Economics 2286 O Level Notes

v2.0

Contents:

1 Question Types + Answering Method

- Calculate (Q1): use data from the source to calculate required value
- Identify: name required terms, using source data for Q1
- State: express in clear terms
- Define: give specific meaning to a given term(s)
- Explain: give purposes/reasons, describe why and/or how, support with relevant evidence (esp. Q1)
- Analyse:
    - Q1 (Analyse the relationship between…): state relationship, provide 2 supporting examples (from source), provide exceptions with examples (from source), comment on relationship
    - (c): give details to show meaning
- Discuss: write about a given issue/topic in a structured and balanced way (2 A, 2 CA, evaluation)

- Section A (Q1):
    - Calculate [1]
    - Identify reasons (from source)
    - Explain (using source material)
    - Analyse the relationship… [5]
    - Analyse [4] → 2 points
    - Discuss (x2) [6] each → 3 points
- Section B (3 out of 4):
    - Identify/State/Define [2]
    - Explain [4] → 2 points
    - Analyse [6] → 3 points or **definition of given topic + 2 to 3 points**
    - Discuss [8] → 4 points (2 A, 2 CA)

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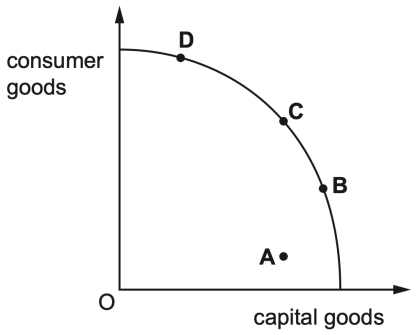
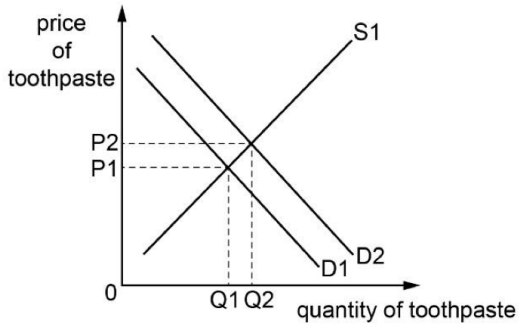
2 Topic 1 Key Points

- basic economic problem: scarcity (i.e. unlimited wants but limited resources)
    - wants is not the same as demand, scarcity is not the same as shortage
- factors of production:
    - land: natural resources used in production (reward: rent)
    - labour: human resources used in production (reward: wages)
    - capital: man-made goods which contribute to production (reward: interest)
    - entrepreneurship: skills required to combine and manage other FOP for production, risk taker (reward: profits)
- free good vs economic good
    - free good: unlimited, not scarce ∴ does not incur opp. cost (e.g sunshine, air)
        - a free good is not the same as a good that is free of charge
    - ec. good: limited, scarce ∴ incurs opp. cost
- firms: 'production' → resources processed into goods and services
- households and consumers: 'consumption' → act of buying produced goods and services to satisfy wants
- opportunity cost: the next best alternative forgone
- allocation of resources:
    - households and consumers → maximum satisfaction (quality and price of products)
    - firms → maximum profits
    - governments → maximum SOL of the population
- PPC (Production Possibility Curve): maximum productive capacity of a country
    - pt. on PPC: resources fully utilised (FE)
    - pt. within PPC: attainable production point (resources not fully utilised)
        - pt. above PPC: unattainable in production
        - **movement of pt. along PPC: more resources used to produce a good but less to the other good (opp. cost)**
        - shift of PPC: change in quantity and/or quality of FOP
            - increased foreign workers
            - increased training of workers
            - technological advancement
            - resources destroyed (e.g war)



3 Topic 2 Key Points

- microec. vs macroec.
  - microeconomics: economic decisions of consumers, producers and households
  - macroeconomics: economic issues and actions that affect the whole economy (decisions of govt.)
- demand: willingness and ability to purchase goods and services
  - quantity demanded: change in price causes a change in quantity demanded
  - individual vs market dd
    - individual demand: amount an individual demands
    - market demand: total demand for a product
  - conditions:
    - income
    - substitutes
    - compliments
    - taste and fashion
  - price elasticity of demand ($\frac{\%\Delta Qdd}{\%\Delta P}$): responsiveness of the quantity demanded to a change in price
    - the higher the PED, the more elastic the demand
    - elastic (PED > 1): change in price causes a more than proportionate change in quantity demanded
    - inelastic (PED < 1): change in prices causes a less than proportionate change in quantity demanded
    - determinants:
      - substitutes
      - compliments
      - proportion of income spent
      - nature of product (luxury, addictive, etc.)
- supply: willingness and ability to sell goods and services
  - quantity supplied: change in price causes a change in Qss
  - individual vs market ss
    - individual ss: supply of one firm
    - market ss: total supplied by all firms
  - conditions:
    - cost of production
    - improvements in technology
    - taxes/subsidies
    - prices of other products
    - disasters and wars
  - price elasticity of supply ($\frac{\%\Delta Qss}{\%\Delta P}$): responsiveness of the quantity supplied to a change in price
    - the higher the PES, the more elastic the supply
    - elastic (PES > 1): change in price causes a more than proportionate change in quantity supplied
    - inelastic (PES < 1): change in prices causes a less than proportionate change in quantity supplied
    - determinants:
      - time taken to produce a product (longer time taken → PES more inelastic)
      - feasibility of storing a product (able to store longer → PES more elastic)



- market equilibrium vs disequilibrium
    - equilibrium: price where dd = ss
    - disequilibrium: dd not equal to ss (i.e. surplus or shortage)
- market economic system: no government intervention (i.e. resources are privately owned, self-interests of firms, price signals)
    - resource allocation questions:
        - what to produce?
        - how to produce?
        - for whom to produce?
    - price mechanism: demand and supply forces determine the prices of goods and services in a market economy
    - few large firms (monopolies) dominate the market (limited competition)
    - public goods (e.g defence) not produced (no price signals)
        - note: roads are quasi-public goods (not exactly a public good as it is rivalrous and excludable)
    - negative externalities
    - freedom of choice (no government restrictions)
    - market failure: free market forces do not lead to the most desired outcome in production and consumption, misallocation of resources → need for government intervention and efficiency
        - failure to supply certain goods and services (e.g. public goods)
            - public goods: non-rivalry, non-excludability, not produced if left to market

solutions:

1. full provision by government (financed from tax revenue)

- ensure essential goods are provided for all
- deter foreign invasion (defence) and ensure peace and stability
    - more conducive for FDI and MNCs
- difficult to estimate amount of goods to provide (over → wastage, under → insufficient)
- high opp. cost
- cost on taxpayers

- under-consumption of certain goods and services (e.g. merit goods)
    - social benefit = private benefit (firms, individuals, government) + external benefit (3rd party not involved in production or consumption)
    - merit goods: socially desirable (+ve externalities)
        - e.g. education, vaccination, public library
    - under-consumption due to
        - ignoring of external benefits: generates EB on 3rd party but consumers seeking to maximise self-interest only take into account PC and PB and ignore EB
        - imperfect information: consumers do not fully appreciate the beneficial effects to themselves (perceived PB < actual PB)
- over-consumption of certain goods and services (e.g demerit goods)
    - social cost = private cost + external cost
    - demerit goods: -ve externalities
        - e.g. cigarettes, alcohol, factories (pollution), gambling
    - over-consumption due to
        - ignoring of external costs: generates EC on 3rd party but consumers seeking to maximise self-interest only take into account PC and PB and ignore EC
        - imperfect information: consumers not fully aware of harmful effects of demerit good consumption (perceived PC < actual PC)

solutions:

1. change in supply (producers)
    a. subsidies (under-consumption)
    - lower COP
    - increase in supply (surplus → downward pressure on price)
    - producers pass on cost savings, encourage consumption

    b. taxation (over-consumption)
    - increase COP
    - decrease supply (shortage → upward pressure on price)
    - higher prices discourage consumption

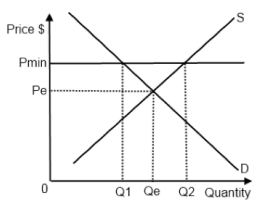
- taxes boost govt. revenue
- easy to implement
- high opp. cost (subsidies)
- over-reliance, abuse of system
- difficult to valuate
- demerit goods are usually addictive, demand price inelastic

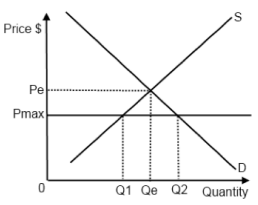
2. rules and regulations
    a. ban consumption of demerit goods
    b. compulsory consumption of merit goods

- fast implementation
- breaking of rules (due to weak enforcement), illegal markets
- high administrative and enforcement cost

3. moral suasion (advertising, education, campaigns)
- can be successful in long term
- people more receptive towards moral suasion
- high opp. cost
- may not be successful, takes a long time for changes

- price floor and price ceiling
    - price floor (minimum price) → set above equilibrium price to increase the price of a product/wages of labour (usually demerit goods, e.g. cigarettes)
    - price ceiling (maximum price) → set below equilibrium price to lower the price of a product (usually merit goods)





        - private vs public expenditure
            - private exp.: firms are profit driven → more efficient production to lower AC, but may charge high prices (increase TR, increase P)
                - abuse of monopoly power (monopoly: one firm, absolute market power): restrict output and charge higher prices, may lead to underproduction of goods (misallocation of resources)

                solution:
                - increase competition
                    - privatisation: transfer of ownership of firms from government to private sector
                    - nationalisation: opposite of privatisation
            - public exp.: ensure public and merit goods are accessible to all people (+ve externalities) → incur opp. cost, heavily subsidised goods may be overconsumed and lead to long queues or shortages (e.g. healthcare)
        - factor immobility
            - occupational immobility: mismatch of skills → inability to more from job to job
            - geographical immobility: unwillingness to travel/be separated from family → inability to move from region to region
- mixed economic system: market system + government intervention (self-interest, price signals determine resource allocation, some degree of government intervention and regulation)

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4 Topic 3 Key Points

- money
    - functions:
        - medium of exchange
        - measure of value
        - store of value
        - deferred payment (borrowing money)
    - characteristics:
        - acceptability (legal tender)
        - durability
        - portability
        - divisibility (divide larger value money into smaller values without losing value)
        - scarcity
- central banks (e.g. Bank Negara Malaysia, Monetary Authority of Singapore)
    - issue notes
    - lender of last resort (help commercial banks when they are experiencing a bank run)
    - regulator and supervisor (make sure commercial banks comply with the rules)
    - banker to government (advisor to govt. on financial issues) and commercial banks (commercial banks keep part of their balances with the central bank)
    - implements monetary policy (control supply of money and interest rates)
- commercial banks
    - accept deposits
    - making advances (not the same as a loan)
    - credit creation (increase supply of money → make money available to borrowers, e.g. credit cards)
    - secondary functions (collect and clear cheques, financial advice, safety deposit boxes, money transfers)

- role and importance of banks to government, producers and consumers
    - central bank:

government	implement MP (interest rates, money supply, exchange rate), banker to govt.
producers	(com. banks) affects profits (i.e IR), lender of last resort
consumers	IR affects loans, ensure households do not lose savings during financial crisis

    - commercial bank:

government	may borrow if they have budget deficit → crowding out effect (increase IR)
producers	borrow to finance expansion/start up
consumers	borrow to finance big ticket items (e.g. property, cars)

- spending: amount households spend on goods and services to satisfy current needs and wants
    - factors affecting spending:
        - income (higher the income, greater the ability to spend)
        - interest rates (higher the IR, lower the spending, higher the saving)
        - consumer confidence (confident about job, expect pay increase, spend more)
        - inflation (increase inflation reduces purchasing power)
- saving: income not spent on consumption (accumulation of money by postponing current consumption)
    - factors affecting saving:
        - interest rates (higher the IR, higher the saving)
        - future consumption
        - retirement
        - consumer confidence (in case their employment circumstances change)
        - saving schemes (attract people to save e.g. banks, compulsory saving e.g CPF)
- borrowing: to receive from somebody temporarily and expecting to return it
    - interest rate is the cost of borrowing
    - factors affecting borrowing:
        - credit cards
        - wealth (more assets owned, larger sum of money you can borrow)
- workers
    - factors affecting choice of occupation (wage/non-wage factors)
        - wages (hourly or weekly rate)/salaries (monthly fixed rate)/commision (percentage of value sold)/piece rate (per item sold)
        - bonus
        - share options
        - level of challenge/danger
        - level of education/experience/length of training required
        - job recognition
        - personal satisfaction
        - career prospects
    - demand for labour
        - factors affecting demand for labour:
            - productivity (produce more per unit of time, lower COP)
                - increased training/wages
            - machinery used (increases productivity, decreases dd for labour)
            - demand/price of good and services (e.g. higher dd for office spaces, higher dd for construction workers)

- supply of labour
    - factors affecting supply of labour:
        - size and structure of population (i.e age, gender)
            - e.g. young pop. → ready ss of workers
        - skills/education/training required (e.g. school leaving age, qualifications)
        - labour force participation rate (e.g. retirement age)
        - availability and level of welfare benefits (e.g. high unE benefits → discourage people from working)
        - mobility (geographical/occupational)
- determination of wages/differences in earnings:
    - PED of labour (e.g. more skilled labour, less substitutes, dd more price inelastic)
    - PES of labour (e.g. more work permits issued, ss more price inelastic)
    - government policy (e.g. requirement of higher qualifications for jobs)
    - relative bargaining power (e.g. increased productivity, higher bargaining power)
    - discrimination
- division of labour (specialisation)
    - advantages:
        - workers: skillful in a particular area, increased productivity (more bargaining power)
        - firms: increased productivity (lower AC, higher profits), improve quality of products
        - economy: increased national productivity (increase SRAS, economic growth)
    - disadvantages:
        - workers: boring/repetitive work, alienated (unable to progress, less bargaining power)
        - firms: overspecialisation → too dependent on specialised workers (less bargaining power for firms)
        - economy: occupational immobility (specialised workers may not be skilled in other areas → higher structural unE)

- trade unions: organisations that represents the interest of workers in negotiation about improving wages and working conditions with employers and governments
    - role of trade unions:
        - collective bargaining on wages, working hours, working conditions
        - protecting employment (e.g. unfair dismissal, discrimination)
        - influence government policy (e.g. minimum wage, workers' rights)
        - provide legal assistance
    - factors influencing strength of trade unions:
        - proportion of the industry workers in trade unions
        - affiliation with larger organisations that negotiate with the government
        - member workers are in industries that controls essential services (e.g. public transport)
        - how replaceable workers are
            - low skilled workers are easily replaced by machines/non-trade union workers (especially during period of high unE)
    - advantages of trade unions:

workers	improved pay, working conditions, improved communication
firms	improved communication, needs of workers addressed, higher motivation → higher productivity ∴ lower COP, higher profits
government	improved communication

    - disadvantages of trade unions:

workers	might lose their job/get pay cuts if negotiations fail
firms	workers on strike disrupts production, higher pay increases COP ∴ lower profits
government	strong trade unions deter foreign investors (which may lead to higher unE)

- firms

primary sector	producing, mining, extraction of natural resources (e.g. oil, gas, agriculture) - larger sector in developing countries
secondary sector	manufacturing (use of natural resources/unfinished products to make other goods)
tertiary sector	final stage of production (distribution, selling, providing services, e.g. banking) - larger sector in developed countries

    - developed countries have more resources to build infrastructure/train workers for sec./ter. sector
    - developing countries have more unskilled labour (jobs in pri./sec. sector tend to require less skills)
- private and public sector firms
    - private sector: privately owned (controlled by owners/largest shareholders)
        - usually profit driven → competitive prices, better quality of products
        - firms with considerable market share may exploit consumers with higher prices, complacent → poorer quality goods
    - public sector: operate under government control (e.g. Temasek Holdings)
        - controlled by government → prices of essential goods regulated
        - profits reinvested in improving public services/fund other public sector spending
        - benefit consumers with better amenities and facilities
        - complacent (maximising profits is not the goal) → inefficient
        - losses funded by government (taxes)
- relative size of firms
    - depends on
        - number of employees
        - organisation/management
        - capital
        - market share
    - large firms
        - examples: MNCs (Apple, Starbucks, etc.), Dairy Farm Group, NTUC
    - small firms
        - examples: cafes, bakeries
        - reasons for small firms to exist:
            - niche/small market
            - limited access to capital
            - choose to remain small
                - lower stress, reasonable profit aims, lack of skills/finances to expand
        - advantages of small firms
            - flexible, quick to respond to changes in consumer demand/tastes/preferences
                - do not need to consult many stakeholders
            - provide personal services (cater to specific requirements, personalised products)
            - specialise in production of specific products → better quality products
            - receive more government subsidies (enable them to keep prices low/quality high)
            - unlikely to experience diseconomies of scale (e.g. coordination problems) → cost effective, keep prices low
        - disadvantages of small firms
            - unable to enjoy economies of scale → unable to enjoy cost savings, prices may be higher
            - less able to raise capital to fund expansion/R&D → less able to produce higher quality/more innovative products to attract consumers
            - more vulnerable to bankruptcy as they lack financial resources

- growth of firms (internal/external growth)
    - internal growth: use of own tools and resources to expand (e.g. increased market share)
    - external growth: use of external resources to expand (e.g. mergers)
        - mergers

<table>
<tr><td colspan="2">horizontal merger</td><td colspan="2">merger of firms in the same stage of production</td></tr>
<tr><td rowspan="2">vertical merger</td><td>forward</td><td rowspan="2">merger of firms from different stages of production</td><td>e.g. manufacturer merges with processing firm</td></tr>
<tr><td>backward</td><td>e.g. manufacturer merges with distribution firm</td></tr>
<tr><td colspan="2">conglomerate merger</td><td colspan="2">merger of unrelated firms</td></tr>
</table>

        - advantages of mergers

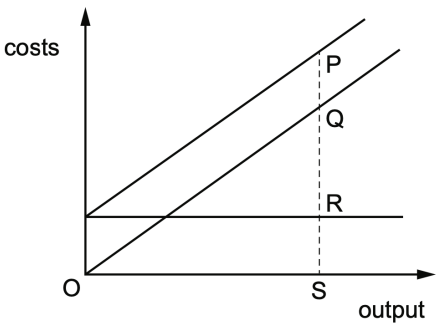
horizontal	lower AC by removing duplicate services, retrench excess workers
vertical	(backward) buy raw materials cheaper than competitors, (forward) control the distribution network/marketing
conglomerate	diversify risks, unlikely to have duplicates (less retrenchment)

        - disadvantages of mergers

horizontal	miscommunication between employees → disEOS (coordination problems) ∴ increase AC, decrease profits
vertical	miscommunication between employees → disEOS (coordination problems) ∴ increase AC, decrease profits
conglomerate	may not have expertise to manage a firm from a different industry, not much of cost savings

    - economies and diseconomies of scale
        - cost savings (EOS) or cost dissavings (disEOS) from growth of the firm (internal) or economy (external)
        - internal EOS (lower AC, increased profits)
            - technical EOS: use of machinery → more efficient, higher productivity (larger firms are better able to make use of capital resources)
            - administrative EOS: hire administrative experts (e.g. legal officers, accountants) → higher productivity (greater specialisation)
            - marketing EOS
                - purchasing EOS: discounts from bulk purchases (larger firms have better bargaining power)
                - bulk advertising → spread out advertising costs over a large output
            - financial EOS
                - better credit-worthiness of larger firms → lower cost of borrowing (lower IR)
                - raise funds in capital market (issuing shares to public, cheaper than borrowing)
            - risk bearing EOS (**not cost saving**): diversification, reduce risk
        - internal disEOS (higher AC, decreased profits)
            - bureaucratic structure: slower decision making and work efficiency
            - coordination and management problems: large firms more difficult to supervise/manage/coordinate → inefficiency
            - financial disEOS: firms borrow heavily → underrated credit-worthiness, increased interest payments

        - external EOS (lower COP of industry, lower AC, increased profits)
            - development of industrial amenities (e.g. water, electricity, gas)
            - development of transport systems: increase efficiency → lower transport costs
            - development of research facilities (combined research efforts): improve technology and efficiency
        - external disEOS (higher COP of industry, higher AC, decreased profits)
            - higher factor prices: increased dd for FOP → shortage, higher prices
            - overcrowding and congestion:
                - traffic congestion: loss of man hours
                - air pollution: government impose taxes and fines
- methods of production (labour-intensive/capital-intensive)
    - labour-intensive: larger proportion of labour than capital
        - primary sector
        - tertiary sector
    - capital-intensive: larger proportion of capital than labour
        - secondary sector
    - reasons for adopting different methods of production:
        - type of products/production process:
            - machines cannot replace labour (especially tertiary sector, e.g. hairdresser)
            - handmade/customisable products (labour-intensive)
        - price of labour and capital resources: the more abundant the inputs, the lower the input cost (e.g. abundant labour → lower wages ∴ more labour-intensive)
        - productivity of labour and capital:
            - firms combine capital and labour resources in the most productive and efficient way → maximise output, minimise cost
            - if one becomes more efficient in production than the other, firms may substitute it (factor substitution)
- production vs productivity
    - production: scarce resources combined to make goods and services over a period of time
    - productivity: amount of output that can be produced with the given amount of input over a period of time
        - e.g. labour productivity = total output produced / number of labour units
- cost of production (TC) = fixed cost (FC) + variable cost (VC)
    - fixed cost: does not vary with output, occurs in short run (e.g. cost of machines)
    - variable cost: varies with output, occurs in short and long run (e.g. cost of raw materials)
    - (on diagram) fixed cost = RS, variable cost = PR
- total revenue (TR) = price × quantity
- objectives of firms:
    - maximise profits (profits = TR - TC)
    - growth (bigger market share, enjoy EOS)
    - social welfare
    - survival



- market structure
    - competitiveness of markets: the higher the number of firms, the more competitive it is → encourage firms to use resources more efficiently to lower COP, leads to lower prices, better quality products, greater choice, but lower profits (more substitutes, price elastic dd)
    - monopoly markets: one/**very** few large firms
        - large barrier to entry, low competition
        - perfectly elastic demand
        - experience EOS, but may also experience disEOS
            - EOS → lower prices (cost savings passed down to consumers)
        - ability to conduct R&D, more innovative
            - better quality products
            - may not have incentive to conduct R&D and may not improve quality
        - profit driven monopolies may abuse their power to charge high prices (restrict output, decrease ss, shortage → upward pressure on price)
        - exclusive rights to raw materials → control scarce resources, limited variety
            - no close substitutes
        - supernatural profits → income inequality (shareholders get richer, consumers get poorer)

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5 Topic 4 Key Points

- role of government

<table>
<tr><td>local/national</td><td>- maximise welfare of citizens (improvement in SOL → address market failure, poverty, income inequality)
- achieve macroec. goals
- lawmaker and regulator</td><td rowspan="2">collect and settle taxes</td></tr>
<tr><td>international</td><td>- ensure healthy BOP
- ensure country is attractive to foreign investors
- good diplomatic relations with other countries</td></tr>
</table>

- macroeconomic goals
    - economic growth
    - full employment/low unE
    - stable prices/low inflation
    - balance of payments stability
    - redistribution of income
- budget: forecast by a government of its expenditures and revenues for a period of time
    - surplus: tax revenue - govt. spending > 0 (+ve)
        - may go into reserves
    - deficit: tax revenue - govt. spending < 0 (-ve)
        - funded by other means (e.g. borrowing)
- reasons for spending
    - influence economic activity (increase AD)
    - reduce market failure (spend on public goods)
    - promote equity (fair distribution of goods and services between poor and rich)
    - pay interest on national debt (cost of borrowing to finance deficit)
- taxes: main source of government revenue
    - reasons for levying taxes
        - redistribute income (tax revenue used towards more benefits for the poor)
        - discourage consumption of demerit goods
        - discourage firms from producing negative externalities (e.g. pollution → increase COP)
        - discourage consumption of imports (protect domestic industries)
        - influence economic activity (lower taxes → increase C/I ∴ actual EG)

- types of taxes

direct taxes	imposed on income or profits which are paid directly to the government, cannot be transferred (e.g. income tax/corporate tax)
indirect taxes	imposed on production/sale/consumption of goods and services, can be transferred to others (e.g. GST/VAT can be passed down from producers to consumers)
progressive taxes	proportion of income paid on tax increases as income increases (reduce income inequality)
regressive taxes	proportion of income paid on tax decreases as income increases (increase income inequality) - **indirect taxes are regressive** (people with lower incomes spend a higher proportion of income than people with higher incomes on the same product)
proportional taxes	fixed tax rate (fairness)

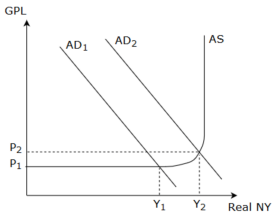
- impact of taxation

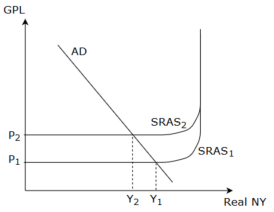
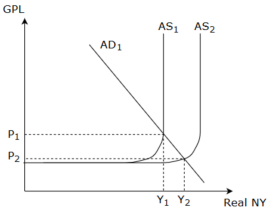
consumers	advantages: incentive for people to work harder (disposable income falls due to tax, work harder to increase)
	disadvantages: increase in tax rate → increase temptation of tax evasion, excessive increase discourages people from working (brain drain), tax burden of indirect taxes greater on people with lower incomes
producers	advantages: higher productive capacity (workers more incentivised)
	disadvantages: lower profits after tax
government	advantages: high revenue yield (easier to estimate and plan budget), indirect taxes are cost effective (relatively cheap and easy to collect, lower administrative burden on govt.), flexibility to change tax rates easily (more immediate impacts on consumption or production)
	disadvantages: higher government expenditure (e.g. law enforcement, more discouraged from working → higher unE benefits)
economy	advantages: reduced income inequality (progressive tax), discourage consumption of demerit goods (promote healthier lifestyles)
	disadvantages: local and foreign firms relocate abroad to expand production/increase profits after tax (reduce investments in country), indirect taxes (tend to be regressive) increase income inequality, higher prices may result in creation of illegal markets

- principles of taxation (qualities of a good tax)
  - equity (taxing according to ability to pay)
  - non-distortionary (should not distort sensible economic behaviour, e.g. income tax should not be so high that it causes brain drain/turn investors away)
  - certainty (stable)
  - convenience (easy payment channels)
  - flexibility (ability to change the tax rate)

- economic growth
  - measure economic growth: real GDP per capita/head/person ($\frac{real\ GDP}{population\ size}$)
  - recession: decline in economic activity (negative EG i.e. decrease in real GDP)
    - shift economy within PPC (e.g. point on PPC to point within PPC)
  - causes of economic growth

    note: only PPC changes tested (ADAS curve not required, but good to understand)

change in total/aggregate demand (AD)	- AD = consumption + investment + government spending + net exports (export - import) - increase in AD (below FE) → actual EG (increase in real GDP) - increase utilisation of resources - movement towards PPC from within PPC 

change in total/aggregate supply (AS)	- increase in AS → potential EG (increase in productive capacity of economy)
	  - increase in quality, quantity of FOP/improvement in technology → increase LRAS
	  - increase in investments (increase quantity of FOP → increase LRAS)
	  - decrease in price of FOP (lower COP → firms more willing and able to produce more ∴ increase SRAS)
	- outward shift of PPC
	 
	 

    - long run aggregate supply (LRAS): caused by change in quantity/quality of FOP/technology
    - short run aggregate supply (SRAS): caused by change in COP (e.g. subsidy to firms)
  - consequences of economic growth

positive consequences	improved SOL (GDP per capita), lower unE (higher EG → firms employ more workers to increase production), more tax revenue (income/corporate tax, GST)
negative consequences	high EG may cause inflation (i.e. demand-pull inflation), negative externalities (e.g. pollution, congestion), greater income inequality (people with relevant skills have higher earning power)

  - policies to promote economic growth
    - demand management policies (increase AD, given spare capacity/below FE)
      - fiscal policy: use of government spending and taxation to achieve macroec. goals

        policies:
        - government spending
          - increase in government spending (G) → increase AD ∴ stimulate actual EG
        - taxation
          - decrease tax rate (lower personal/corporate tax) → increase disposable income/profits after tax, increase C/I, increase AD ∴ stimulate actual EG

      - effect of fiscal policy on macroec. goals
        - reduce income inequality
        - reduce poverty

- effectiveness of fiscal policy on economic growth
    - business pessimism/optimism (e.g. pessimistic → lower tax rates may not increase AD)
    - fiscal health of government (govt. may not have financial liberty)
    - may trigger crowding out effect
        - increase G → increase borrowing from banks, increase IR ∴ lower C/I, unhealthy for economy in LR)
    - time lag (effect may only be felt when problems are less severe)
    - conflict with other macroec. goals
        - assuming economy operating near or at FE, further increase in AD can lead to demand-pull inflation
- monetary policy: manipulation of monetary variables to achieve macroec. goals

policies:
- money supply: total stock of money in a country (amount of money in circulation)
- interest rates: cost of borrowing
    - lower IR → lower cost of borrowing ∴ increase C/I, increase AD, stimulates actual EG
    - increased I → greater capital accumulation ∴ increase productive capacity, increase LRAS, stimulates potential EG
- exchange rates
    - lower exchange rate → price of exports decrease in terms of foreign currency + price of imports increase in terms of domestic currency → (assuming Marshall-Lerner condition holds → PEDx + PEDm > 1) net export revenue increases, increase AD, stimulate actual EG

- effects of monetary policy on macroec. goals
    - stimulates potential EG
    - lowers unemployment
    - higher material SOL (increase in real GDP, disposable income → households more willing and able to consume more goods and services)

- effectiveness of monetary policy on economic growth
    - interest inelasticity of demand for loans
        - MNCs/FDI need not borrow from domestic sources to finance investments (own reserves/borrow from foreign sources/issue shares) → fall in IR will only increase I to a small extent ∴ limit increase in AD, limit increase in actual EG (MP less effective)
    - economic outlook (optimism/pessimism)
        - pessimistic economic outlook during recession → lower business confidence (firms less likely to invest) ∴ fall in IR only increase I to a small extent, limit increase in AD, limit increase in actual EG (MP less effective)
    - inability to cut IR (IR near 0%, cannot be reduced to <0%)
    - conflict with other macroec. goals
        - assuming economy operating near or at FE, further increase in AD can lead to demand-pull inflation

- supply-side policy (AS)

policies:
- education and training (subsidies)
  - raises labour productivity in LR → increases productive capacity (increase quality of labour) ∴ increase LRAS, stimulate potential EG
- labour market reform
  - reduce bargaining power of trade unions → higher number of workers willing to work at given wage, larger labour force (increase quantity of labour), increase productive capacity ∴ increase LRAS, stimulate potential EG
- improving incentives to work (e.g. lower unE benefits)
  - widen income gap between the unemployed and employed → encourage unemployed to seek employment, increase labour force (increase quantity of labour) ∴ increase LRAS, stimulate potential EG
- lower direct taxes (e.g. income tax)
  - increase disposable income, higher opp. cost of leisure → workers work longer hours and undergo training to get well-paying jobs/encourage unemployed to seek employment, increase productive capacity ∴ increase LRAS, stimulate potential EG
- wage controls
- privatisation/deregulation (to increase competition)

  - effects of supply-side policy on macroec. goals
    - lower unemployment
    - maintain price stability

- effectiveness of supply-side policy on economic growth

- time lag
  - impact of policies on economy may take a long time (e.g. takes time to train workers)
- uncertain outcomes
  - depends on response of firms and individuals to tax cuts
    - increase disposable income due to lower income tax may encourage workers to work fewer hours as they can still earn the same wage with more leisure hours
  - depends on ability for workers to be trained (e.g. not all workers will be able to pick up new skills effectively)
- political resistance (to unE benefits/wage controls/reforms)
- opp. cost incurred on government (e.g. spending on education could have been spent on healthcare)

- employment and unemployment
  - employment: a paid work agreement between an employer and an employee
  - unemployment: condition of the economy in which some FOP are not being utilised in production
    - unemployed: person who is able, available and willing to work at the going wage rate in a suitable job but is unable to find paid employment despite actively searching for work
    - labour force: unemployed + employed (not including housewives, students, retirees)
  - full employment: when there is no cyclical unemployment i.e. when the unemployment rate = natural rate of unemployment (frictional unE + structural unE)
  - causes for changes in the pattern of employment
    - increase in proportion of workers in the tertiary sector as the economy develops
    - decline in proportion of workers in the primary sector as the country moves towards a market economy
    - greater proportion of women in the labour force due to changes in social attitudes

- measurement of unemployment:
    - claimant count: number of people claiming unemployment-related benefits
    - labour force survey: survey conducted by countries to produce official national statistics on the labour force, unemployment and employment for monitoring and planning purposes
    - unemployment rate ($\frac{number\ of\ unemployed\ people}{labour\ force} \times 100\%$)
- **causes**/types of unemployment
    - cyclical (demand-deficient) unemployment: caused by weak/falling AD (less demand for goods and services → firms reduce production/investment ∴ lay off workers)
    - frictional unemployment: occurs as it takes time for workers to be matched with suitable jobs due to imperfect information in the labour market (workers are unaware of the job openings available, firms do not have perfect information about potential employees and their skill set)
    - structural unemployment: when the structure of the economy changes resulting in mismatch of skills and job requirements in the labour market
        - regional (e.g. decline in coal mining industry → higher unE, FOP immobility)
        - sectoral (changing patterns of demand, e.g. shift from coal mining to biofuel industries)
        - technological (change in production techniques, e.g. increasing use of machinery → workers have skills that firms no longer require ∴ untrained workers become unemployed)
    - seasonal unemployment: occurs during a regular/seasonal decline in economic activity (e.g. farming, tourism)
        - not the most serious cause of unE, contributes to natural rate of unemployment
- consequences of unemployment

individual	- depression, family tensions, crime, violents, riots, etc.
firms	- lower profits (higher unE → lower production ∴ lower output, lower revenue) - lower demand for products → lower revenue, lower profits

government	- higher unemployment benefits (higher government expenditure)
	- lower tax revenue
	  - income tax: fewer are employed, smaller tax base, lower tax revenue
	  - indirect tax (e.g. GST): lower consumption levels, lower tax revenue

economy	- idle resources (hours that unemployed do not work cannot be recovered) - loss of potential output (production below productive capacity) - wastage of resources

- policies to reduce unemployment
    - reduce cyclical unemployment (i.e. increase AD → produce more goods ∴ demand for more labour, higher demand for labour, reduce cyclical unE)
        - expansionary fiscal policy
            - lower tax rate
            - increase government spending
        - expansionary monetary policy
            - decrease interest rates
            - depreciation of currency
        - trade policies (topic 6)
            - FTA, protectionist measures (e.g. import tariffs)
    - supply-side policy
        - reduce structural unemployment (i.e. improve training and education → skills more relevant)
            - education and training
        - reduce frictional unemployment (e.g. reduce time and conditions to look for a job → reduce frictional unE)
            - lower unemployment benefits
    - reduce structural unemployment (i.e. diversify industries to reduce reliance on industries with seasonal demand)
        - spreading production evenly, expanding production lines (create more job opportunities)
            - workers stay employed throughout the year
- effectiveness of policies: <u>same as effectiveness of achieving EG</u>

- inflation and deflation
    - inflation: period of sustained increase in the general price level for 2 or more consecutive quarters
        - measurement of inflation: rise in consumer price index (CPI)
    - deflation: period of sustained decrease in the general price level for 2 or more consecutive quarters
        - measurement of inflation: fall in CPI
    - CPI: measures the **weighted** average price changes (reflects the proportion of income spent on the items) over time of a **fixed basket of consumption goods and services** (represents consumption patterns) commonly purchased by households compared to a base year (reference year, when prices are relatively stable)

category (basket of items)	weight		price change (%) - price index (relative price of item) - 100 (base year)		weighted price change (%)
food	$\frac{4}{10}$	×	110 - 100 = 10	=	4
housing	$\frac{1}{10}$		95 - 100 = -5		-0.5
transport	$\frac{3}{10}$		100 - 100 = 0		0
entertainment	$\frac{2}{10}$		108 - 100 = 8		1.6
				change in price level	5.1

    - inflation rate: rate of change in CPI ($year\ 2\ inflation\ rate = \frac{year\ 2\ CPI - year\ 1\ CPI}{year\ 1\ CPI} \times 100\%$)

year	2017	2018	2019	2020	2021	2022
CPI (2019 = 100)	99.0	99.4	100	99.8	102.1	108.4

        - e.g. year-on-year inflation rate for 2022 = $\frac{CPI\ (2022) - CPI\ (2021)}{CPI\ (2021)} \times 100\%$
        = $\frac{108.4 - 102.1}{102.1} \times 100\% = 6.17\%$

- limitations of CPI: consumption patterns may change, price increase may not be caused by inflation, introduction of new goods and services, CPI may not reflect consumption pattern of households of different income groups (CPI reflects average household consumption pattern)

- causes of inflation

  - demand-pull inflation (sustained increase in AD, when the economy is near or at FE)
    - increase in AD (C + I + G + N)
  - cost-push inflation (increase in COP, even when economy is not at FE)
    - increase in wages (trade unions bargain for higher wages → higher COP)
    - shortage of raw materials
    - immobility of FOP (e.g. COVID → workers unable to travel ∴ shortage in labour, price of labour increases, higher COP, lower SRAS)
    - exhaustion of resources (e.g. oil)

- consequences of inflation

consumers	- under progressive tax structure, increase income (due to inflation) → taxpayers pay larger proportion of income on tax
workers	- fixed income workers → fall in real income - indexation: contract with employer to be compensated for inflation - variable income workers → unlikely to be affected (incomes usually a percentage of the value of work undertaken, e.g. property agents)
savers	- causes uncertainty (unsure of future value of savings, less incentive to save, higher IR → fall in C ∴ actual EG slows) - inflation → fall in real savings
lenders	- increase in GPL → real value of debt falls (lenders lose at the benefit of borrowers)
firms	- causes uncertainty (unsure of future prices and costs, less incentive to invest, fall in I → actual EG slows) - misallocation of resources (mistake rise in GPL as rise in price of their products → mistakenly allocate more resources into production)
economy	- fall in EG → fall in C/I, fall in AD - effects on money (purchasing power of currency falls → currency depreciates against other currencies) - international competitiveness/BOP weakens

- policies to reduce inflation
    - contractionary fiscal policy (lower AD → reduce demand-pull inflation)
        - raise tax rates
        - decrease government spending
    - contractionary monetary policy (lower AD → reduce demand-pull inflation)
        - raise interest rates
        - decrease money supply
        - raise exchange rate
            - can also reduce cost-push inflation (imported inflation): currency appreciates → price of imports in domestic currency fall, cost of raw material imports falls ∴ fall in price of goods and services, price of domestic products pressured to fall to remain competitive against cheaper imports, reduce imported inflation, reduce cost-push inflation
    - supply-side policy (lower COP → increase AS ∴ reduce cost-push inflation)
        - education and training
        - labour market reform (e.g. trade union reform)
        - improving incentives to work (e.g. lower unE benefits)
        - lower direct taxes (e.g. income tax)
        - wage controls
            - limit on increases in wage rates to prevent wages from increasing faster than productivity → prevent COP from increasing too quickly ∴ slow down fall in SRAS
        - privatisation/deregulation (to increase competition)
- effectiveness of policies
    - conflict with other macroec. goals
        - fall in AD → negative actual EG
        - fall in LRAS → reduce potential EG
    - priorities of the government
        - not feasible to reduce G but compromise strategic social, economic and security concerns
        - long term projects difficult to shelve (to cater to short term needs)
    - implementation problems (time lag)
    - interest inelasticity of loans (raising IR ineffective)
        - high consumer/business optimism → high C/I despite higher IR
        - other sources of financing I (large firms e.g. MNCs/FDI → past reserves/profits, borrow from other countries with lower IR)
    - raise COP → higher IR may lead to higher COP ∴ cost-push inflation
    - availability of reserves → require sufficient foreign reserves to maintain stronger currency
    - difficult to predict impact of policies (lack of current/reliable information)
    - high exchange rate may decrease export competitiveness
    - uncertain outcomes (supply-side policies)
    - political resistance
- causes of deflation
    - weak AD (also results in cyclical unE)
    - excess production (surplus → downward pressure on prices)
    - tight monetary policy (govt. raise IR too much to reduce inflation → resulting in deflation)
    - continuous improvements in technology (lower COP → increase SRAS ∴ lower prices)
    - deregulation (increase competition → lower prices)
    - imported deflation (dumping → lower prices, fall in prices of imported FOP → COP falls ∴ lower prices)
- consequences of deflation
    - when SRAS increases due to lower COP, possible for declining prices to be accompanied by strong EG
        - technological improvements boost productivity faster than prices falling
        - low-cost producer expands → drive down producer or consumer costs
    - reflects weak AD → high cyclical unE
    - increase uncertainty (further weaken AD)
        - profits → lower I, expectations of lower prices → lower C

- policies to reduce deflation: same as to promote EG
- effectiveness of policies: same as effectiveness of achieving EG

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6 Topic 5 Key Points

- economic growth vs **economic development**
  - economic growth: increase in the value of goods and services (measured as increase in GDP)
  - economic development: growth in the economic wealth of a country from a developing to a developed country (including production of necessities, rise in SOL, economic growth, social choices)
- living standards
  - material vs non material SOL
    - material SOL: measured by real income per capita (e.g. real GDP/GNI per capita)
    - non-material SOL: influenced by factors that measures quality of life (e.g. life expectancy, IMR, crime rate, etc.)
  - indicators of living standards:
    - real GDP per capita/head: total monetary value of all final goods and services produced by residents (including foreigners in the country) within the geographical boundary of the country in a period of time after **adjusting for inflation**

advantages	- adjusted for inflation - compare SOL over time between countries
disadvantages	- includes all individuals (not only those working) - does not account for income inequality, illegal/non-market activities, change in quality of goods and services, non-material aspects of SOL (e.g. leisure, life expectancy, education, pollution, etc.)

    - human development index (HDI): consists of life expectancy, education (i.e. mean years, expected years), income (GNI) per capita

advantages	- consists of indicators of material and non-material aspects of SOL
disadvantages	- does not account for income inequality

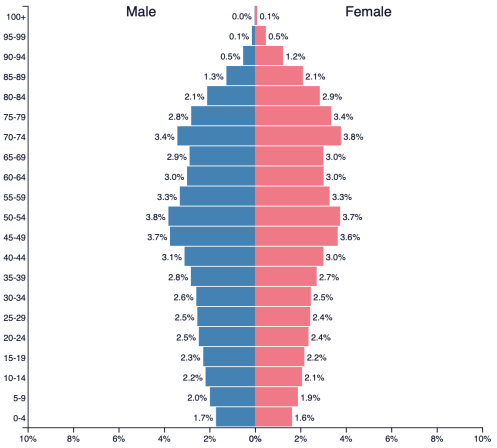
    - reasons for differences in living standards and income distribution within/between countries
      - economic system
        - mixed economic systems provide the highest SOL
        - market economic system: highest income inequality
      - taxation
        - indirect taxes (e.g. GST) → higher proportion of income for lower income households ∴ greater income inequality
      - level of productivity
        - differences in skills/productivity → different wages i.e. higher skilled workers earn more than low skilled workers ∴ difference in material SOL/income inequality
      - population size
      - education level
      - inflation

- poverty: lack of financial resources to afford basic standard of living
  - absolute poverty: inability to afford basic necessities (earn less than US$1.90 a day), more prevalent in less (economically) developed countries (LDCs/LEDCs)

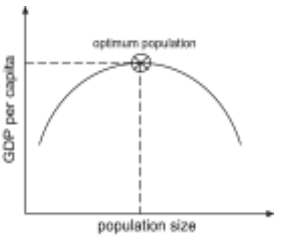
    causes:
    - natural disasters
    - inefficient public spending (e.g. spending too much on war instead of development)
    - debt
    - child labour → lack of educated/skilled population
  - relative poverty: earn less than the average household income in the country, more prevalent in (more economically) developed countries (DCs/MEDCs)

    causes:
    - unemployment
    - low education
    - poor health (also a result of poverty)
    - lack of access to affordable services (due to lack of government support/benefit, e.g. transportation)
    - low/outdated skills (poor quality of labour)
  - policies to reduce poverty
    - promoting economic growth (better education, lower unemployment, higher wages,etc.)
    - improving education (supply-side policy)
    - more generous benefits (e.g. public transport/healthcare/unemployment benefits)
    - progressive taxation (redistribution of income)
    - higher national minimum wages (reduce relative poverty)
- population
  - factors affecting population growth
    - birth rate: number of people born for every 1000 people
      - factors affecting birth rate
        - age-sex structure (e.g. more males than females → lower BR)
        - availability of family planning services → higher BR
        - social beliefs
          - contraception
          - abortion
          - female employment (more women focus on career → later marriage ∴ have children later)
        - infant mortality rate (IMR)
          - higher IMR → higher BR (more children as more are likely to die)
        - conflicts (e.g war) → lower BR
        - cost of education (higher cost → lower BR)
    - death rate: number of people who die for every 1000 people
      - factors affecting death rate
        - access to healthcare (better access to healthcare → lower DR)
        - improvements to medical facilities (lower DR)
        - nutrition/healthy diets (lower DR)
        - level of hygiene
        - infectious diseases
        - conflicts/level of crime
    - net migration: difference between emigration and immigration
      - emigration: when a person moves out of a country
        - emigration > immigration: lower population growth
      - immigration: when a person moves into a country
        - immigration > emigration: higher population growth

- population pyramid: age and gender distribution of a population
- can be used to identify
  - ageing/young population
    - e.g. Japan (in diagram) has an ageing population → higher proportion of older people than younger people (wider towards the top than the bottom)
  - declining/ expanding population
    - e.g. Japan has a declining population → low birth rates (narrow base)
  - dependency ratio ($\frac{dependent\ population}{working\ population}$)
    - dependent population: includes children, students, housewives, unemployed, pensioners



- optimum population: balance of population size and resources available
  - under-populated: insufficient labour (may deter investors), higher GDP per capita, may cause economic decline, unutilised resources (wastage)
  - over-populated: shortages (e.g. housing, energy), congestion, lower GDP per capita, may cause inflationary pressures, higher unemployment



- differences in economic development between countries

DCs	- better education (higher government spending), higher level of literacy
	  - more skilled labour → higher wages
	  - more productive
	- lower birth rates (e.g. more women working), higher life expectancy (better medical facilities), lower death rates (better healthcare) → ageing population
	- larger tertiary and secondary sector (most of workforce in service industries)
	- greater saving and investment
	- better healthcare (higher government spending)

LDCs	- lower spending on education, lower level of literacy
	  - less skilled labour → lower wages
	  - less productive
	- higher birth rates than DCs (e.g. higher IMR), lower life expectancy, higher death rates (BR > DR) → higher rate of natural population increase (birth rate - death rate)
	  - result of lack of contraception, poverty, lack of education, etc.
	- larger primary sector (major contributor to GDP)
	- lower saving and investment
	- poorer healthcare

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7 Topic 6 Key Points

- international specialisation
  - national specialisation:
    - superior resource allocation: if a country has better quality resources → charge higher prices, higher quantity of resources → lower prices (drive competitors out of business)
    - cheaper production methods: lower prices → higher comparative advantage (e.g. use of capital resources, low cost labour-intensive production)
      - comparative advantage: the ability to produce cheaper than competitors

- advantages of international specialisation

consumers	- increase variety of goods, lower prices (more competition), better quality of goods → increase consumer welfare
firms	- enjoy EOS (large scale production → lower AC ∴ higher profits - higher competition → firms become more productive/efficient to lower COP (remain internationally competitive) ∴ higher profits - more competition → more innovative and better quality products ∴ increase demand, increase revenue, higher profits
economy	- increase in export revenue → improve current account - increased production (of exports) → more jobs ∴ lower unE - increase in export revenue → increase AD (economy not at FE) ∴ actual EG

- disadvantages of international specialisation

consumers	- vulnerable to supply shocks/sour diplomacy relations → consumers may not have access to essential goods and services ∴ lower consumer welfare - pollution (depletion of natural resources) → lower non-material SOL
firms	- disEOS (firms grow too big, e.g. coordination problems) → higher AC ∴ lower profits - inefficient firms may become bankrupt (unable to compete with other firms)
economy	- vulnerable to external shocks (over-reliant on imports, e.g. fall in global oil prices) → lower export revenue ∴ fall in AD, recession - inefficient domestic firms → bankrupt and shut down ∴ higher unE - structural unE (especially when country loses comparative advantage) - have to discover/develop new areas of comp. advantage (can be difficult/requires hard work)

- globalisation: economic, social, technological, cultural, political changes that are increasing interactions and interdependencies between people, firms and economies around the world
  - multinational countries (MNCs): have premises and productive operations in more than one country (e.g. McDonald's, Samsung)
    - costs and benefits of MNCs to host country

benefits	- provision of jobs (lower unE) - increase FDI → increase I, increase AD ∴ actual EG (assuming economy not at FE) - increase variety of goods and services to consumers - excess goods and services can be exported out → earn export revenue ∴ improve current account - new ideas/technology/skills that increase productivity of local workers - government earns tax revenue (corporate tax)
costs	- local firms may become bankrupt (intense competition from MNCs) → increase unE - profits earned may be sent back to home country → worsen current account - exploit local workers (low pay, poor working conditions) - move profits between countries to avoid taxes - abuse power to receive generous subsidies/tax incentives from host countries

- costs and benefits of MNCs to home country

benefits	- lower cost by producing in other countries → consumers (in home country) benefit from lower prices - profits sent back to home country → improves current account - larger consumer base in host country
costs	- loss of jobs in home country - goods that used to be produced and exported from home country now produced and exported from host country → worsen current account of home country - technology/designs/ideas stolen from home country

- free trade: exchange of goods and services across international borders without any barriers to entry
  - benefits of free trade

    - increased variety of goods to consumers, lower prices (higher competition from foreign firms), better quality products → higher consumer welfare
    - firms enjoy EOS (e.g. marketing EOS) → mass production, lower AC ∴ higher profits
    - increased competition forces firms to be more efficient → better use of global resources
    - increased competition forces firms to be more innovative → produce better quality products ∴ higher demand for its products, higher revenue, higher profits
    - firms have access to cheaper raw materials → lower COP ∴ higher profits
    - international cooperation → better relations between countries (lower hostility)
    - flow of new ideas/skills/technology across countries
    - greater export revenue improves the current account
    - increased production of exports → more jobs created ∴ lower unE

- trade protection (protectionism): protection of domestic industries and employment from foreign competition in domestic markets
  - reasons for protectionism:

    - protect infant industries (sunrise industries): protect new firms that may not be able to compete with large foreign firms
    - protect declining industries (sunset industries): limit the economic damage (e.g. unemployment) that may occur when these firms close abruptly
      - may be caused by a shift in comparative advantage
      - misallocation/waste of resources (inefficient/less productive firms)
    - protect strategic industries (e.g. water, electricity, defence): such firms are essential for self-sufficiency and defence, lower reliance on other countries (reduce vulnerabilities)
    - avoid dumping: when foreign firms sell below market prices in foreign markets (usually below COP) to drive domestic firms out of business
    - correct current account deficit: lower imports
    - cheap labour: protectionism can pressure firms to improve working conditions/pay for their workers

- methods of protectionism:
    - tariffs (import tax): tax on imports (increase price of imports) → lower demand for imports, increase demand for domestic goods
        - government generates tax revenue
        - effectiveness:
            - depends on PED of imports (in domestic market)
                - price inelastic demand for imports → less effective
                - price elastic demand for imports → more effective
            - may lead to retaliation by trade partners (partners also impose protectionism measures) → impact export industries, reduce world trade
    - import quotas: quantity restriction of imports into a country
        - lower ss of imports → upwards pressure on price ∴ higher prices of imports, relative price of imports higher than domestic goods, higher demand for domestic goods
            - benefits domestic firms → higher dd, higher revenue, higher profits
        - effectiveness:
            - firms that maintain high demand for their products earn higher revenue from higher prices
            - higher prices for consumers
            - less choice for consumers
    - subsidies: grants paid to domestic producers to help reduce their production costs
        - government subsidies to domestic production → lower COP ∴ firms able to charge lower prices for domestic and export markets
        - effectiveness:
            - government may have to impose higher tax rates to fund subsidies
            - opportunity cost incurred by the government
    - embargoes: a ban on the importation of a particular product
        - may be used to stop the import of harmful products (e.g. drugs, weapons, certain foods)
        - reasons to implement embargoes may be political (e.g. China and USA)
        - effectiveness:
            - government may have to impose higher taxes to fund embargoes
            - prices of some products may rise (supply decreases)
            - some products may not be available anymore (lower choice)
- impacts of protectionism

tariffs	- domestic firms increase production to meet demand (after tariffs imposed on imports) → more jobs created ∴ lower unE - higher prices of imported resources → higher COP for domestic firms ∴ lower production, higher unE
import quotas	- government may earn higher corporation tax (firms earn higher profits) - domestic firms able to compete with foreign firms better
subsidies	- higher comparative advantage for domestic firms
embargoes	- foreign firms may go out of business

- foreign exchange rates (forex): price of a currency in terms of another (e.g. S$1 = RM 3.4)
  - determined through demand and supply of of a currency in the forex market
    - factors affecting demand for currency

      - higher income of foreigners/preference for domestic goods → higher demand for exported goods and services ∴ higher demand for currency
      - higher interest rate → attract foreign investment ∴ more investment into country, higher demand for currency
      - speculators (people who take large risks by buying/selling financial/real assets to make capital gain on anticipated future change in value) → buy domestic currency
      - entry of MNCs in the country (more FDI) → buy domestic currency ∴ increase demand for currency

    - factors affecting supply of currency

      - higher income of locals/preference of imported goods → more imports of goods and services ∴ higher supply of currency (domestic currency sold, foreign currency bought)
      - lower interest rate → less foreign investment ∴ lower investment into country, higher supply of currency
      - speculators → sell domestic currency
      - central banks sell currency in forex market and buy other foreign currencies
      - MNCs leaving country → sell domestic currency ∴ increase supply of currency

  - equilibrium forex rate: when the demand and supply of a currency are equal
  - floating exchange rate system: market forces (dd/ss) determine the value of the currency
    - shortage (demand > supply): currency **appreciates**
    - surplus (supply > demand): currency **depreciates**

advantages	- government does not need to monitor and maintain the exchange rate - no currency reserves needed - can automatically eliminate current account imbalances (i.e. exchange rate depreciates when there is a deficit)
disadvantages	- vulnerable to instability/uncertainty (currency may fluctuate) → lower investment from firms

  - fixed (pegged) exchange rate system: central bank intervenes to maintain the exchange rate in relation to another currency (e.g. HK$ is pegged to US$, B$ is pegged to S$)
    - upward pressure on value of currency: **devalue** (weaken currency) to maintain peg
    - downward pressure on value of currency: **revalue** (strengthen currency) to maintain peg

advantages	- minimise instabilities/uncertainty (easier to predict)
	  - ease business planning
	  - facilitate international trade/investment between countries
	- central banks acquire credibility (by fixing domestic currency to that of a more disciplined nation)

disadvantages	- fixed rate may not correlate with the market equilibrium exchange rate → may lead to excess demand or supply - central bank needs to regularly buy and sell domestic currency to maintain the exchange rate

  - differences between fixed and floating exchange rate

fixed exchange rate	floating exchange rate
- price of currency is fixed (against a stable currency) - regular government intervention - does not automatically maintain BOP disequilibrium	- price of currency fluctuates (according to market forces) - no government intervention - automatically maintains BOP disequilibrium

- maintained float exchange rate system: compromise between fixed and floating exchange rate systems (i.e. exchange rate allowed to fluctuate within predetermined upper and lower bands)
- consequences of forex rate fluctuations

    - price of imports
        - appreciation of currency → price of imports kept low
            - lower COP → lower price of exports
        - depreciation of currency → price of imports relatively higher
            - higher COP → higher price of exports
    - price of exports
        - appreciation of currency → price of exports relatively higher (harms price competitiveness of exports)
        - depreciation of currency → price of exports kept low
    - spending on exports
        - appreciation of currency → price of exports in foreign currencies rise ∴ quantity demanded of exports decrease (assuming PED of exports is price elastic)
            - may increase unE (decrease in exports)
        - depreciation of currency → price of exports in foreign currencies fall ∴ quantity demanded of exports increase (assuming PED of exports is price elastic)
            - can help to improve current account balance (quantity demanded increases more than proportionately than decrease in price of exports)
            - may lower unE (increase in exports)
    - spending on imports
        - appreciation of currency → price of imports fall, quantity demanded of imports increase (assuming PED of imports is price elastic)
            - can lead to actual EG/inflation (fall in import revenue, net export increases)
        - depreciation of currency → price of imports rise, quantity demanded of imports decrease (assuming PED of imports is price elastic)
            - can lead to cost-push (imported) inflation (increase in COP)
    - investment (FDI)
        - appreciation of currency → more expensive to invest in country ∴ decrease I, lower AD, lower GDP/negative EG
        - depreciation of currency → cheaper to invest in country ∴ increase I, higher AD, higher GDP/actual EG

- balance of payments (BOP): record of inflows (credit) and outflows (debit) of money from a country due to the transactions between the residents of the country and the rest of the world in a year
    - financial/capital account **(not in syllabus)**
    - current account: record of all transactions related to goods and services, and payments related to the transfer of income

components:
- balance of trade
    - trade in goods (visible exports/imports)
    - trade in services (invisible exports/imports)
- primary income (net income → income transfers by citizens and firms)
    - citizens who work abroad and remit money back home (credit)
    - citizens who earn wages/salaries/benefits from abroad (credit)
    - foreigners who work and send money back home (debit)
- secondary income (current transfers → usually payments at government level between countries)
    - e.g. charity, government aid, contributions to World Bank

- current account deficit and surplus
  - deficit: debit (-) > credit (+), value of imports greater than value of exports

reasons:
- relatively high domestic inflation rate → domestically produced goods and services become relatively more expensive ∴ prices of exports are relatively higher, fall in export revenue (assuming PED of exports is elastic)
  - local consumers switch to relatively cheaper imports → demand for imports increase ∴ increase in import expenditure
  - fall in exports and rise in imports will lead to a current account deficit (assuming it was initially in equilibrium)
- increase in rate of EG → increase in real national income of households, purchasing power of households increases ∴ demand for imports increase (increased demand for goods and services), increase in import expenditure
  - rise in imports will lead to BOT deficit (assuming exports unchanged) → current account deficit
- slowdown in economy of trading partners (relatively lower/negative EG, e.g. recession)→ decrease in real national income of foreign households, purchasing power of foreign households decreases ∴ demand for exports decrease (i.e. demand for imports in foreign countries decrease), fall in export revenue
  - fall in exports will lead to BOT deficit (assuming imports unchanged) → current account deficit
- currency appreciation → price of exports in foreign currency increases, price of imports in domestic currency decreases ∴ quantity demanded of exports falls, quantity demanded of imports increases, net exports decreases (assuming Marshall-Lerner condition holds)
  - fall in exports and rise in imports will lead to a current account deficit (assuming it was initially in equilibrium)
- relatively lower productivity → COP increases, price of exports increases (loss of comparative advantage, foreign competitors able to produce similar products at a lower cost), consumers switch to cheaper substitutes (i.e. imports) ∴ fall in demand for exports/domestic goods, fall in export revenue
  - increase in quantity demanded of imports (assuming PED of imports is elastic) → increase in import expenditure
  - fall in exports and rise in imports will lead to a current account deficit (assuming it was initially in equilibrium)

  - surplus: credit (+) > debit (-), value of exports greater than value of imports

reasons:
- relatively higher productivity → COP falls, price of exports fall (increase in comparative advantage of firms) ∴ quantity demanded of exports increases (assuming PED of exports is elastic), increase in export revenue
  - rise in exports will lead to BOT surplus (assuming imports unchanged) → current account surplus
- currency depreciation → price of exports in foreign currency decreases, price of imports in domestic currency increases ∴ quantity demanded of exports increases, quantity demanded of imports decreases, net exports increases (assuming Marshall-Lerner condition holds)
  - rise in exports and fall in imports will lead to a current account surplus (assuming it was initially in equilibrium)
- relatively lower domestic inflation rate → domestically produced goods and services become relatively cheaper ∴ prices of exports are relatively lower, increase in export revenue (assuming PED of exports is elastic)
  - local consumers switch to relatively cheaper domestic products → demand for exports increase ∴ increase in export expenditure
  - rise in exports and fall in imports will lead to a current account surplus (assuming it was initially in equilibrium)

- consequences of a current account deficit
    - slowdown in economy → fall in net exports, fall in AD ∴ fall in actual EG, fall in real GDP
        - lower demand for exports/domestic goods and services → firms lower production ∴ higher unE
    - exchange rate depreciates → cost of imports increases ∴ COP increases, cost-push (imported) inflation
        - can automatically correct current account deficit in a floating exchange rate system
- consequences of a current account surplus
    - economic growth → rise in net exports, increase in AD ∴ stimulates actual EG, rise in real GDP
        - may lead to demand-pull inflation if economy near or at FE
        - greater demand for exports/domestic goods → firms increase production ∴ lower unE
    - exchange rate appreciates → cost of imports decreases ∴ COP decreases
        - can automatically balance current account in a floating exchange rate system

- policies to achieve BOP stability
    - nothing (allow market forces to correct a deficit/surplus automatically → floating exchange rate system)
    - protectionism → increase the price of imports
    - currency devaluation → make price of imports more expensive in domestic currency
    - higher taxation (contractionary fiscal policy) → lower disposable income of consumers
    - raise interest rates (contractionary monetary policy) → higher cost of borrowing, lower C
    - supply-side policies
        - education and training → increase productivity
        - investment in infrastructure → lower COP for domestic firms (external EOS)
- effectiveness of policies to achieve BOP stability
    - other external factors may be preventing the currency from depreciating (and hence self-correcting a deficit)
    - protectionist policies may lead to retaliation from trading partners → offset improvements to a BOP deficit
    - raising tax rates may also result in lower demand from local consumers for domestic goods → lower output, may lead to higher unE
    - time lag of supply-side policies, government may incur opp. cost

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8 Definitions

- compiled list of definitions for easier revision (not exhaustive, may not include all possible define questions)

economic problem	unlimited wants but limited resources to satisfy them
land	natural resources used in production (reward: rent)
labour	human resources used in production (reward: wages)
capital	man-made resources which contribute to production (reward: interest)
entrepreneurship	skills required to combine and manage other factors of production for production, the **risk taker** (reward: profit)
economic good	goods that are scarce and incur opportunity cost
free good	good that are not scarce and do not incur opportunity cost
opportunity cost	the next best alternative forgone
production possibility curve (PPC)	a diagram showing the maximum possible combinations/productive capacity of two types of products with the given resources and technology (and shows opportunity cost)
microeconomics	economic decisions of **consumers, producers, households** (the study of individual markets)
macroeconomics	economic issues and actions that affect the **whole economy** (decisions of the **government**)
demand	willingness and ability to purchase a product
supply	willingness and ability to sell a good
market equilibrium	when the demand and supply of a product is equal
market disequilibrium	when there is excess demand or excess supply for a product (i.e. when there is a surplus/shortage)
price elasticity of demand (PED)	the responsiveness of the **quantity** demanded of a product to a change in price
price elasticity of supply (PES)	the responsiveness of the **quantity** supplied of a product to a change in price
market economic system/free market	a market where resources are allocated by the price mechanism in the absence of government intervention
market failure	inefficient allocation of resources in a market economy
mixed economic system	an economy with a **private sector** and a **public sector** (a **market** based economy with some **government intervention**)
regulation	rules that seek to modify or determine the behaviour of firms or organisations
deregulation	the removal of regulation
privatisation	transfer of ownership/property/business from the **government to the private sector**
nationalisation	taking privately-owned firms/industries/assets and putting them under the control of the government
saving	income not spent
division of labour	workers specialising in particular tasks
trade unions	**organisations** that **represents** the interest of workers in negotiations with employers and governments
primary sector	firms involved in the **production** or **extraction** of raw materials
secondary sector	firms involved in the **manufacturing** of goods and services from raw materials
tertiary sector	firms which provide **services**

public sector	firms that are owned and controlled by the government
private sector	firms that are owned and controlled by firms and private individuals (entrepreneurs, shareholders)
production	scarce resources (factors of production) combined to make goods and services
productivity	amount of outputs produced per unit of input (measure of efficiency)
costs of production (total cost, TC)	total fixed cost (TFC) + total variable cost (TVC)
revenue (total revenue, TR)	the amount received from selling a product
budget	forecast of revenue and expenditure over a period of time
indirect taxes	a tax on consumer spending
fiscal policy	the use of government spending and taxation to influence aggregate demand in the economy
money supply	the amount of money in the economy at any given moment of time
monetary policy	influencing the money supply to influence aggregate demand
supply-side policy	measures that aim to increase the productive capacity of the economy
recession	a significant decline in economic activity
economic growth	the annual increase in the level of national output/real GDP
employment	the economic use of labour as a factor of production
unemployment	when some factors of production are not being utilised in production
full employment (FE)	the **lowest unemployment possible**/ when everyone who is willing and able to work has a job (i.e. only frictional and structural unemployment)
inflation	a period of sustained increase in the general price level for 2 or more consecutive quarters
deflation	a period of sustained decrease in the general price level for 2 or more consecutive quarters
absolute poverty	the inability to afford basic necessities (i.e. people who earn less than US$1.90 a day)
relative poverty	people who earn less than the average household income in the country
birth rate	the number of **live births per 1000** of the country's population **per year**
death rate	the number of **deaths per 1000** of the country's population **per year**
net migration	the difference between emigration and immigration
globalisation	the increasing connectedness and interdependence of world cultures and economies
trade protection	protecting domestic firms from foreign competition
dumping	the sale of a product at less than cost price/a low price in a foreign country to gain a larger market share
foreign exchange rates	the price of a currency in terms of another
appreciation	an increase in the value of the currency compared to other currencies in a floating exchange rate
depreciation	a fall in the value of the currency compared to other currencies in a floating exchange rate
revaluation	an increase in the value of the currency compared to other currencies in a fixed exchange rate system
devaluation	a fall in the value of the currency compared to other currencies in a fixed exchange rate system

9 Notes + Sample Questions

- discuss the benefits/costs/advantages/effects/etc. to
    - consumers: greater **choice,** more **variety,** higher **quality,** lower **price,** higher material/non-material SOL (topic 5)
    - firms: higher productivity, higher **profits** (topic 3) → lower TC, higher TR
    - government: macroeconomic aims
    - economy (economic effects): market failure (topic 2), **economic development** (topic 5), **economic growth** (topic 4), international trade/BOP (topic 6)

- discuss whether more people will apply to be pilots for Indian Airlines in the future (0455/22 *November 2021*)
    - keywords: apply to be pilots → wage/non-wage factors of choosing a job
    - A: more people may apply
        - improvements in technology → make the job **easier**
        - better education/training → improve skills
        - size of industry increasing → higher **demand** for pilots (more job opportunities)
            - may increase **wages**
        - improved **working conditions**
    - CA: more people may not apply
        - period of training may increase → **cost** of training increase
        - other jobs may offer **higher wages**/better working conditions/wages of pilots may fall + example of the other job
        - improvements in technology may decrease the need for pilots and increase the **skills needed**
        - higher prices of fuel/tax on fuel → reduce the size of industry (less job opportunities)
        - lower price of other forms of transport (substitutes) → lower demand for pilots

- explain, with examples, the difference between the secondary sector and the tertiary sector (0455/22 *November 2021*)
    - sec: manufacturing e.g. car industry [2]
    - ter: services e.g. insurance [2]

- explain two advantages to an economy of reducing child labour (0455/22 *November 2021*)
    - keyword: economy → ec. growth/development, BOP
    - enable children to be educated → higher **literacy**/skills/productivity/**potential EG**
    - improve children's health → higher **life expectancy**/higher SOL
    - **higher wages** → decreased supply of cheap labour
    - increase job opportunities for adults → **lower unE** for adults

- explain two benefits an economy may gain from having a young labour force (0455/21 *June 2020*)
    - may be more **flexible** → switch from doing different tasks
    - more **mobile** → move from one place to another or one job to another
    - more **up to date** with **advancements in technology** → more efficient/**productive**/able to use new tech

- discuss whether or not the increase in borrowing is likely to have caused inflation in Vietnam in 2017 (0455/21 *June 2020*)
    - keyword: increase in borrowing → increased C and I
    - A: might have caused inflation
        - higher C/I → higher AD → higher **demand-pull inflation**
        - tax rates may rise → increase COP → **cost-push inflation**
    - CA: might not have caused inflation
        - higher I may reduce COP → lower cost-push inflation
        - increased education (from source) → **higher productivity**, lower COP → lower cost-push inflation

- discuss whether or not a national minimum wage will reduce poverty (0455/21 *June 2020*)
    - keywords: poverty → can be absolute or relative
    - A: may reduce poverty
        - if min. wage set **above equilibrium level** → **raise pay** of the low-paid
        - reduce **relative** poverty → **reduce gap** between high and low-income workers
        - reduce **absolute** poverty → if set above US$1.90/enabling low wage workers greater **access to basic necessities**
    - CA: may not reduce poverty
        - may not have impact if set **below equilibrium level**
        - **higher COP** → higher unE
        - will not help the poor who are **unable to work**
        - some receiving it may not be in poor households (i.e. get support from family members)
    - **a national minimum wage diagram which shows the effect on pay and employment will be rewarded (but not expected)**

- define macroeconomics (0455/21 *June 2020*)
    - the study of the **whole economy** [2]

- analyse two possible conflicts between government aims (0455/23 *June 2019*)
    - keywords: government aims → macroeconomic aims (macroec. → decisions of govt.)
    - lower unE vs price stability → lower unE means higher incomes, increasing AD → dd-pull inflation
    - economic growth vs price stability → production increases faster than the increase in resources (i.e. AD increases at FE) → increase in AD leads to higher prices rather than increased output and employment

- discuss whether or not small firms are likely to survive in the long run (0455/22 *November 2018*)
    - keyword: long run, small firms → see above notes (topic 3)
    - A: might survive in the LR
        - provide **personal services** → greater contact with customers, more **responsive to changes** in consumer demand
        - more **flexible** → fewer people to consult (people → as in management, stakeholders, etc.)
        - producing products in low demand → **not facing competition** from larger firms
        - may **cooperate with other small firms** → able to take advantage of **EOS** (e.g. buying in bulk)
        - receive **govt. subsidies** → lower COP
    - CA: may not survive in the LR
        - may be driven out of business by **larger firms** with lower COP
        - better known larger firms can take advantage of EOS + example of EOS
        - **govt. subsidies** may be **short term**
        - some small firms may cease to exist when **owners retire/die** e.g. sole traders
        - less capital/more difficulty in raising **capital** → difficult to purchase new/high quality equipment → **difficult to invest in R&D**

- what is the difference between the price of a product and the cost of a product? (0455/23 *November 2018*)
    - price is the amount a customer pays for a product/**how much the product is sold for**
    - cost is the **expenditure** involved in **producing a product** e.g. labour costs

- how a change in social attitudes would lead to greater participation by women in the labour force (0455/23 *June 2022*)
    - keywords: change in social attitudes → what change? → how it leads to greater participation by women
    - **acceptance that women are equal to men/acceptable for women to work** and that their role is not only as a homemaker/childcare is not just female role
    - **more acceptable for women to be educated**/more encouragement for women to study → **increases their job opportunities**
    - women feel **more comfortable/ accepted** at work → more jobs will be open to women

- analyse the causes of market failure (0455/23 *June 2022*)
    - keywords: market failure → public goods not produced, merit goods under-consumed, demerit goods over-consumed
    - definition of market failure: when market forces cause an **inefficient allocation of resources**
    - **demerit goods** + example, imperfect information where consumers may not know about the actual costs
        - external costs are costs to the third party which are not considered by consumers and producers → overproduced or **over-consumed**
    - **merit goods** + example, consumers may not know about actual benefits
        - external benefits are benefits to the third party which are not considered by consumers and producers → underproduced or **under-consumed**
    - **public goods** are **non-rivalrous** and **non-excludable**, and has the free rider problem, where people want to consume but don't want to pay for it so **no profit incentive for firms** → goods are underprovided/**not produced** by the market
    - abuse of monopoly power → when firms have no competitors they will push up prices or reduce quality
    - factor immobility where labour cannot move from one job to another or to take up a job somewhere else → leads to structural unemployment

- **SG O Level past year papers are the November 0455/23 IGCSE papers (free online :0)**

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10 Acknowledgements

- https://www.savemyexams.com/ economics IGCSE notes
- http://alevelecons.weebly.com/qn-66.html ADAS diagrams
- https://www.populationpyramid.net/ population pyramid (of Japan)
- https://ibguides.com/economics/notes/price-controls/ min/max price diagrams
- past year papers: PPC, DDSS, COP diagrams

- let me know if there are any mistakes/clarifications

- the end -

topical summary (not extensive)

topic 1	factors of production	land (natural); labour (human); capital (man-made); entrepreneurship (**risk taker**)	- rent - wages - interest - profit
topic 2	key resource allocation questions	what to produce; for whom to produce; how to produce	price mechanism - price acts as **signalling** function to producers (higher demand, price increases, encourage higher production) - price acts as **rationing** function (goods and services rationed to those who are willing and able to pay the higher price) - price **incentivises producers** to respond to changes in market conditions (e.g. labour/capital-intensive production when wages/costs fall)
	market failure	underproduction of <u>public goods</u>; underconsumption of <u>merit goods</u>; overconsumption of <u>demerit goods</u>	- direct provision by government, privatisation/nationalisation - subsidies/indirect taxation, maximum/minimum prices, regulation - effectiveness of government intervention
topic 3	money	functions	- medium of exchange, store of value, measure of value, deferred payment
	banking	central bank; commercial bank	- issue notes, lender of last resort, regulator and supervisor, banker to government, implements monetary policy - accepts deposits, making advances, credit creation, other functions/services
	division of labour/ specialisation	advantages; disadvantages	- higher productivity (more bargaining power, lower AC, higher SRAS) - alienated (unable to progress), overspecialisation, occupational immobility
	trade unions		
	firms	primary sector; secondary sector; tertiary sector; public sector; private sector; large firms; small firms	- producing, mining, extraction of natural resources - manufacturing - provide services - operate under government control - privately owned (<u>aims: growth, profit maximisation, survival, social welfare</u>) - enjoy EOS, may experience disEOS, more resources, etc. - may not enjoy EOS/experience disEOS, less resources, **quick to respond to changes**, etc.
	economies/ diseconomies of scale	EOS (lower AC); disEOS (higher AC)	- technical, administrative, marketing, purchasing, financial, risk bearing, (external) development - coordination/management, financial, (external) congestion/pollution

topic 4	macroeconomic aims	economic growth; full employment; stable prices; balance of payments stability; redistribution of income; **possible conflicts**	- full employment vs stable prices, economic growth vs balance of payments stability, full employment vs balance of payments stability
	budget	tax revenue; government spending	- indirect (GST, VAT), direct (income/corporate tax) - e.g. education, healthcare, etc.
	taxes	qualities of a good tax; impacts of taxation	- equity, non-distortionary, certainty, **convenience**, flexibility - on consumers, producers, government, economy
	fiscal policy	government spending; taxation	- may cause greater budget deficit - may reduce budget deficit/increase budget surplus
	monetary policy	money supply; interest rates; foreign exchange rates	- cost of borrowing - price of exports and imports (**use M-L**)
	supply-side policy	education and training; labour market reforms; lower direct taxes; improving incentives to work and invest; deregulation; privatisation	- raise labour productivity - reduce bargaining power of trade unions - higher disposable income - e.g. lower unemployment benefits

	employment	changes in the pattern of employment;
		
		unemployment
			- e.g. **higher proportion of women in labour force due to change in social attitudes**, decline of primary sector due to moving towards market economy, etc.
			- causes/types: cyclical, structural, frictional
			  - consequences on firms, individuals, economy
			  - policies to reduce unemployment: FP, SSP

	inflation and deflation	causes; consequences; policies to control inflation and deflation	- demand-pull/demand-side, cost-push/supply-side - on consumers, workers, savers, lenders, firms, economy - FP, MP, SSP

topic 5	living standards	measurement; differences in living standards	- real GDP per capita, **HDI** - advantages and disadvantages
	poverty	absolute/relative; causes; policies to reduce poverty	- promote economic growth, improved education, more generous state benefits, progressive taxation, national minimum wage
	population	birth rate; death rate; net migration; optimum population	- immigration and emigration
topic 6	international specialisation	superior resource allocation; cheaper production methods	

	globalisation	multinational companies;
		free trade;
		protection
			- costs and benefits to home and host countries
			- benefits for consumers, producers, economies
			- tariffs, import quotas, subsidies, embargoes
			  - reasons: <u>protect infant/declining/strategic industries, avoid dumping</u>
			  - effectiveness

	foreign exchange rates	floating/fixed;
		
		fluctuations in foreign exchange rate
			- appreciation/depreciation and revaluation/devaluation
			  - advantages and disadvantages
			- **changes in demand for exports and imports, changes in interest rates, speculation, entry/departure of MNCs**
			  - consequences on export and import <u>prices</u>, <u>spending</u> on export and imports (via PED)

	current account of balance of payments	structure;
		
		deficit and surplus;
		
		balance of payments stability
			- **trade in goods, trade in services, primary income, secondary income**
			- e.g. inflation, foreign exchange rate, productivity
			  - impacts on GDP, employment, inflation, foreign exchange rate
			  - e.g. FP, MP, SSP, etc.