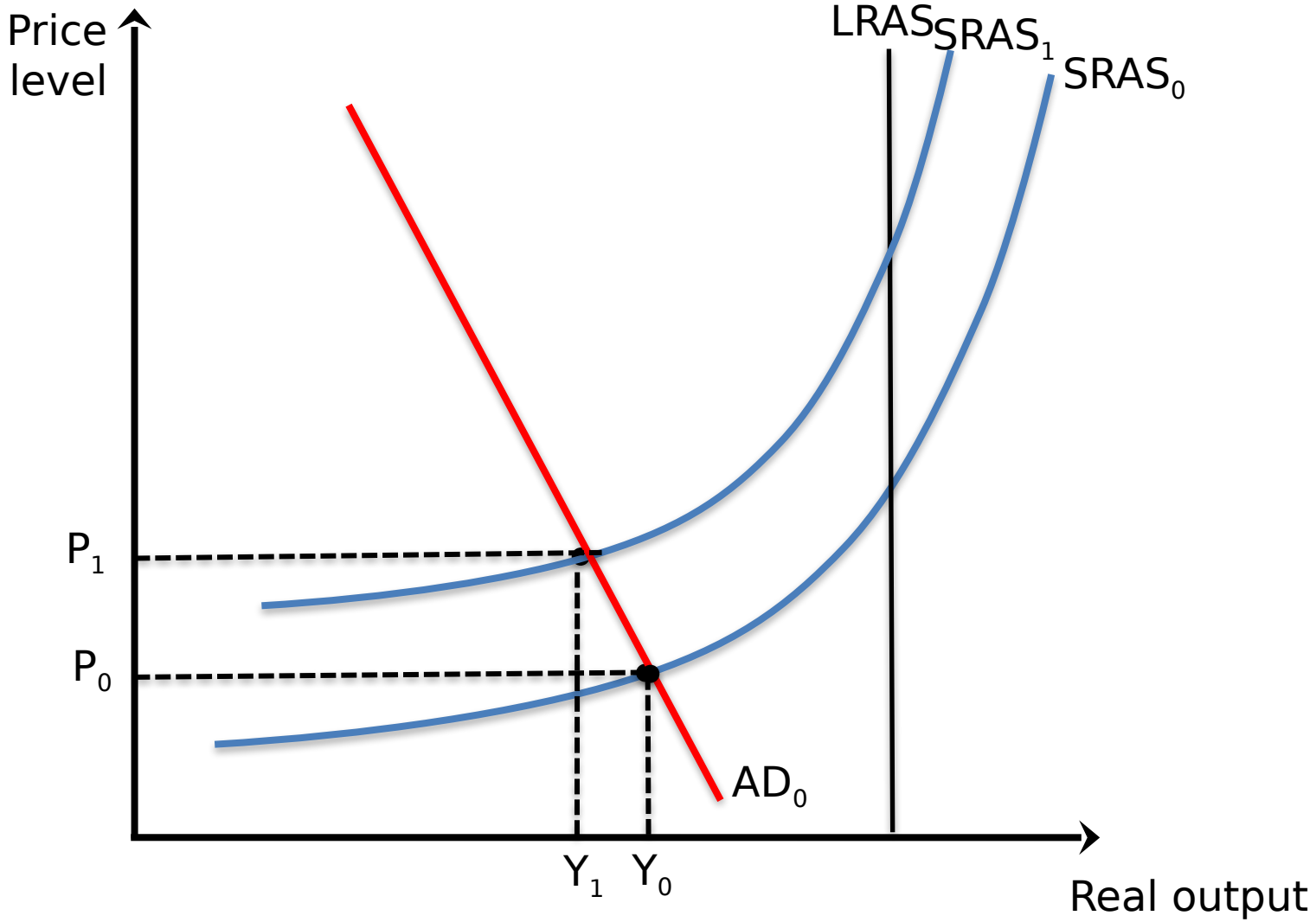
Inflation and its causes

- **Inflation:** increase in general price level, while deflation refers to falling prices. Rate of inflation measures annual % increase in general price level. If rate is negative then there has been deflation.
- **Three causes of inflation:**
  - **(i) Demand pull inflation:** AD curve shifts right (see next slide); equilibrium output rises; equilibrium price rises due to this inflation. This inflation is associated with a booming economy
  - **(ii) Cost push inflation:** associated with continuing rises in costs and hence continuing shifts up of the SRAS curve (see diagram in the next slide but one). Cost rises because of higher wages due to trade unions / monopoly power of suppliers pushing up prices / import prices rising (e.g., higher price of commodities – oil, copper, aluminium, iron ore and other minerals)
  - **(iii) Expectations of inflation:** workers and firms take account of these expectations. Will influence wage bargaining between firms and trade unions, e.g., expected rate of inflation of 2.0%.

Demand pull inflation



Cost push inflation



Overview of the details of policies that shift the AD / SRAS (and possibly LRAS)

- Two categories of policies to achieve macroeconomic objectives:
- (i) Demand side (i.e., demand management) policies impact AD. Two forms of demand side policy.
  - (a) Fiscal policy: to impact the economy the government can use its fiscal policy tools of the levels of government expenditure and taxation
  - (b) Monetary policy: typically the responsibility of an independent central bank (e.g., Bank of England) which can impact the economy through its monetary policy tools of the levels of money supply and the base rate of interest (e.g., Bank Rate). Bank Rate is the rate of interest the Bank of England pays on commercial banks' deposits. If the Bank of England changes the Bank Rate it will influence the rates of interest that commercial banks charge people to borrow or pay on their savings
- (ii) Supply side policies seek to impact SRAS (and possibly LRAS)
- We now consider (i) and (ii), in turn.

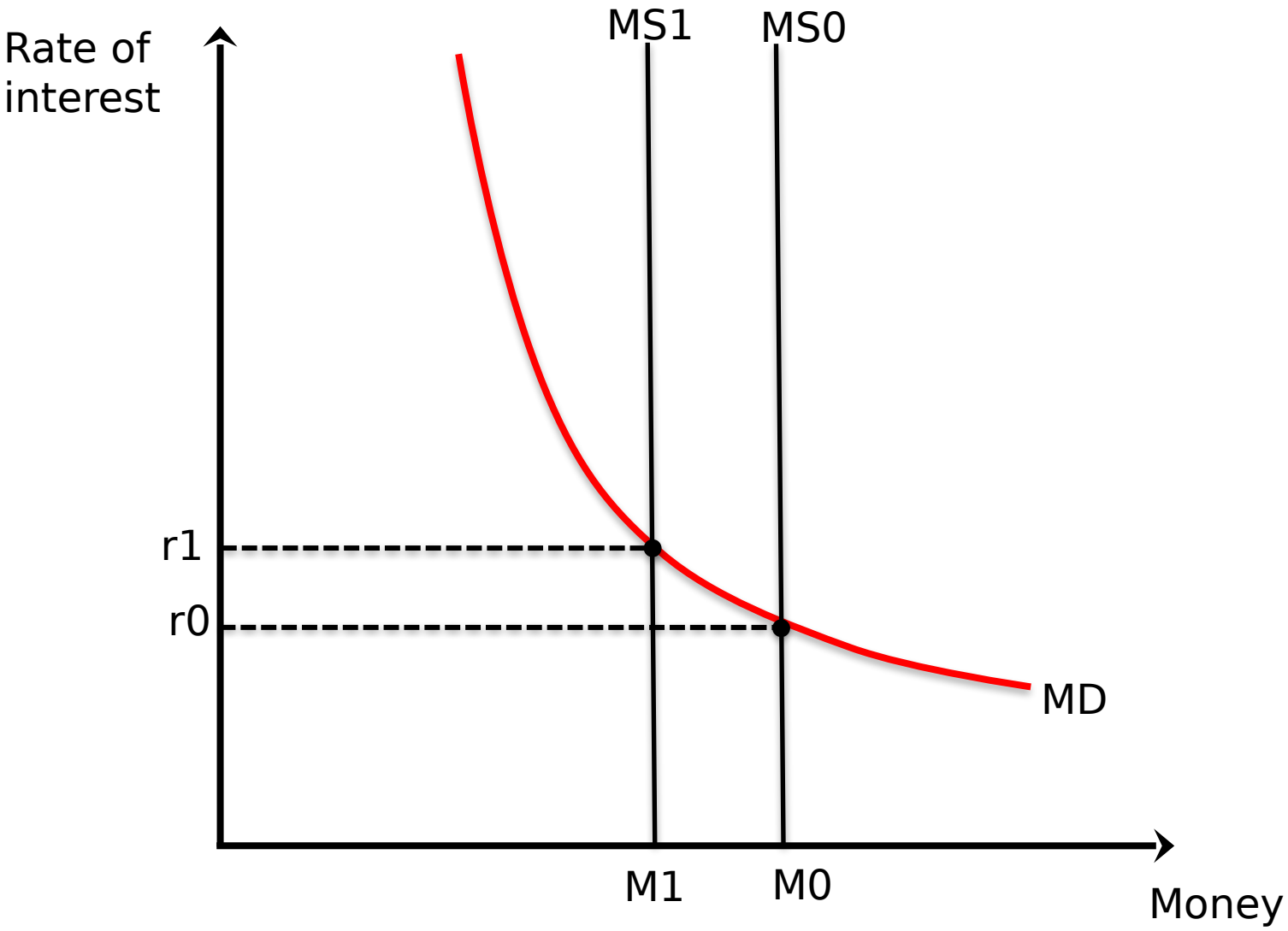
Some details of fiscal policy

- A distinction is made between automatic fiscal stabilisers and discretionary fiscal policy
  - (a) Automatic fiscal stabilisers: built into the economy without the gov doing anything. E.g., as GDP rises, T rises which because T is a withdrawal dampens the expansionary effect of the rise in GDP. E.g., as GDP rises, G on unemployment benefits falls which because G is an injection dampens the expansionary effect of the rise in GDP.
  - (b) Discretionary fiscal policy: gov chooses to change G and / or T if (a) is not going to be a sufficiently big enough response. This will be the case if a fluctuation in the economy is substantial or there is a major disequilibrium (e.g., severe recession)
- Expansionary fiscal policy (G up and / or T down) increases the budget deficit (G greater than tax revenue) or reduces the budget surplus (G less than tax revenue). Contractionary fiscal policy (G down and / or T up) decreases this deficit or increases this surplus.

Some details of monetary policy

- Bank of England's Monetary Policy Committee (MPC) meets every month to set the Bank Rate. Other central banks (ECB and Fed Res in US) meet regularly to do the same.
- The central bank's base interest rate (e.g., Bank rate) influences many other rates in the economy and thereby has a major influence on a range of macroeconomic indicators
- Monetary policy does not just involve the central bank setting the base interest rate, but also intervening in the money market to adjust the money supply to make sure the base rate it has set represents the equilibrium interest rate.
- The main way a central bank seeks to adjust the level of the money supply is through open market operations: sale / purchase by the central bank of gov securities (bonds or bills) in the open market (see next slide).
- Bank of England uses monetary policy in the current month to target inflation of 2% in 24 months

Reducing the MS



Some details of supply side policies (1)

- Only considered policies so far that affect the demand side of the economy (i.e., shift the AD schedule).
- Supply side policies shift the SRAS (and possibly the LRAS) schedule to the right and increase the short run (and possibly long run) equilibrium level of output of the economy. LRAS will shift to the right if the policy increases the long run potential level of output of the economy.
- Market oriented supply side policies can take various forms. (i) G down because public sector is viewed as less efficient, so gov focuses on contracting out to the private sector, e.g., IT contracts. (ii) Tax cuts. (iii) Reduce power of labour through the right not to join a union and promoting flexible labour markets (e.g., part-time). (iv) Promote competition, e.g., privatisation, and free trade and capital movements. The latter increases globalisation, exposing domestic firms to more international competition which further reduces the power of domestic labour

Some details of supply side policies (2)

- There are also interventionist supply side polices which are used where firms have no incentive to carry out the required investment because they think the risks are too high for an individual firm. E.g., investing in risky R&D because although you hope it will lead to a new invention, you do not know for certain that it will.
- From a national perspective the benefits of the investment might be much greater than the costs, so we have a case of market failure which intervention by the gov can correct.
- E.g., (i) Gov funding of R&D at universities, where the benefits of the R&D can be accessed by all the relevant firms in the economy. (ii) Direct provision of goods and services by the gov, e.g., investments in infrastructure such as motorways. (iii) Gov training schemes because some firms may be reluctant to provide enough training because of concerns about staff leaving. (iv) Gov assistance to small firms (grants, advisory services and tax reductions)

MGT6128: Managerial Economics
2024-25

Anthony Glass

a.j.glass@sheffield.ac.uk

Sheffield University Management School.

AACSB ACCREDITED

ASSOCIATION OF MBAS ACCREDITED

EFMD EQUIS ACCREDITED

Changing pattern of trade over the years

- Globalisation has led to much greater interdependence between countries
- Data that follows is from Sloman and Jones (2019), 6th Edition, Chapter 12
- From 1990 to 2018 the average annual rate of growth of world real GDP was 3.48%, whereas the average annual rate of growth of world trade was 5.33%.
- For most countries exports of goods are larger than exports of services. In 1980, world exports of goods was 18% of world GDP and world exports of services was 3.3% of world GDP.
- In 2018, world exports of goods was 22.8% of world GDP and world exports of services was 6.7% of world GDP
- In absolute terms the share of world exports of goods has increased by more (3.4% versus 4.8%). Proportional rise in the share of world exports of services has been much larger as this share has more than doubled.
- Developing countries now have a larger share of world trade. Due to value of exports from BRICS countries as a % of the value of world exports rising from 5.5% in 1992 to 18.3% in 2018.
- Mexico, Turkey, Indonesia, Cambodia and Vietnam have recently joined the rapidly growing group of newly industrialised developing countries.
- Despite the growth in the share of world trade of developing

Why do countries trade? (1)

- Economic gains from trade
- Consumption motive
  - Domestic consumers get access to a greater variety of goods that increase their utility (i.e., satisfaction) by better satisfying their tastes. Without trade these goods would not be available to domestic consumers (e.g., UK imports coffee and bananas)
- Production motive
  - Incomes & employment generated by trade due to access to a much larger international market (‘export-led growth’)
- Competition motive
  - Extra competition from imports may stimulate domestic firms to be more cost efficient and may also prevent domestic monopolies/oligopolies charging high prices
- Innovation motive
  - Trade may stimulate R&D and more rapid adoption of new technology, which might enable faster economic growth
- Macroeconomic motive
  - Extra price competition will place downward pressure on inflation.

Why do countries trade? (2)

Economic gains continued…

- Gain from specialisation (Smith, 1776) → rather than a country doing everything itself → international division of labour and other factors of production (capital, energy, etc.) so that countries produce certain types of goods to exploit economies of scale and their skills (entrepreneurial; managerial; labour)
- Not immediately clear at the outset (I will make it clear though) that all nations can gain from trade by supplying domestically and internationally (exporting) a good/service that each country has a comparative advantage in producing (Ricardo, 1817).

• Non-economic gains from trade: closer political ties

Comparative advantage (1)

- Countries have different resources and differ in population density, labour skills, climate, raw materials, capital equipment, etc., so they have different abilities to supply goods. Thus, their relative costs of supplying goods differ which forms the basis of trade
- Trade between 2 countries can still be beneficial even if one country could produce all goods with fewer resources than the other (i.e., one country has an absolute advantage in the production of all goods over the other), providing the relative efficiency with which goods can be produced differs between the 2 countries. It is this difference that leads to both countries gaining from trade by supplying those goods that they have a comparative advantage in producing.

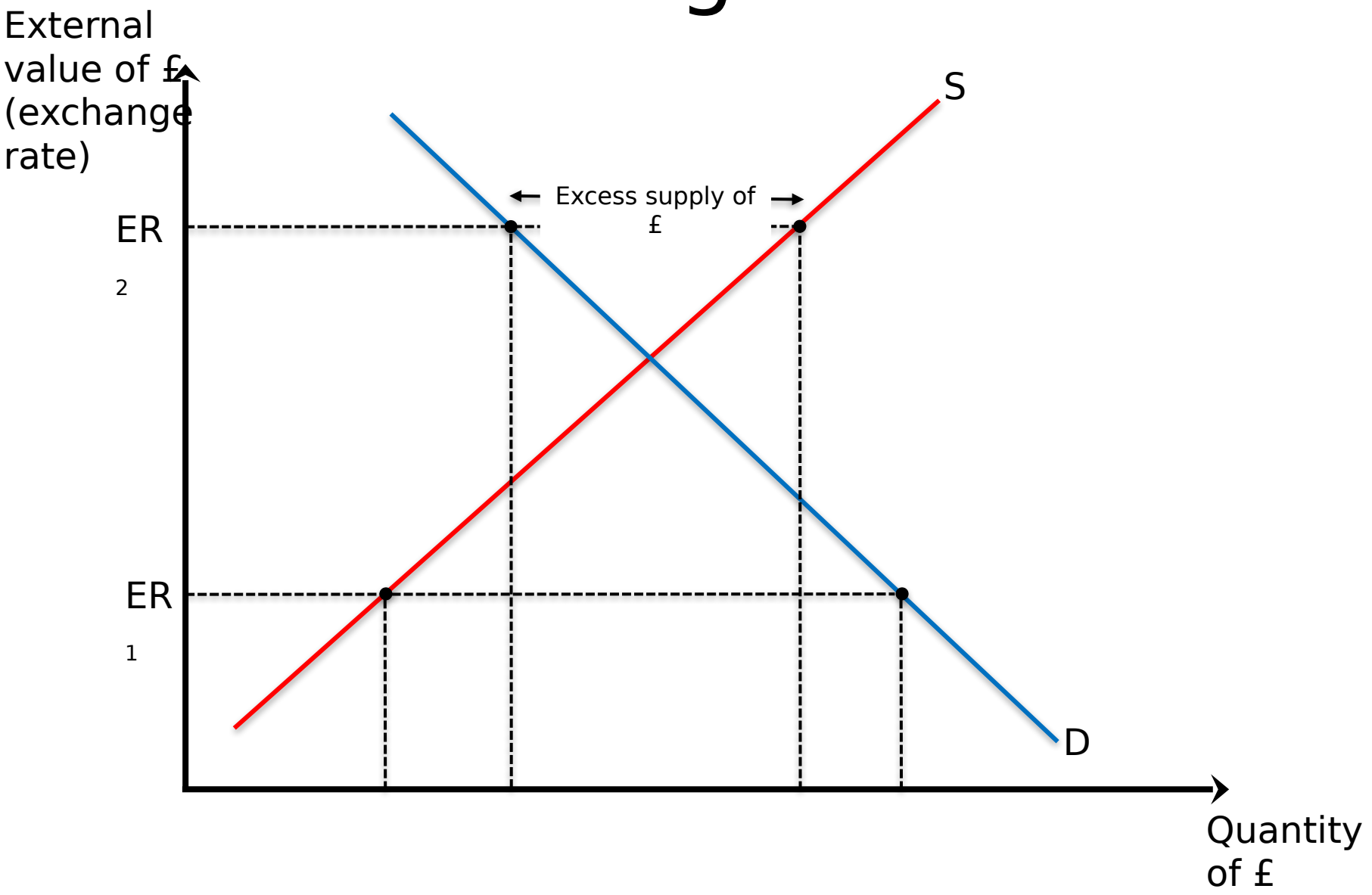
What determines comparative advantage? (1)

- Theory of comparative advantage shows how countries can gain from trade, but why do some countries have a comparative advantage in some goods rather than others?
- Heckscher-Ohlin model of international trade – comparative advantage reflects countries' endowments of factors of production – labour, capital, land, natural resources (including climate), etc.. Countries should specialise in the producing (and exporting) goods that make the most use of the factors they have most of. E.g., Canada has a lot of land so produces and exports wheat.
  - Leontief – factors include human capital – i.e., quality of labour input (reflecting investment in education & training). E.g., the highly developed engineering skills in Germany is one reason why it has a comparative advantage in producing well-engineered cars.
- Home demand can drive product development in home and international markets. E.g., U.S. demand for IT solutions drove development at Microsoft and Google which then gave these companies an international advantage

What determines comparative advantage? (2)

- Firms are more likely to be successful internationally if there are well-developed supporting home industries, e.g., industries providing specialist equipment & specialist consultancy.
- Instead, it may be other industries that are part of the home main value chain that need to be well-developed for firms to be successful internationally. E.g., suppliers of the firms' inputs through to distributors of the firms' outputs.
- The more efficient the value chain, the greater the competitive advantage of the firms at each point in the chain.

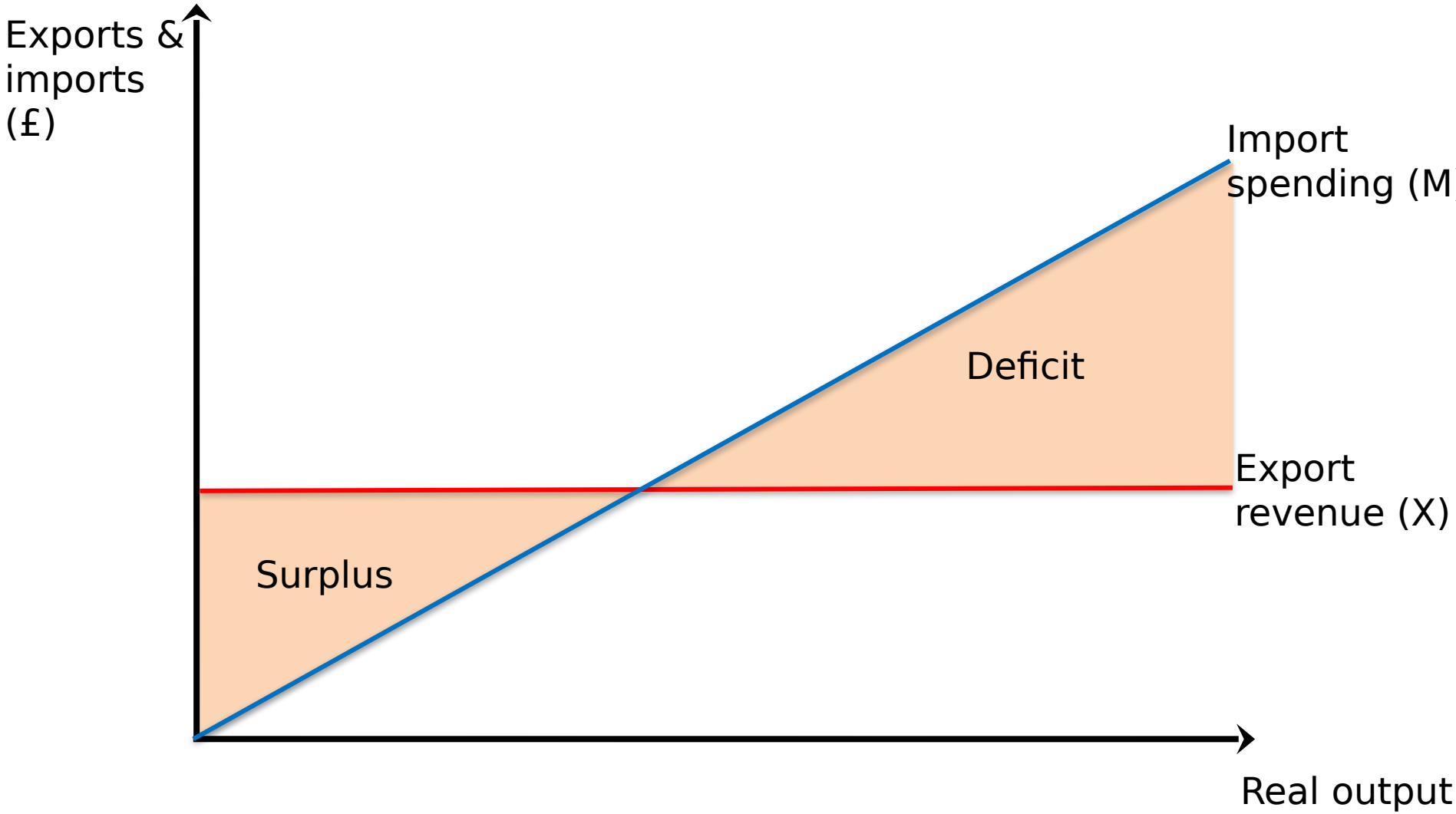
Exchange rates



Exchange rates & business

- Exchange rates matter for business for several reasons:
  - Influence the ease of exporting via the impact of a change in the exchange rate on the price of exports
  - Affect the ease with which foreign competitors can penetrate the domestic market via the impact of a change in the exchange rate on the price of imports
  - Source of trading & investment uncertainty because of the risk of exchange rate movements
    - Translation risk: value of foreign assets, liabilities, etc. on the balance sheet
    - Transaction risk: change in the foreign exchange cash flow for a financial obligation due to a change in the exchange rate
  - Changes in the costs of imported raw materials & components due to exchange rate movements

Exports & imports



International trade policy – background

- Free trade is widely believed to be beneficial for countries due to the mutual benefit emanating from countries' comparative advantages
- Yet trade protectionism (i.e., barriers to trade) has grown since the 1970s
  - Reducing / preventing rises in such protectionism has long since been a key objective of institutions such as GATT (General Agreement on Tariffs & Trade) and its successor the WTO (World Trade Organization) which was set up in 1995 – see textbooks
- We assess the arguments for and against countries' using trade policy to: (i) protect their economies from the impact of imports; or (ii) benefit their economies from increasing their exports

Policies to restrict trade

- Forms of trade protection policies:
  - Tariff-based – taxes placed on imported goods which increase their price
  - Quotas – physical limits on volumes of imports
  - Tariffs and quotas are the two main types of trade protection policy that we will focus on but there are others
    - Government subsidies to domestic producers: these payments reduce domestic producers' costs which enables these producers to be more competitive in domestic and foreign markets (i.e., they are able to price their goods lower in these markets). When firms use government subsidies to finance lower prices in foreign markets this is referred to as 'dumping'
    - Controls on the quality of goods, e.g., safety requirements
    - Administrative regulations that are designed to exclude imports, e.g., customs delays or excessive paperwork
    - Government favours domestic producers when purchasing equipment, e.g., defence equipment
- Governments do not make the choice between free trade and no trade. They choose between free trade and some amount of trade protectionism. They typically choose the latter, but then they must decide to what extent they will restrict trade, e.g., will they opt for a lot of trade protectionism or a little protectionism.

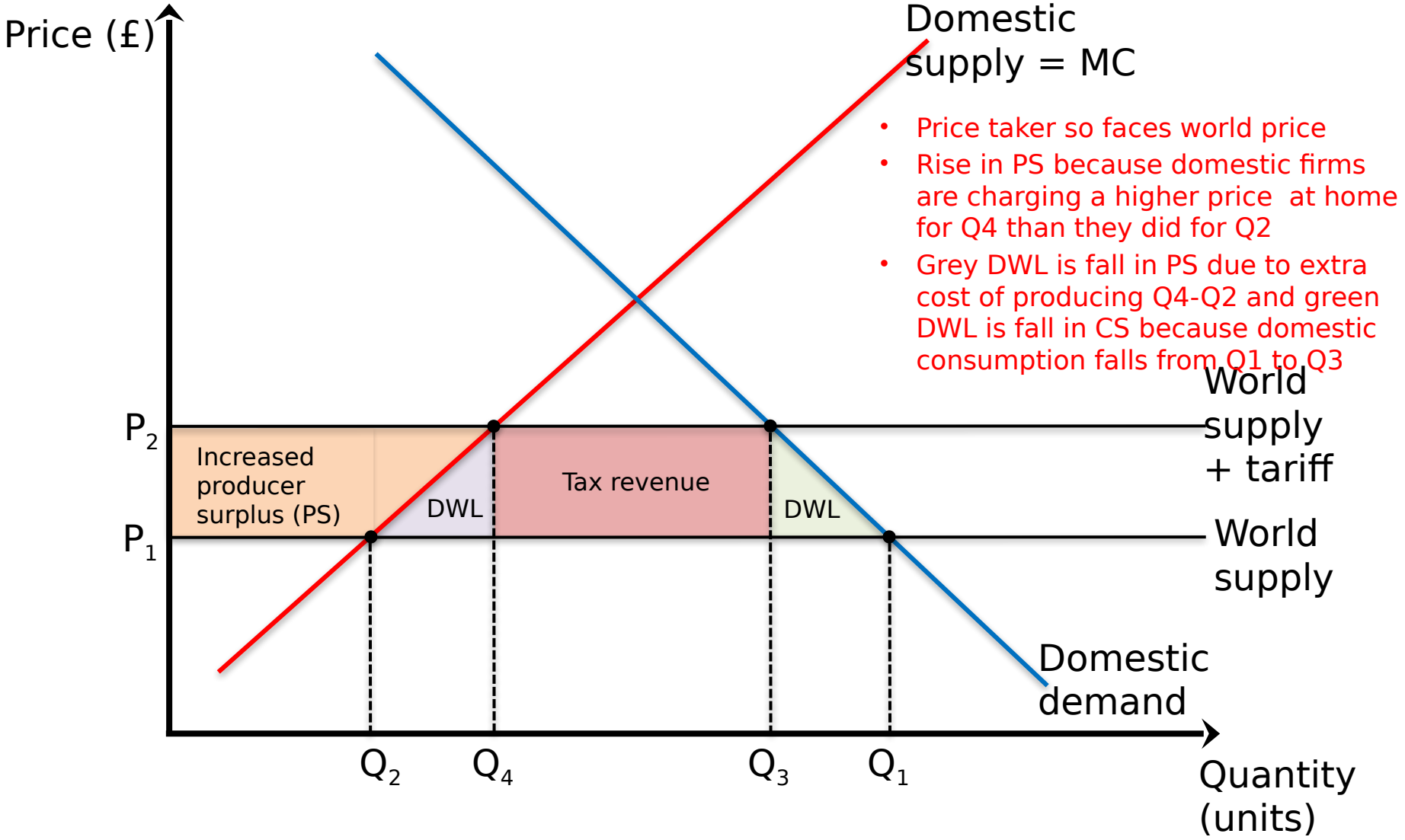
Arguments to restrict trade (1)

- Several arguments to restrict trade
  - **Infant industry argument**: to protect and aid the survival of industries that are in their infancy but have a potential comparative advantage (e.g., some industries in developing countries). Such industries are too small yet to have gained economies of scale, their workers are inexperienced and there is a lack of back-up facilities (communications networks, specialist R&D, limited access to finance, etc.). Protection from foreign competition **for a period of time** will allow the infant industry to expand and become more efficient. Incentive for efficiency may disappear if the trade protection is not removed once the industry has achieved a comparative advantage
  - **Senile industry argument**: Where once established industries have been allowed to run down and can no longer compete effectively. They have lost the comparative advantages they once had but there is potential for them to regain these advantages. Without trade protection these industries will simply not be able to make enough profit to finance the required investment to regain their comparative advantages.

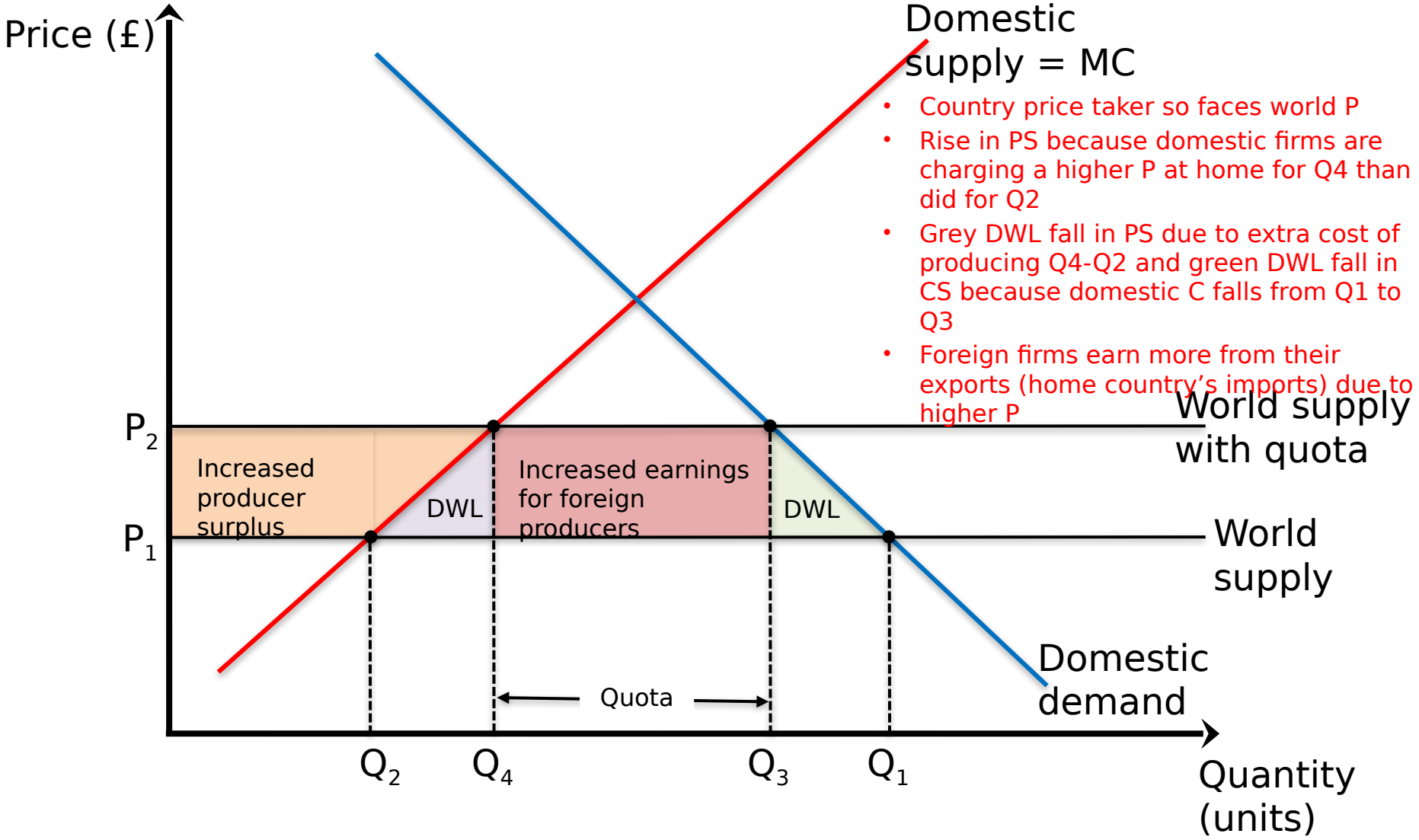
Arguments to restrict trade (2)

- Arguments to restrict trade continued…
  - **To prevent dumping and other unfair practices**: Another country may engage in dumping by its government subsidising some of its exports. The price of these exports will no longer reflect comparative costs. Thus there may be benefits from tariffs being imposed by importing countries to counteract the government subsidy. There is also a case for retaliation with trade restrictions against countries which impose restrictions on your exports. In the short run both countries will be worse off, but in the long run there may be benefit if the retaliation can persuade the other country to remove its trade restriction(s). Threat of retaliation can lead to the other country removing its restriction(s).
  - **To prevent a foreign based monopoly**: Competition from abroad can drive domestic producers out of business. The foreign company would now have a monopoly and could exploit its market power by charging excessive prices. This problem could be tackled by restricting the foreign company's imports or by subsidising the domestic producer(s).

Impact on a country from a tariff



Impact on a country from an import quota



Arguments against restricting trade

- Some other arguments against restricting trade
  - **Impact on global income**: If a large country such as the US imposes trade restrictions, its imports will fall. These imports are other countries exports. A reduction in their exports will lead to a fall in income in the rest-of-the-world. This will lead to a reduction in demand for US exports. This all tends to undo any benefit of trade restrictions
  - **Prevents an infant industry 'growing up'**: Trade protection can remove the incentive for an infant industry to become more cost efficient, i.e., 'grow up'. Too much trade protection should not be provided and should be removed as soon as possible.
  - **Retaliation can cancel out the effect of the initial trade restriction**: E.g., US imposes restrictions on its imports from the EU; & EU retaliates and imposes restrictions on its imports from the US. Any gain from the US trade restriction to US firms competing with EU imports is offset by the EU's retaliation leading to a fall in US exports.
  - **Government analytical cost**: It will cost the government a lot in resources to carefully analyse each case for a trade restriction to ensure that it does not give too much trade protection

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Anthony Glass

a.j.glass@sheffield.ac.uk

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Definition and diversity of MNCs

- MNC: A business that either owns or controls foreign subsidiaries in more than one country
- MNCs are very diverse. 6 sources of diversity among MNCs:
  - (i) **Size**: Many (if not most) of the world's largest firms are MNCs. Turnover of some exceeds the national income of many countries. Many large MNCs have been downsizing since the mid-1980s. Thousands of very small specialist MNCs.
  - (ii) **Organizational structure**: Downsizing has involved shrinking the size of the HQs, removing bureaucracy to speed up decision making and reorganising global operations into small autonomous profit centres. Move to hybrid form – large enough to exploit economies of scale and small enough to be very responsive and have specific market knowledge.

Diversity of MNCs continued…

- (iii) **Nature of business**: There is no typical line of activity of MNCs. They cover the full range of business activities, e.g., manufacturing, agricultural production and finance.
- (iv) **Production locations**: Some MNCs are truly global, with production in a wide variety of countries and regions (6 regions in the world, e.g., Central and Eastern Europe). Other MNCs locate in one other region, or in a very narrow range of countries. Several constraining factors on location, e.g., nature dictates location of natural resource extraction
- (v) **Subsidiary ownership patterns**: Number of options – wholly owned or part owned. Part owned can be a majority / minority share in a joint venture with a host country company / government. Host country government part ownership is mainly in capital intensive MNCs such as those involved in oil and gas extraction.
- (vi) **Overseas business relative to total business**: MNCs differ in how big their overseas operations are relative to their total business.

Other internationalisation strategies

- Other internationalisation strategies apart from opting to be a MNC (wholly owned/joint venture)
  - Indirect exporting: sell to an intermediary (that is often in the corporation's home country) who then exports
  - Direct exporting
  - Franchising
  - Licensing
  - Foreign Direct Investment (FDI): Investment by a firm / individual in one country into business interests located in another country - broader than MNCs, e.g., buying shares in a company abroad but not being involved in its day-to-day operations.
- Patterns of FDI
  - Growth & geography of FDI (i.e., periods of growth

Types of MNCs / forms of multinational expansion

- Three types:
  - (i) Horizontally integrated multinational
    - Largely produces same product in different countries (but perhaps with some variations in product specification to suit the needs and tastes of local market). Primary objective is growth by expanding into new markets
  - (ii) Vertically integrated multinational
    - Different stages of production undertaken in different countries, e.g., oil companies such as Shell and Exxon Mobil (Esso) – typically to control costs & reduce uncertainty of the business environment
  - (iii) Conglomerate multinational
    - Produce range of different products in different countries. By this process of diversification, the MNC spreads the risk. E.g., Unilever employs over 165k people in over 190 countries, producing 400 brands of food, home care and personal care products, which are sold in over 170

Motivations to be a MNC (1)

- 9 motivations
  - (i) **Lower input prices and / or greater availability of inputs**: Nations are not equally endowed with resources. In general, the more plentiful the resource (e.g., labour) the lower its cost.
  - (ii) **Higher quality of inputs and higher productivity** can drive the location of MNC operations
    - **Higher labour skills**: Higher cost per hour but lower cost per unit of output. E.g., due to experience and higher labour skills
    - **Entrepreneurial and managerial skills**: Managers in MNCs are often more innovative in the way they do business
    - **Learning by doing**: Where skills and productivity of workers and managers improve with experience

Motivations to be a MNC (2)

- (iv) **Lower transactions costs**: Do not incur the transactions costs of arranging a contract with an overseas import agent, or with a firm in the host country to produce the product under licence.
- (v) **Lower transport costs**: As overseas plants can serve local or regional markets and / or use local raw materials.
- (vi) **Taking advantage of government policies to increase profit**: E.g., avoidance of tariffs and to attract FDI the host country may offer reduced tax, and subsidies such as the provision of subsidised premises.
- (vii) **Access to new markets**
  - **Increased demand**: Attractive when domestic growth opportunities are limited as a result of the maturity of the market or shifting consumer tastes.
  - **Spreading risks**: Larger and more diverse markets

Motivations to be a MNC (3)

- (viii) **Exploiting advantages over local firms**
  - Ownership of superior technology
  - Entrepreneurial and managerial skills
  - R&D capacity
  - Superior quality products
  - More effective marketing
- (ix) **Learning from experience in diverse markets**: Different experience can be gained from operations in multiple countries and this experience can be used to improve operations in other countries.

Problems that MNCs face

- 4 specific problems
  - (i) **Language barriers**: Extent of this problem will vary between countries. This barrier will be bigger if the MNC tends to employ expatriates, as communication will then be more difficult with local staff.
  - (ii) **Selling and marketing in foreign markets**: Strategies that work in the home country might fail overseas due to wide social and cultural differences. Many US MNCs are frequently accused of imposing US values in the design and promotion of products. Foreign consumers may be opposed to this and may not purchase the MNC's products.
  - (iii) **Attitudes of host governments**: Government will typically try and get the best deal for the host country from MNCs, which means going multinational is less beneficial for the MNC. E.g., host government insisting on part hots state / host country firm ownership and / or high tax regimes.
  - (iv) **Communications and coordination between subsidiaries**: Need to avoid potential diseconomies of scale from expanding globally. E.g., due to longer and more complex lines of communication. International subsidiaries operating largely independently of the parent company will minimise this.
- **General problem of global strategy trade-off**: This trade-off is between economies of scale from expanding globally via product / service standardization, versus higher costs of customising products / services to meet the particular tastes of foreign markets. Approach of MNC depends on whether there are big cost pressures in the foreign markets because price competition is intense. If so an MNC may typically go for standardization. If there is high product differentiation in foreign

Host country advantages from MNCs

- 4 advantages
  - (i) **Employment**: If MNC investment is in new plants (rather than taking over an existing company) this will generate new employment. Most countries try to entice MNCs to regions where growth is low and unemployment high to get the biggest increase in new employment. Direct and indirect new employment. Direct is new employment by the MNC and indirect new employment by other firms in the local economy due to may be a new supply network or simply higher incomes. MNC might lead to firms going out of business in other regions leading to higher unemployment there.
  - (ii) **Balance of payments**: Host's BOP will improve (i.e., less in deficit or more in surplus) because of, e.g., in the long term export promotion and import substitution. Downside is that profits earned by the MNC will be repatriated to the parent company.
  - (iii) **Technology transfer**: Domestic producers will gain from the technology imported by the MNC. E.g., domestic producers copy the technology and working practices of the MNC, and

Host country disadvantages from MNCs

- 4 disadvantages
  - (i) **Uncertainty**: Often surprisingly easy for MNC to switch operations to another foreign country. Always uncertainty for the host about this, particularly if relations with MNC sour
  - (ii) **Control**: The ease with which an MNC can switch operations to another foreign country means that it can likely exert control over the host country – particularly when the host is a developing country. Host is in a weak bargaining position.
  - (iii) **Transfer pricing**: MNC can reduce its tax liabilities through transfer pricing – price a business charges itself for transferring partly finished goods from one division of the company to another. Via transfer pricing a MNC can reduce its profit in countries with high rates of tax and increase its profit in those with low rates.
  - (iv) **The environment**: Many MNCs have been accused of investing in countries to get access to their natural resources, which are extracted / used in a way that does excessive harm to the environment. Greater tendency for this to happen when the host is a developing country, as they tend to place more emphasis on the short term rather than the long term