overview

1. income + employment determination

- aggregate demand: total level of spending in an economy at each price level → C + I + G + (X-M)
  - wealth effect: assuming unchanged nominal income, ↑GPL = ↓ purchasing power
  - i.e. households are worse off → s → same income can fetch less g / s, discourages C = ↓RNI
  - interest rate effect: ↑GPL = ↑dd for $ to maintain SOL = ↑i/r
  - becomes more expensive to purchase on credit, hence decrease in interest senstive / big ticket items = overall ↓C, ↓RNI
  - international substitution effect: ↑GPL = domestic goods become more expensive relative to foreign substitutes, c.p. residents more likely to buy imports (↑M)
  - at same time, foreign demand for country's g / s falls (↓X)
  - overall: ↓ (X-M) = ↓AD + worsening BOP position (current account, balance of trade)

determinants of shift in AD

- change in expectations: income / profits, real wealth, GPL
- change in govt policies: fiscal (multiplier) or i/r (i/r effect)
- change in world economy: income level in other countries (foreign dd), GPL in foreign countries (X + M), foreign ER (X + M)

- aggregate expenditure: total planned expenditure on goods + services in economy

45 degree diagram

※ demonstrates the effect of changes to AD on national income + employment only (i.e. no GPL)

inflationary / deflationary gap

- aggregate supply: total supply of goods and services in any economy at each price level

actual growth

potential growth

standard of living

- material SOL: the amount of g + s consumed by the average person in the economy in a given time period
- non-material SOL: qualitative aspects of welfare: e.g.health, stress, security

multiplier effect

- MPC: proportion of extra income spent on consumption
- MPW: savings / taxes / imports
  - MPS: asian societies tend to have higher savings rates (cite examples here) vs. western credit culture
  - MPT: singapore has low taxes (20% household / 17% corporate) vs. welfare states with high taxes to finance public spending / transfer payments
  - MPM: singapore has high tendency to import: exports have high import content + no natural resources leads to reliance on imports for many basic necessities
- evaluation: depends on state of economy, i.e. sufficient excess capacity must be present for full effect to occur → if country is already producing at FE, increasing AD will only create inflationary pressures

step diagram

- at original income of Y0, planned AE (BY0) exceeds actual national output (AY0) i.e. firms draw upon inventories to meet excess demand, unplanned disinvestment of AB occurs
- incentive for firms to increase production by AB, national outcomes rises by BC to YA
- increase in RNI to YA = greater induced C by households (CD) — one man's spending is another's income
  - however, not entirely spent on consumer g/s → leaks out in the form of savings / taxes / imports
  - i.e. CD < AB, AE again exceeds national output: repeat process
- multiplier does not continue indefinitely: after each rise in RNI, additional induced C diminishes due to leakages
  - process stops when total W = initial increase in injection
  - i.e. planned AE = actual national output, eqm level of NI now increased to Y1

AD - AS diagram

- multiplier effect based on principle that one person's spending is another person's income → stimulates further spending
- i.e. initial increase in autonomous AD will lead to more than proportionate increase in eqm level of RNI
- when injection of G leads to rise in AD (AD1 → AD2), income generated further stimulated AD, leading process to be repeated over many rounds (AD2 → AD3) as income flows back into circular flow
- eventually stops b/c of presence of leakages:
  - increase in AD is smaller each time due to MPW factors
  - when cumulative incease in induced withdrawals = initial increase in autonomous AD, multiplier process stops (AD4)
  - ultimately: more than proportionate increase (Y4Y1 > AD2 - AD1)

2. aims and issues

macro goals → internal + external stability

1. strong + sustainable economic growth
2. low rates of unemployment
3. low + stable anticipated inflation rates
4. external stability: healthy BOP + exchange rate stability

i) economic growth

- actual growth: % annual increase in national output actually produced (SR concept: increased utilisation of present capacity)
- potential growth: the speed at which economy could grow, if it were to use all its resources (NIEG)

- GDP: value of all final goods + services produced within a given country during given period of time
- GNP: value of all final goods + services produced by domestic factors of production during given period

benefits of EG	costs of EG
- when EG outstrips population growth, it will lead to higher income per head - in turn leads to higher levels of consumption = higher material SOL as households can afford higher levels of consumption of g + s	- income inequality
- decrease in cyclical unemployment (see income adjustment process)	- environmental impact: finite resources, pollution + environmental degradation

benefits of EG	costs of EG
- increases in potential growth can avoid other macro-economic problems: • lower inflation rates: increases in productive capacity raises level of full employment + shifts AS curve outwards → dampens inflationary pressures • reduce unemployment rates: if PG in terms of SSP skills upgrading, will reduce structural unE • improve BOP: improve X price competitiveness through process innovation (↓ unit COP) or raise external demand through product innovation (higher quality g + s)	- overheating (i.e. dd pull inflation) → if not accompanied by PG - esp. if income not channeled to produtive investments but instead goes to risky ventures e.g. property / asset speculation
- income redistribution: higher incomes = higher income tax revenue • greater availability of funds for govt to channel towards transfer payments • smaller group of individuals requiring support → govt better able to target assistance	

causes of weak EG	consequences of weak EG
demand factors - decrease in AD (domestic policy or external shock) • low rate of investment especially in developing nations → capital deepening does not take place because low income = low savings rate (need to spend large % of income on basic necessities) • low savings rate = decrease supply loanable funds = high i/r discourages I + C (↑ cost of borrowing)	- unemployment + lost output
- external shocks e.g. global recessions • trade partners reduce demand for X • unplanned spare stocks = excess capacity, producers lower output in next production cycle • labour as FOP (derived dd): ↓Xdd = ↑ cycl. unE • loss of income leads to reduction in disposable income + purchasing power (dissavings) = ↓C, ↓AD	- lower savings + consumption

causes of weak EG	consequences of weak EG
- political situation: uncertainties, high risks of expropriation lead to low investor confidence (↓FDI) + lack of rule of law / political stability = poor business climate	- lower I + LT growth: impedes capital accumulation / evolution of economy from primary to secondary and tertiary sectors + removes opportunity for tech transfer
supply factors - lack of national resources: weak resource base as obstacle to growth (counter: HK, SG, japan) - lack of labour / human capital → quality, quantity, mobility • resolved through skills upgrading + education: but both are LR strategies + significant strain on govt resources (opp cost?) - lack of tech advancement through R&D: unable to reap benefits of lower unit COP + investment opportunities in emerging markets (e.g. 1990s digital industry)	

ii) inflation

- refers to sustained rise in the GPL of g + s throughout the economy over a sustained period of time
- anticipated inflation: able to accurately predict
  - workers ask for increased money wages
  - households demand increased nominal i/r
- unanticipated inflation: volatile, significantly above / below expectations → impedes policy-making

causes of inflation

A. demand pull inflation

- results from persistent rise in AD: firms respond by raising prices
- based on state of economy i.e. amount of spare capacity (resolved through potential growth → outward shift of AS curve)

❊ income adjustment process

- increased AD creates shortages in economy: current spending > current production
- unplanned rundown of inventories, drawn upon by firms to meet rise in sales → employ more workers
- at lower levels of RNI: spare capacity = able to easily expand output
  - at intermediate region of AD curve, greater competition + scarcity of FOP leads to higher unit COP
  - results in single raise in GPL in order to keep production profitable (rises until disequilibrium is eliminated at P1)
- **for inflation to occur**: rise in GPL persists over time as economy approaches FE
- ongoing competition for scarce resources = firms bid up factor prices, leading to build-up of inflationary pressures

B. cost push inflation

- driven by supply side factors + rise in COP
- forms of cost-push inflation: wage-push, rise in costs of raw materials, imported inflation, profit-push (depends on PED of good, monopoly power used), tax-push

⁕ inflation process

- increased COP (e.g. factor inputs) lead to rise in AS → firms will take opportunity to raise prices
- as GPL rises, spending for g + s decreases due to wealth, i/r, and international substitution effect (movt along the AD curve)
- GPL rises until shortage is elimiated at the higher equilibrium price / lower output Y1
  - if prices expected to rise further, workers will ask for higher wages, further increasing COP → i.e. wage price spiral
  - AS2 to AS3: persistent rise in GPL

wage-price spiral: vicious cycle where inflation further escalates due to workers demanding higher nominal wages in anticipation of higher inflation in future

benefits of low inflation	costs of high inflation	policies
promotes AG • consumers expect prices to rise slowly = have incentive to buy now (↑C = ↑AD) • consequentially: firms expect sales to rise = ↑I, ↑AD	- fall in matl SOL due to decreased purchasing power ($ worth less in real terms)	contractionary dd-side policies - fiscal: ↓G + ↑T - monetary: ↓money supply, ↑i/r - reduction in AD will lower GPL, dampen inflationary pressures
promotes PG • household certain about future value of savings → have more incentive to save = ↑ supply loanable funds • firms also more secure in the projected rate of return on investment: can calculate w certainty the profitability of investment based on MEI curve	- hinders growth by creating uncertainty, leading to: • ↓I: greater risk, higher costs, lower profitability of I (fixed returns will be worth less) • high inflation = high interest rates = ↓C • increased speculative activity: can lead to asset bubble / banking crisis, govt will have to expend reserves to ward off speculative attacks • loss in savings (drop in real value) = ↓loanable funds, ↑i/r, ↓I	supply-side policies - R&D to raise productivity of inputs - increased productive capacity = potential growth - AS curve shifts outwards, creates spare capacity in economy + dampens inflationary pressure - rise in LRAS: NIEG

benefits of low inflation	costs of high inflation	policies
- maintains intl competitiveness (price of X) + BOP	deterioration of BOP - loss of X competitiveness because of higher GPL - intl substitution effect: M becomes relatively cheaper → ↓(X-M), ↓AD - ↓qty dd for currency = depreciation	prices + income policy - ensure wage increment is in line with productivity increases - i.e. avoid wage-price spiral - reduce power of monopoly to raise prices (profit-push) + trade unions to push up wages (wage-push) - more applicable to cost-push inflation
- economic agents can take actions to protect themselves	- misallocation of resources: distortion of price mechanism, unable to carry out its signalling function	
	arbitrary redistribution of income - fixed vs variable incomes - debtors vs creditors - finanical vs physical assets (nominal adjustments)	
- general target: 2% inflation - MAS recently shifted to 0%	- shoe leather costs: opp costs incurred counteracting impact of inflation - menu costs: costs to firm from changing prices - wage price spiral: breakdown in function of money if taken to extremes	exchange rate policy - appreciate currency, resultant ↓(X-M) will curtail dd-pull inflation - relevant to SG: trade is largest component of AD - will worsen cost-push inflation (imported inflation)

iii) employment

- full employment: level of employment that results from efficient use of labour force after allowance made for natural rate of unemployment (NAIRU)
  - imperfect info, dynamic changes, and structural conditions of economy (i.e. frictional + structural)

type	policy	limitations

- structural: unemployment across industries resulting from changes in the pattern of dd / ss in the economy
  • leads to occupational immobility of labour
  • mismatch between skills + vacancies in the market
	1. supply side policies
	- encourage workers to adopt a more willing attitude towards retraining
	- trade unions: encourage workers to accept some reduction in wages if necessary (tripartite wage council)
	- govt funded training schemes to equip workers w skills to move into emerging sectors
	
	2. demand side policies
	- govt establishes / provides grants to firms to set up in areas of severe structural unE
		- costly
		- time lag
		- resistance to learning

type	policy	limitations
- frictional: labour immobility resulting from time lag before people find suitable jobs • resulting from imperfect information or finding prevailing wage rate too low	- provision of better job information by job centres, private employment agencies etc - reduction in level of unemployment benefits in order to incentivise the unemployed to accept viable offers	- costly: strain on govt budget, risks of deficit - time lag
- cyclical / demand deficient unemployment: caused by a reduction in AD in turn fall in demand for labour • compounded by fact that wages are sticky downwards (keynes) i.e. will not accept pay cuts	expansionary policies 1. fiscal: ↑G, ↓T 2. monetary: ↑ money supply, ↓ i/r 3. ER policy (with dd-side effects): depreciate domestic currency to boost X-competitiveness (ML condition) = ↑AD	- costly - time lag - interest elasticity of MEI (vs. animal spirits) - imported inflation

- frictional unE not necessarily indicative of inefficiency: allows better matching of skills w job requirements → enhance employee productivity + earnings
- structural unE inevitable: changes in CA over time due to evolving international conditions

consequences of unemployment
- output loss to economy → in LT can lead to hysteresis (deskilled + demotivated)
- -ve impact on govt budget: decreased tax revenue + higher welfare spending
- rise in social problems, especially if uneven patterns of distribution

external stability
- avoidance of persistent + large BOP deficits / surpluses + excessive fluctuations in exchange rates

- BOP: defined as the record of a country's international transactions → main components are the current acct, capital acct, official financing acct
- problematic if deficit is chronic + persistent in nature → i.e. not necessarily undesirable, it if is due to:
  - capital account deficit bc of possibility of future returns from outward FDI: presently not visible
  - current account deficit bc of import of capital equipment + raw materials required for implementation of growth + industrialisation strategies

- persistent deficit means that economy is drawing on forex reserves / borrowing from abroad to pay for ever-increasing transactions
  - resultant excess demand can lead to depreciation of domestic currency → erosion of external purchasing power in future years
  - incurring external debts through borrowing from abroad may perpetuate deficit problem, especially if these are short-term loans spent on non-performing areas (e.g. eurozone crisis, AFC)

policy	limitations
short term deficit - central bank buys up surplus of home currency	- causes run down of previously accumulated reserves (gold / forex) - erodes states' ability to ward off speculative attacks

policy	limitations
- increasing rate of interest to encourage short term capital inflow	- not applicable to SG: does not pursue i/r policy - financial hub, open to capital flows: small differences between domestic + foreign i/r will lead to large + rapid movt of funds - i.e. short term policy: once rates are revised back upwards, deficit will return - hot money inflows will be offset by higher cost of borrowing, ↓AD → tradeoff in macro goals
long term deficit — expenditure switching i.e. reduce level of imports by increasing price of foreign goods relative to domestic substitutes - protectionism • import controls have direct expenditure switching effect • quotas discourage expenditure by reducing qty • tariffs / duties discourage by raising relative price - devaluation • price of exports in terms of foreign currency falls • price of imports in terms of home currency rises • extent of change in Qdx and Qdm depends on elasticities → assuming ML condition holds, ↑(X-M) • improvement in current account, c.p. BOP - other policy measures • provide subsidies, tax-exemptions to exporting industries: help modernise + increase efficiency • training + R&D to develop productivity • income + price policy: i.e. limiting price / wage increases (c/f: inflation) → maintain GPL + X price competitiveness	- distortion of resource allocation: induces inefficiency, reduces citizen welfare - import controls may result in retaliation + trade war: decline in opportunities for export-led growth - in short run: BOP worsens due to j-curve effect - devaluation may lead to cost-push inflation in countries where goods have high import content - trade partners may retaliate: devaluation, erecting trade barriers
expenditure reducing - contractionary FP - contractionary MP *** note:** ML condition: whereby PEDx + PEDm > 1 even if individually they are < 1, the value of (X-M) will rise + current account of BOP improves when currency depreciates	- induces fall in import dd but conflicts with other macro goals - most appropriate when inflation is root cause of deficit: has dampening effect on GPL - however: prices usually rigid downwards → will result in fall in output + RNI without effect on GPL - reduction in level of AD means that it should not be implemented in recession (keynes POV) - further decrease in RNI + increase in cycl. unE - effectiveness depends on income elasticity of imports (i.e. normal gd / luxuries) - where dd is inelastic, must have v big drop in income to have an effect → severe tradeoffs - deflationary policy may not necessarily improve balance of trade if external dd is universally weak - even if price lowered, trading partners also in recession

3. govt policy

i) expansionary FP

1. lowering taxes: affects C + I
   - household consumption given by C = a + bY → decreased taxes = higher disposable income = greater purchasing power = ↑C
   - business tax rebates will increase profits → shift in MEI curve, expected rate of return on investments increases = more investments considered profitable = ↑I

⁕ evaluation
- if MPC is low, reducing taxes will have minimal effect on consumption → consumers will save the extra income
- consumer / investor confidence: consumers do not base consumption only on current but also expected future income (i.e. tax cuts if seen as temporary will not stimulate C)
- private investors → keynesian animal spirits i.e. dependent on "business expectations" / irrational vibes

2. govt expenditure: affects G
- inject increased fiscal spending into a weak economy: aims to trigger off stream of induced spending via multiplier effect to jump-start economy
- i.e. pump-priming

⁕ evaluation
- to fund increased spending, govt will either have to:
  - increase taxes: but reduces disposable income + profits of consumers & firms → ↓C, I = ↓AD
  - borrow from financial institutions i.e. crowding out effect due to public sector borrowing → raises i/r, ↓I
  - borrow from foreign states:
  - print money: creates inflation
- i.e. to be effective, rise in AD must outweigh ↓C, I

- crowding out not applicable to SG: govt draws extra funds from reserves, not public borrowing
- impact of fiscal stimulus in SG is limited due to small domestic market + small % of domC + I in AD → mainly dominated by external trade

⁕ **contractionary FP:** response to higher taxes
- income effect: afford less so work more to avoid drop in SOL
- substitution effect: discouraged from working bc opp cost of leisure (wages foregone) is now lower

ii) expansionary MP

i.e. manipulation of i/r, ER, money supply

1. lowering interest rates — C, I
- decreased cost of borrowing leads to higher consumption from households: spending on big ticket items
- cost of borrowing form firms reduced: raising expected rate of return, incentive to increase level of investment based on MEI theory
- domestic currency depreciates due to outflow of hot money: counteracts the effect on money supply

⁕ evaluation
- interest elasticity of money demand: if bulk of money in economy consists of speculative funds, large decrease in money supply required to decrease i/r

- interest elasticity of C & I: if C + I are interest-inelastic i.e. more dependent on confidence levels, bleak expectations may mean C + I do not increase despite low i/r
  - flipside: irrational exuberance despite high i/r in contractionary MP

- liquidity trap: if i/r is already at perceived lowest possible rate: increasing money supply will not decrease it any further, since investors expect to rise in future → would rather hold on to cash to exchange for bonds when it happens

2. exchange rate — (X-M), I, C

	effects of appreciation	effects of depreciation
benefits	- prices of imports lower when converted to S$ i.e. ↓imported inflation - can also dampen demand-pull inflation by ↓AD	- remedies BOP deficits (expenditure switching) - if country depreciates domestic ER: exports cheaper, imports more expensive → if ML condition holds - higher demand for important substitutes: ↑C
		- attracts FDI due to lower relative costs of operation - hot money inflows since people expect currency to appreciate = cumulative ↑I - note J curve effect in SR vs LR
limitations	- ↓X price competitiveness = ↓(X-M) = ↓AD - worsens balance of trade + BOT	- unstable ER may discourage long-term I
		- high import content of exports leads to ↑COP from imported inflation - ↑(X-M) may lead to demand-pull inflation

⁂ **SG prioritises ER policy**: small size + openness (mundell - fleming trilemma)
- size: dependent on external sector → total merchandise trade 4x GDP i.e. ER will directly affect most significant component
- price taker i.e. high import content means that changes in world price have direct impact on GPL → ER as tool to offset imported inflation
- open nature of economy: large + quick movts of capital will offset attempts to regulate money supply

⁂ <u>evaluation</u>
- conflicts with other macro goals
  - depreciation: positive effects on national income + employment vs. imported inflation
  - LR: poor mgmt of inflation will result in wage-price spiral causing SG to lose its X competitiveness (counter-productive) → i.e. must remain a once-off, short term policy
  - appreciation: dampens inflation vs. worsening BOP, higher unemployment, fall in RNI (matl SOL + AG)

- **time lags**: recognition, implementatio, impact
- **imperfect info**: limited economic data + constant changes in conditions of domestic / international economies compound problem (forex mkt volatile, in flux)
- **availability of reserves**: intervention to keep external value above / below market eqm is only possible if country has sufficient reserves
  - country with insufficient reserves leaves themselves vulnerable to speculative attack
  - e.g. country unable to support external value, speculators expect eventual depreciation and begin sell-off, exerting further downward pressure on ER (c/f: AFC)

iii) supply side policies

1. increasing capital stock (↑AS)

- attract FDI from abroad to develop new industries
- investment in capital: R&D (product + process innovation), purchase of capital e.g. machinery to raise fixed capital formation
  - reduces COP in short run, increases productive capacity of economy (↑PG)
  - e.g. grants for R&D: research innovation enterprise (RIE) 2020 plan → $19bn commitment

2. increase productivity of workforce

- quality of human capital increased through re-training, reduces structural unE
- e.g. CET 2020 masterplan, skills devt fund (SDF), skillsfuture 2015, workfare training support
- especially important for SG: CA in skilled workforce capable of operating in knowledge-based sectors (high value-add)

3. market oriented policies

product markets	**labour markets**
1. privatisation - transfer of state-owned assets from piblic sector to private sector - corporate owners have responsibility of restructuring enterprise - firm is subjected to competitive pressures: incentive to cut costs - effect: ↓unit COP, ↑SRAS - subjecting firm to market forces will make them produce what consumers want (i.e. AE) - allows price mechanism to take over allocative function - more rapid response to changes in demand / resources = ↑CW	1. reducing power of trade unions - unions push up wages: ↑ cost-push inflation - reducing ability to unilaterally raise wages encourages investment: COP can be monitored / projected more accurately - i.e. more certainty wrt rate of return on investment - fall in likelihood of work stoppages = ↑ business confidence, ↑FDI - ↑ capital investment = ↑ productive capacity, ↑PG **examples**: - national wage council + tripartite wage policy - harmonious relations, wages increase in line w productivity

2. pro-competition policies (similar concept)
- breaking up state-owned monopolies
- e.g. natural monopoly in utilities owned by PUB (singapore power) → national electricity market
- will be fully liberalised by 2018: expected to yield 5 - 15% cost savings
 	
examples
- tougher competition policy regime (via legislation) e.g. anti-trust measures, reduces discretionary power of large firms to raise prices
  • e.g. competition commission singapore (2004 competition act)
 	
- removing barriers to entry e.g. legal restrictions / patents on certain industries
- contestable markets idea: forces incumbents to be more efficient
 	
- promoting freer trade between nations via elimination / reduction of tariffs
- however: in LR there may be re-concentration of market as unproductive firms leave or foreign firms dominate
	2. income policies
	- wage setting: unit labour cost should not be higher than labour productivity
	- flexible labour market able to accept wage recommendations
	  • policies implemented during recession (1985, 2001, 2003)
	  • voluntary wage restrictions for civil servants
	  • reduction in employers CPF contribution to 20%
	
	- policies to prevent unemployment: jobs credit scheme
	- cash grant to businesses helps defray labour costs + encourage firms to retain workers
	
	3. cuts in social welfare
	- overly comprehensive employment compensation may reduce incentive to rejoin workforce
	- cutting programs as stimulus to find work
	
	- however: appropriate level of unemployment benefits necessary
	- social safety net: help economically disadvtged + build social cohesion

product markets	labour markets
3. promotion of enterprise - extension of loans / provision of technical expertise - start-ups inject competition + innovation into industry: bring in new methods of production **examples** - stat boards: IE, spring singapore - tax incentives + grants for productivity improvement expenses → PIC scheme - loans at attractive i/r → local enterprise financing scheme (LEFS)	4. tax reform - lower income tax attracts foreign talent + prevent brain drain - encourages work + saving (↑ disposable income) - lower corp tax encourages I: increased after-tax profits - especially necessary in context of globalisation: human capital + investment shift away from countries w high tax rates - effect: ↑ productive capacity, ↑PG

4. international trade

- exchange of goods + services between countries, involving use of different currencies, crossing international borders
- self-sufficiency seldom possible due to uneven distribution of resources amongst countries (diff factor endowments)
  - different goods requiring different proportions of factor inputs in their production
  - economic resources unevenly distributed throughtout world
  - international mobility of resources is limited (esp. land)
- leads to the development of different comparative advantages (e.g. japan: industrially advanced vs. australia: land-intensive)

comparative advantage

- rationale behind intl trade: trade + specialisation
- specialise in producing the g + s that one is best suited to producing → using these to trade for other gds
- ricardo's CA: there is a basis for beneficial trade as long as countries incur different COP
  - i.e. countries gain from trade if there are differences in the relative opportunity costs of producing specific goods between them

2 country 2 good model

assumptions	limitations
no transport costs nor trade restrictions, so full benefits of specialisation + trade can be felt	1. transport costs may be very high in intl trade, making it cheaper to produce goods domestically than import them, or to buy from a country that is not the lowest cost producer but in geographical proximity 2. protectionism: free trade does not always exist, countries may want to protect certain strategic industries even if they do not have CA in them
factor immobility between different countries i.e. each country can only use her own resources globalisation: free flow of capital, technology, labour	countries frequently lose comparative advtg over time as developing nations catch up (e.g. us vs japan in manufacturing)
constant opportunity costs (i.e. constant returns to scale) → straight line PPC also implies perfect factor mobility within each country i.e. resources can easily be transferred from production of one good to another, equally suitable for production of all goods	law of increasing opp costs: countries will lose their CA if they over-specialise, as resources in economy are not perfectly homogenous i.e not equally suitable for all goods
note: will only result in greater consumption of g + s for trading countries only if the terms of trade negotiated are acceptable i.e. lie between the opp costs of production between the two countries	product differentiation countries produce similar goods but differentiate them enough such that countries producing similar goods will still import those goods i.e. intra industry trade → specialty Thai rice

sources of CA

- intl differences in factor endowment
- differences in levels of technology
- dynamic comparative advantage: changing patterns in CA, e.g. labour training, education policies

advantages of free trade

1. micro

- higher world output + consumption, gain favourable ToT for all
  - trade + specialisation leads to higher qty of g + s consumed (no longer limited by ability to produce at S0 → both countries able to consume at point outside the PPC)

- higher consumer welfare
- lower COP = higher prodits, lower prices (transfer cost savings from int + ext EoS)
- benefits to consumers: higher quality products + greater consumer choice
- increased competition from firms promotes X-effiency, prevents monopolies

2. macro
- enlarging market: overcoming domestic size constraints (esp. small + open economies)
- dyanmic gains i.e. technology transfers
- lowers inflationary pressure (wrt imported inflation, lower GPL through competition)
- improves BOP, stimulated AD via ↑(X-M) + multiplier effect
- promotes beneficial political links

disadvantages of trade

1. micro
- unfair competition → dumping
  - dumping refers to the sale of goods in overseas markets below the MC of production in that country
  - objective: drive out rival producers in the importing country: monopolise market or clear excess stock
  - unfair advantage if producers subsidised by govt → unfair competition (e.g. EU + sugar, US + steel)
- imports of harmful goods: demerit goods e.g. alcohol, cigarettes etc → transnational crime, golden triangle

2. macro
- overreliance: susceptibility to external shocks (e.g. 2008 US subprime mortgage)
- structural unemployment + crowding out of domestic industry due to greater competition (labour, industry)

arguments for protectionism	evaluation
improve BOP: i.e. expenditure-switching policy - restriction of imports to curb excessive import expenditure over export revenue	- protectionism is a beggar-thy-neighbour policy: • trade partners' incomes reduced, will import less (if dd in income elastic) • export revenue falls • BOP worsens, ↓AD: counterproductive - at best a stopgap measure: will cause retaliation from trade partners in form of protectionism / econ warfare - should opt for supply side policies instead to strengthen CA
reduce cyclical unemployment - importing foreign goods may mean creating jobs for foreign markets that would otherwise go to domestic labour - i.e. "exporting jobs" - protectionism diverts demand from foreign to domestically produced goods → protecting employment in those industries	- if it is the result of a recession, domestic recovery may eventually be delayed since it can no longer be triggered by multiplier effects from exports
reduce structural employment - allow declining industries to decline slowly rather than allowing sudden structural unE - i.e. provide buffer time for workers to be retrained	- may hinder restructuring of economy by preventing it from develping new sectors - closed nature of economy obstructs benefits from technology transfers

arguments for protectionism	evaluation
protection of infant industries - have potential comparative advtg, but in nascent stages require time to develop + read EoS - require protection from foreign firms until they have sufficient heft to compete globally	- difficult to determine which industries have hat potential CA - difficult to determine when to withdraw protection: leads to LR structural weaknesses - may breed inefficiency + complacency: artificially boosts demand
protection against dumping - foreign firms will undercut local producers at price below that of the home market / below cost - destory local competition: foreign firm corners market share and can then charge higher prices	- domestic producers may falsely accuse foreign firms of 'dumping' when they cannot match lower prices - may actually be due to local firms being X-inefficient
improve TOT - restrict imports, so foreign firms lower prices, country gains from higher TOT	- not applicable to SG: country can only dictate world prices if it has monopsony power (i.e. huge domestic mkt + intl clout) - vs. price-taker → minimal impact

arguments against protectionism

- goes against law of CA: loss of CA should drive country to develop new areas, not resort to protectionism
- countries forgoes gains from trade coming from purchasing more efficiently produced foreign goods → autarky is productively + allocatively inefficient
- perpetuates domestic inefficiency + cronyism
- consumers ultimately suffer from having to pay higher prices + narrow selection of goods + lower product quality

tariff diagram

- in absence of intl trade, domestic price set at P
- assuming foreign car producers willing to supply all cards demanded at world price (Pw), supply curve of imported cars in perfectly price elastic
- imposition of tariff to reduce imports from Q1 - Q4 to Q2 - Q3 → leads to deadweight loss

economic impacts

1. consumption effect
   - lower consumption + pay higher prices for new qty → reduction in consumer surplus, not AE
2. production effect
   - increased production + increased revenue (↑qty x ↑price)
3. govt revenue effect
   - receives tax revenue i.e. the higher amount the consumers are now paying

- overall effect contigent on price elasticity of imports + whether foreign suppliers choose to absorb part or all of the tariff
- effects of trade policy overlooked:
  - tariff cuts volume of M to economy
  - improves balance of trade: leads to higher appreciation of domestic currency than it would have otherwise (lower supply of currency in forex mkt)
  - appreciation makes exports more expensive abroad: in LR ↓X, ↓AD — unintended consequences!

other forms of protectionism

- non-tariff barriers (e.g. import quotas → more direct + restrictive)
- export subsidies
- forex controls: intl trade carried out in terms of foreign currencies, so the control over purchase of forex will in turn limit the amt + type of imports
- embargoes: social (e.g. demerit gds) or political reasons
- international cartels (e.g. OPEC vs. US fracking industry): fix price + output policy to price out competition
- "new protectionism" i.e. disguised restrictions → french skis + japanese snow

singapore's comparative advantages

1. strategic location: natural CA in transportation, maritime, entrepot trade
2. high GDP/cap: capital intensive production e.g. chemical processing, electronics production etc
3. skilled labour: value-added production (e.g. knowledge sectors, pharmaceutical research etc)
4. influenced by trends in globalisation
   - diversification of eocnomy (clean energy, biotech)
   - exports in services (due to loss of CA in manufacturing to china) → capitalise on global trend of outsourcing

pattern of trade

- composition of trade i.e. which g + s are being traded, includes inter-industry + intra-industry trade
- direction of trade + trading partners

determinants of trade:

1. inter-industry
   - diff factor endowments / sources of comparative advtg
   - demand-side factors: t&p, population growth, income levels
   - natural / artificial barriers, transport costs, market imperfections
2. intra-industry
   - demand factors: preferences for different qualities + varieties
   - exploit economies of scale in a particular range of product: countries specialise in producing a differentiated good

5. globalisation

- economic interdependence of countries worldwide through increasing volume + variety of cross-border trasnactions
- largely in g + s, free flows of internal capital, spread of technology, labour migration
- associated concepts: global supply chain (fragmentation of pdtn process), offshoring + outsourcing

effects of globalisation

- international trade flow: greater connectedness through preferential trading agreements
- FTAs: eliminate trade barriers amongst themselves, maintain individual barriers against other countries
  - other objectives: e.g. AFTA

    - create competitive production base, expand intra-ASEAN trade to allow for greater specialisation + reap int + ext EoS
    - attract more FDI: emergence of single market (ASEAN economic community)
- customs unions: adopt common trade barriers → i.e. differ in extent of integration

- FTAs: will lead to change in trade patterns
    - trade liberalisation & expansion: greater intra-union trade
    - trade creation: when economic integration leads to a shift in trade from higher cost producer to ower cost member country
    - trade diversion: shift in trade from lower cost producer to higher cost member
    - welfare reducing: pdtn directed away from pattern of comparative advtg

❊ evaluation → i.e. relative strengths of TC vs TD
- depends on how closely FTA prices approach the low-cost world price (closer = better)
- extent of initial tariff rate (higher = better)
- price elasticity of supply + demand in country A (more elastic = better)
- number of participating countries (more = better: minimises opportunities for TD)

FDI benefits (recipient)	FDI costs (recipient)
short run - improved BOP position (capital acct, offset BOP deficit) - FDI supplements insufficient domestic S + I: raises fixed capital formation - creates job opportunites + adds to overall dd for labour (i.e. rise in wages across the board) - increase in corporate tax revenue	- stifles homegrown industry because of foreign MNCs (int EoS, able to undercut prices, cannot compete) - i.e. local competition driven out → firm gains monopoly power - rapid transfers of funds during crisis leads to difficulties with stabilisation: m'sia implementing capital controls during AFC
long run - greater capital accumulation + technical / managerial expertise → increased productive capacity - i.e. potential growth - if investment in export-oriented industry: improved BOT, BOP c.p. + through generation of forex earnings required to service debts etc	micro - dual economy leads to unequal distribution of wealth - generation of negative externalities: environmental degradation due to poor regulation + enforcement that attracted foreign firms in first place
	macro - crowding out effect leads to ↓ domestic I - dutch disease: i.e. other aspects of economy negatively impacted by disporportionate strength in single industry - instability in ER causes difficulties for planning

FDI benefits (source)	FDI costs (source)
- exports of machinery / capital goods - other industries will see rise in demand for X→ recipient's EG = increased pper - reverses negative impact of FDI outflows in SR	- worsening BOP + higher unemployment in the SR - displacement of trade inf plants abroad supply directly to source country

FDI benefits (source)	FDI costs (source)
- in LR: generates steady flow of income (interest dividends) back to source country	- outsourcing / offshoring leads to cyclical + structural unE - loss of tax revenue from firms
- outward investment allows firm to remain competitive: supports continued survival + employment at home	- hence: implementation of performance requiremnets / local content policies required by recipients (ensure net positive impact) - banned from entering key strategic industries

mobility of labour benefits (R)	mobility of labour costs (R)
- lower wages benefits producers (lower COP) - if skilled, improved quality + qty of labour: brain gain, positive externalities due to skills transfer - decrease in negative externalities: less tendency towards crime + social agitation etc	- widening income gap: non-equitable distribution of gains - i.e. unskilled competition vs. higher wages for natives with complementary jobs' - note that educated have kept jobs: i.e. need for retraining policies etc
- more FOP = greater productive capacity → PG, NIEG	- drain on govt resouces: higher unemployment leads to greater social maintenance costs - external costs: overcrowding - hence: govt needs to establish limits on labour flows: work permit quotas etc.

mobility of labour benefits (S)	mobility of labour costs (S)
- increased remittances contribute to GNP: poverty reducation + raise in material standard of living - source of capital: generates funds for I (AG + PG) - improves BOP position: unilateral transfers in the current account	- loss of X competitiveness due to appreciation of currency from greater remittance flows - brain drain is loss in potential growth: loss of human resources

❊ benefits to world economy

- greater efficiency: labour flows from uses of lower productivity + wages to higher productivity
- increase in world output: outflow of labour from lower to higher productivity country results in smaller output loss than the attendant output gain
  - wage differentials attract workers, reflect levels of productivity (e.g. movt within EU)
  - labour also tends to move where job opportunities are abundant (i.e. underutilised vs. productive)

- LR: equalisation of wages between countries
  - workers responding to wage differentials: supply + demand analysis (shortage / surplus affects rates)
  - assumes labour homogenous + mobile, markets working freely + perfectly — not true: wage suppression!

❊ skilled labour movement

- shortage in home country leads to large opp cost (+ve exty from increasing technology levels)
- TTET country subsidises education → i.e. invests in their accumulation of human capital, constitutes loss of scarce capital on which social rate of return was expected

globalisation eval

- international economies able to modernise + enjoy benefits of globalisation of condition that govts are able to improve education system, provide better infrastructure, investment incentives
- questions of govt failure: will only provide additional wealth if govt can allocate gains w discretion
  - e.g. mexico did not prosper as much from NAFTA: corruption, crumbling infrastructure, lack of credit, small tax base
  - i.e. extent to which globalisation beneficial is contingent on country's ability to capitalise on benefits / mitigate costs

- necessity of regulatory institutions to secure greater stability in system → globalisation can facilitate organised transnational crime (flows of labour + capital)
- non-economic objectives: environmental protection, strong ethical commitment / defense of fairness

addenda

i) singapore & globalisation

why does singapore pursue FTAs

- acceleration of FTAs as a response to the stagnation of multilateral + regional trade liberation agendas
  - support its entrepot / export platform: access to key international markets
  - capitalise on emerging markets, diversify partnerships
- enhance X-competitiveness vis-a-vis other nations
- reduce imported inflation (lower prices due to removal of tariffs)
- preferential access to markets: easing investment rules (↑I = ↑AD)

microeconomic benefits	**macroeconomic benefits**
- EoS from larger scale of pdtn - overseas mkts allows SG to overcome constraints of small domestic market - EoS from specialisation → ↓AC + enhanced comparative advtg in production - on global level: improved allocative efficiency in resource allocation	- larger markets = ↑AD = ↑AG, employment - exposure to larger export markets internationally, ↑X dd = ↑X revenue - singapore context: small + open economy with high mpm: X revenue needs to be high to achieve favourable BOP position
- healthy competition: ↓prices + ↑ variety / quality of products (non-price differentiation) - improved consumer choice + welfare - competition drives process innovation: holds down costs + expands levels of output	- dynamic gains from economic integration - removal of tariffs leads to higher rate of return when exporting through SG + removal of barriers to capital flow - ↑FDI =↑ productive capacity, ↑ potential growth
case study: AFTA + AIA 1. enhance asean's position as competitive production base 2. encourage inflows of FDI 3. expansion of intra-asean trade (EoS)	- ease inflationary pressures - entry of low cost producers exerts downward pressure on prices (reduce imported inflation) - + ↑PG above helps create NIEG (reduce dd-pull inflation)

costs to SG

- increased susceptibility to external shocks due interconnected nature of economy
  - imbalances in mutually dependent system (e.g. trade, financial links) can cause serious disruptions
  - e.g. 2008-9 global financial crisis: SG's high reliance on exports means impact is magnified → large decrease in external dd triggered recession, unemployment

- rising structural unemployment due to strong competition from emerging economies
  - SG has to shift towards producing high-value-added goods because of erosion of manufacturing CA from regional competitors
  - those who lack skills to move from sunset industries into jobs created in emerging sectors will become unemployed

- globalisation exacerbates income inequality
  - those at the top can differentiate themselves w skills + knowledge that command a premium
  - vs. those at the bottom having to compete with cheap labour: depresses wages, results in widening income disparity
  - govt responses: workfare scheme, skills upgrading etc.

future challenges to SG
- advances in information systems, communications etc have effectively shrunk economic distance
- reducing the demand for conventional roles e.g. overseas headquarters, hub + ancillary services (i.e. SG's specialty → positioning as 'regional gatekeeper' for SEA)
- open door trade + investment policies raises competition for investments + export markets
- duplication of roles by lower-cost regional rivals (e.g. maritime / port industry)

ii) trade-offs between objectives

1. compatible objectives
- EG + reduced unemployment (i.e. AD / AS model)
  - increase in AD due to injection of G or rise in C
  - to meet increase in demand, companies will undergo unforseen rundown of stocks + inventories
  - to compensate, will increase production level in the next cycle: require more factors of production
  - if there is spare capacity in economy, more workers will be hired because labour is a derived demand

- price stability + external stability
  - lower domestic inflation = ↑X price competitiveness, ↓M consumption
  - improvement in balance of trade, c.p. BOP improves

2. conflicting objectives

attainment of	may conflict with
economic growth	- inflation - pressure on exchange rate - BOP deficits
price stability	- philips curve (i.e. employment) - lower economic growth (suppression of AD)
low unemployment	- higher prices through demand / cost pressures - current account deficit
external stability	inflationary pressures (low-valued currency)
efficiency	equity