Circular Flow of Income

Insert Diagrams

Withdrawals / Leakages

- M: Import expenditure
- S: Savings
- T: Taxes
- $Y = C_d + M + S + T$ *or* $Y = C_d + W$

Injections

- I: Capital goods
- G: Government goods
- X: Exports
- $Y = C_d + I + G + X$ *or* $Y = C_d + J$

Equilibrium

- No tendency for the level of national income to change
    - Planned J = planned W

Income-Expenditure Model

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

K Process

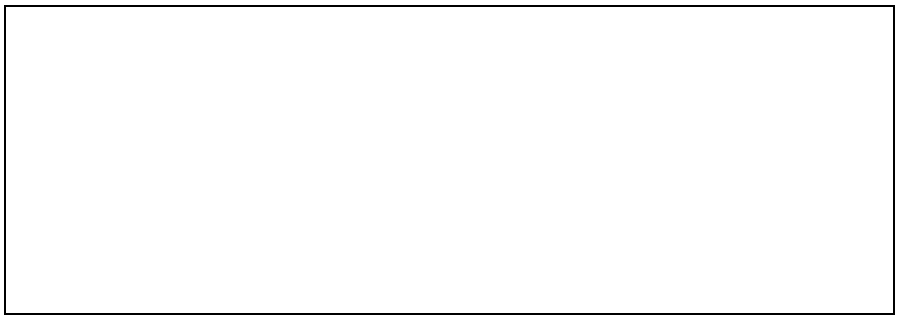
- Firms see fall in unplanned inventories
- Increase production / unplanned investment
- Increase in household income (derived demand for labour as FOP increases)
- Increase in induced C
- Further increase in demand for g&s
- As one person's spending is another person's income, process will continue until total injections = total withdrawals

Equilibrium

- No tendency for economy to increase / decrease output
    - Output = AE
    - No shortages / surpluses
    - No change in unplanned inventories
- Y is determined when AE cuts the 45° line at Y (output) = AE

1. Along AE
    - At Y_2, output < AE → shortage
        - Firms see decrease in unplanned inventories
        - Increase production / unplanned investment
        - Increase in household income (derived demand for labour as FOP increases)
        - Increase in induced C
        - Further increase in demand for g&s
        - Process will continue until total injections = total withdrawals
        - Tendency for the level of national income to rise, thus not at equilibrium
    - At Y_1, output > AE → surplus
        - Firms see increase in unplanned inventories
        - Decrease production / unplanned disinvestment
        - …

2. Movement of AE
    - G increase to boost economy
    - C increase due to:
        - Reduced i/r (COB decreased)
        - Reduced tax
        - Consumer confidence
        - Increased wealth (ie housing + shares)
            - Higher value of assets, greater WA to consume
            - Higher housing prices, consumers can use houses as collaterals to take up bank loans: Increased ability to borrow credit for consumption
    - At Y_1, $AE_2 > Y$ and $AE_3 < Y$
        - …



Extent of Increase

- State of economy: Availability of spare capacity
- Nature of economy: Composition of GDP
- Size of multiplier k
- Impact on LRAS: Sustainable growth

Size of National Income Multiplier

- National income multiplier, k: the ratio of the change in national income to a change in autonomous expenditure (number of times (real) gdp changes when AE changes)
- k = $\frac{1}{MPW}$ or $\frac{1}{MPS+MPT+MPM}$ or $\frac{1}{1-MPC_d}$
- Size of k depends on the value of MPC
    - Depends on the factors that affect the MPW: MPS, MPT and MPM
    - Larger the k, the larger the change in induced consumption for each round
- Multiplier effect will continue until withdrawals = injections
- National income increases by multiplier, k

- MPC: Marginal Propensity to Consume
- MPM: Trade policies of the country, openness of economy
    - Singapore (High): Lack of natural resources, little restrictions on imports
    - USA (Lower): Self-sufficient (factor endowment), protectionist policies to restrict impact of foreign competing imports
- MPS: Attitude towards thrift, social security system
    - Singapore (High): Asian values, compulsory savings (CPF), not a welfare state (prudent lifestyle, save for contingencies)
    - USA (Low): Less thrifty (spend in debt), reduced need to save (unemployment benefits)
- MPT: Taxation policy of country, extent of government benefits and transfer payments
    - Singapore (Low): Government lowered income taxes to attract foreign talents, skilled labour to attract FDI, not a welfare state (low government spending, low direct taxes)
    - USA (High): Welfare system

1. Consumption Function
    - C = a + by
    - a: Autonomous consumption, does not vary with national income
    - b: MPC, induced consumption
    - Determinants of Consumption (C)
        - Income: Higher income, higher W&A to purchase g&s
        - Disposable income

        - Interest rates: Cost of borrowing, incentive to save / opportunity cost of consumption, especially for big ticket items
        - Wealth: Financial assets, collaterals to obtain loans
        - Consumer confident / outlook: Recession – uncertainty, increase in precautionary savings
    - Autonomous:
        - Income taxes: Lower tax, higher disposable income

Macroeconomic Goals

Economic Growth

Increase in gross domestic product (GDP). In order to achieve sustained EG, actual and potential growth must occur

Growth as a priority

1. Increase material SOL as there is an increase in real GDP (=PIE)
    - Increase in **Production**: More g&s available for consumption
    - Increase in **Income**: More purchasing power
    - Increase in **Expenditure**: Household's ability to spend on more g&s. Ceteris paribus, this ensures that on average, a resident can enjoy a higher material standard of living as a greater quantity of goods and services are consumed. Consumers are likely to be able to afford better quality healthcare and education hence improving non-material living standards as well.

1.1. Examples
    - Singapore: 50 years of growth, China: 30 years of economic growth lifted significant proportion of population out of poverty (ability to spend on cars, big ticket items) ⇔ Africa: no basic healthcare, food, sanitation and potable water

2. Government's **budget** improves as tax revenue increases
    - Higher **income**: Wider tax base from income tax
    - Higher **consumption**: Increase in GST revenue
    - **Greater income equity**: Rise in income brings about greater tax revenues, as firms earn greater profit and individuals earn high incomes. This enables the government to spend more on programs such as subsidies and transfer payments to the low-income earners. This results in greater income equality as there is redistribution of wealth from the high to low income earners.

Other goals improved

- AE increases: Spending on public goods, merit goods
- Potential sustainable growth increases: Retraining, Infrastructure, R&D
- Increased equity: Transfer payments for income redistribution
- Examples: Pioneer Generation Package, SkillsFuture
- EG helps to improve other goals such as unemployment: Fall in unplanned inventories → increased induced dd → employment increases

Other goals are important

2. Demand-pull inflation: sustainable
    a. Structural bottlenecks: Lack of spare capacity, e.g. transport networks
        i. Example: India's poor infrastructure (roads with potholes, intermittent electricity supply)
3. Non-material SOL: Negative externalities not taken into consideration, unsustainable, reduced non-mat SOL
    b. Pollution: Poorer environmental quality due to low quality raw materials
        i. Example: China's usage of cheap coal to reduce COP
    c. Strain on resources: Unsustainable intake of foreign workers, infrastructure unable to sustain
        i. Example: Singapore's intake of foreign workers to replace ageing population
4. Structural unemployment: Occupational immobility and restructuring
    d. Demand for higher-skilled workers increased, reduced demand for low-skilled workers: Mismatch of skills (occupational immobility), rapid restructuring needed due to lack of relevant skills
        i. Example: Singapore exports higher end goods (e.g. banking/financial sector, pharmaceuticals), leaving low-skilled workers behind
5. Inclusive growth: inequity due to widening income gap (Singapore's high Gini coefficient) and quality growth: instead of increasing quantity, increase productivity (Singapore needs to focus on innovation instead of foreign workers)

Unemployment

Part of the labour force who are not working but actively looking for jobs

1. Maximisation of **SOL** through **resources utilised** and not left idle

1.1. Economy operates closer to the boundary of the PPC ® AD is high enough relative to productive capacity. The country is then producing the **most possible output** and **income per capita**

1.2. Households enjoy purchasing power for consumption ® Material SOL
1.3. Prevention of social unrest ® Non-material SOL
- Singapore: 2% growth in real GP and 1.9% unemployment in 2015
- Europe: Increased from 34% (2006-07) to 46% (2011-12) – increased strikes, protests and demonstrations

2. Reduces strain on **government budget** through greater tax revenue and lower spending on welfare assistance
2.1. Higher income and consumption tax as citizens earn and spend more
2.2. Reduced need for government to divert their budget spending on social assistance, lower opportunity cost as funds are channelled to other productive uses ® Rightward shift of LRAS
2.3. Government does not need to dip into budget reserves and adopt a deficit, thereby allowing it to accumulate its reserves and use it when the economy faces problems

3. Prevents the loss of **labour skills** and **productive capacity**
3.1. In the long run, hysteresis occurs as individuals who are unemployed could lose their skills. Workers may also become discouraged and leave the labour force, or emigrate to other countries in search of better jobs, resulting in brain drain. This decreases productive capacity as LRAS shifts leftward.

Impacts other goals
4. Low unemployment boosts domestic growth sentiments, thereby increasing economic confidence for consumption and investment. As the [C] and [I] components increase, AD rises through the multiplier process and national income rises.
4.1. On the other hand, high unemployment would reduce household sentiments and firms lose the incentive to invest, thereby decreasing AD through the reverse multiplier process

Inflation
Sustained increase in general price level, which becomes a problem when it is inordinate

Inflation as a priority
1. Price stability **preserves the purchasing power** of money, thereby encouraging spending and saving as households are better able to apportion their current income between current [C] and future consumption [S], maintaining their real income and **standard of living** over time
1.1. [C] Inflation erodes the internal value of money, leading to a fall in purchasing power. With the same amount of money, consumers can purchase lesser units of g&s and their material SOL falls. Especially for lower income groups who do not have assets to hedge against erosion, e.g. property, and they have a higher proportion of income spent on g&s
1.2. [S] Households would have a reduced ability to save as the value of money decreases
- E.g. CPF: 20% of monthly income – price stability maintains purchasing power, preserving savings

2. Price stability promotes **investment** and economic growth
2.1. [I] Firms are able to make **better projections** of their costs and revenue when prices are stable. They can gauge their returns to investment with more confidence and certainty, shifting the MEI curve upwards and increasing the returns from investment (assuming an unchanged interest rate). By the marginalist principle, firms increase investment until the rate of return is equal to the interest rate
2.2. As expected rate of returns rise relative to COP, there are higher expected profits and firms would thus invest in more profitable projects. Moreover, with less volatility and uncertainty, FDI is also attracted as companies are better able to predict future prices and make long-term business decisions

Price stability improves other goals
3. Price stability improves the BOP as the price of exports increase gradually over time
3.1. [X] With a lower relative inflation rate, export price competitiveness is maintained. When prices fall and $PED_X>1$, Q^d rises MTP and X rises significantly
3.2. Furthermore, stable prices reduce the tendency for households to switch to import substitutes as domestic goods and services remain price competitive, increasing Cd and X

Inflation impacts other goals
4. C + I + X rises ® EG rises and UN falls + [I] Potential EG increase as productive capacity moves out more quickly
5. FDI and X rise ® Improved BOP as CA and KA improve

Other goals are more important
6. During times of demand-led recession, UN and EG should be addressed instead.

Balance of Payments
BOP is a record of a country's international transactions between its residents and those of the rest of world over a period of time. It consists of the current account and capital & financial account. Achieving BOP equilibrium is not very

feasible in reality; hence most countries pursue a healthy BOP. Healthy BOP refers to the absence of persistent and large deficit/surplus.

1. **Prevents depletion of reserves** (for fixed/manage ER): A persistent balance of payment deficit implies large and rising external debt which can lead to an increasing share of domestic incomes being paid out to foreigners to service the debt. As a result, there will be fewer funds available for domestic consumption and investment and can lead to dampening of EG in future.
2. **Prevents unstable/depreciation exchange rate**: In a free floating exchange rate system, a BOP deficit is likely to lead to a depreciation of the exchange rate which can lead to problems of imported inflation and dampening of investor confidence.

Good
1. Higher material SOL / potential growth (current account deficit in the short-term)
2. Relieve inflationary pressures (dd-pull inflation by falling AD)

Bad
1. Decrease in net exports, fall in AD (EG and UN)
2. Increased liabilities to foreigners and risk of exchange rate
   - Other countries have greater claims over the country's assets. Deficits would then have to be financed through the sale of assets, which could incur a large external debt. Interest payments may therefore lead to a lower future SOL.
   - Moreover, if major economies lose confidence in the US, they may take their reserves elsewhere, leading to a large capital outflow and depreciate the USD.

Criteria of Comparison
1. State of economy: Recession vs Boom
   - EG/UN vs demand-pull inflation
2. Nature of economy: Singapore is X and FDI dependent
   - Inflation: Need to maintain X p comp and ability to attract FDI especially with rising competition from low cost countries
3. Stage of development
   - Developed: Price stability (given existent high level of savings) ⇔ Developing: growth (for material SOL)
4. Short term vs long term
   - Economic growth and unemployment in the short run vs inflation in the long run
5. Root of problem: Cost-push inflation more important than demand-pull
   - Rise in COP leads to fall in X and C, affecting EG and UN as well
   - Demand-pull is less undesirable – at Yf, GDP and SOL are high with low UN. High prices due to rising AD may suggest a healthy economy with growing demand instead. With this confidence and good sentiments, it may stimulate more I.

Macroeconomic Indicators

Macroeconomic Issues

Economic Growth
- Increase in real GDP (= increase in AD)
- **GDP:** Value of g&s produced domestically
- **Real GDP:** … adjusted for inflation
  - **Inflation:** Structural bottlenecks near Yf, shortage of labour (high skilled in Singapore)

Aggregate Demand
- Reasons for rise in AD
  - **C increase:** wealth increases
    - Wealth: Increase in value of **financial assets (housing** and **stocks)**; housing as **collaterals** to obtain loans
  - **I increase**: corporate tax decreases, post-tax profits increase, positive outlook, expected ROR
  - **X increase:** small country, global economic recovery
    - 200% of Singapore's GDP (due to low domestic consumption / population size)
    - Recovery: trading partners' M increase due to increase in NI + good outlook
- Evaluation of reasons

Process (Reasons for ΔAD)	Evaluation
Change in i/r (increase)	(1) Consumer responsiveness
Affects C & I (increase)	(2) Composition of GDP
Affects AD (increase)	(3) State of economy

	(4) Size of multiplier (k)
Affects economic growth	

- Why is increase in i/r desirable during a recession?
  - (3) State of economy: Excess spare capacity, EG increase + UN decrease via k process

  HOWEVER
  - (1) Responsiveness: Poor during recession
  - (2) Composition of GDP: C & I may not be large (e.g. Singapore)

- Evaluation of AD affecting EG
  - Not sustainable in LR:
    - Demand-pull inflation (nominal growth): Reaching Yf, structural bottlenecks
  - Must increase productive capacity
    - Productive capacity: Economy's ability to produce more g&s
    - To shift AS outwards (insert diagram)
  - AS shift: To promote non-inflationary / sustainable growth
    - No shift: Real growth decreases, GPL/inflation increases
    - Shift outwards: Real growth increases, less increase in GPL/inflation

Aggregate Supply

- Ways to shift AS outwards (QQT)
  - Quantity
    - Land reclamation, foreign labour
  - Quality
    - Retraining: Increase quality of workforce (less workers, more g&s), increased productivity
    - Infrastructure: Increased productive capacity through connectivity (e.g. transport, telecommunications)
      - Transport: geographical mobility, less time needed for greater productivity, less transport time
  - Technology:
    - R&D: FOPs can be combined more efficiently, same resources, more g&s
    - Capital-to-labour ratio increasd
- Evaluation of shifting AS outwards
  - Time-consuming: can only occur in LR
  - May not target problem of low AD: Increase in AS is inconsequential (insert diagram)
    - Should increase AD by: government spending, decrease i/r, decrease taxes (e.g. Budget 2009 Resilience Package: $20.5bil, 6% of GDP)
- Ways to shift AS upwards/downwards (COP)
  - AS increases due to changes in cost of production
    - Tight domestic labour market: Foreign worker levy leads to congestion, not sustainable
      - Encourages to switch from labour to machinery, therefore COP increases
      - Especially labour-intensive sectors, e.g. construction
    - Prices of imports increase, extent demands on price elasticity
      - Increase in prices: No decrease in demand due to lack of domestic alternatives
      - Semi-finished / intermediate goods, e.g. oil, raw materials
      - WHY? Increase in global prices: Global demand increased (China, India), natural disasters, price taker status, resource poor
  - AS decreases due to increase in productivity > increase in wages (COP decreases)
    - Increase in subsidies
    - Unit cost of production decreases, higher wages
- Evaluation of shifting AS upwards: Fall in GDP (insert diagram)
  - C decreases: consumers' purchasing power eroded (wealth effect)
  - I decreases: decreased consumer demand, decreased incentive to increase productive capacity through capital goods
  - X decreases: exports lose price competitiveness, especially price elastic demand of final goods

<u>Unemployment</u>

Impact of unemployment

Society

- Productive inefficiency: Production levels within PPC, not maximised
  - Singapore: dependent on human resources
  - US: major engine of growth (consumers) would be hindered

Government

- Expenditure increases, worsening budget position
  - Countries with budget deficit, e.g. PIGS
  - Less tax revenue: Workers are not contributing to income tax and GST

- Consequence: Less ability to spend on other sectors, e.g. healthcare, education

Workers

- Purchasing power decreases: Less able to spend on goods and services (lower quantity and quality)
- Non-material SOL: feel sad / anxious OR less stress / more leisure time

Consequences of Unemployment

- Long-term unemployment (structural)
  - Difficult to reduce / solve
  - Aggravated with longer waiting time
- Households lose motivation, skills and competency
  - Employability reduces as skills are less relevant
  - Discouraged: drop out of workforce entirely
- Hysteresis: Shrinking workforce, lower productive capacity

Costs of unemployment (Explain any 2 below)

- Personal costs: e.g. loss of income and depression ® fall in material and non-material SOL;
- Productive inefficiency ® Production is not on the frontier but inside the PPC ® Labour resources are not fully utilized ® Average cost of production could be reduced further if available labour is fully utilized.
- Opportunity cost in terms of forgone economic growth. Unemployment implies production is inside the PPC Had labour resources been fully utilized, production would be at the frontier. The economy could have experienced economic growth.
- Cost to taxpayers and government budget: Unemployed workers qualify for social assistance in the form of healthcare subsidies and other unemployment benefits. Moreover, the government would collect less income tax when the unemployment rate rises. This means that government spending on welfare is higher and there is a strain on taxpayers who will finance the spending. There is also an opportunity cost in terms of forgone development expenditure.
- Loss in skills (hysteresis): Workers who are unemployed for prolonged periods of time could lose their skills. This loss in productivity could adversely affect the productive capacity by decreasing the AS in the long-run.
- Discouraged worker effect: Workers who have been structurally unemployed for a long-time may become discouraged and leave the labour force. This results in a fall in productive capacity and possible inflationary pressure in the long run.

Note

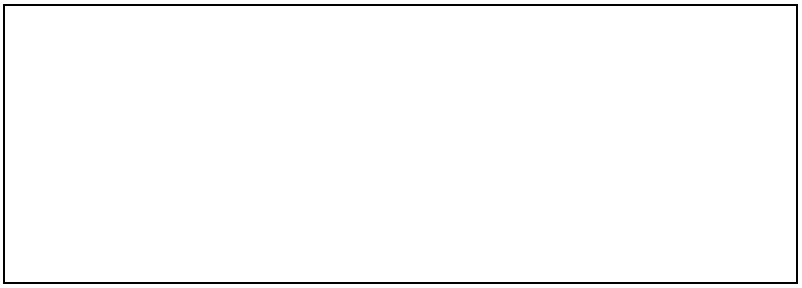
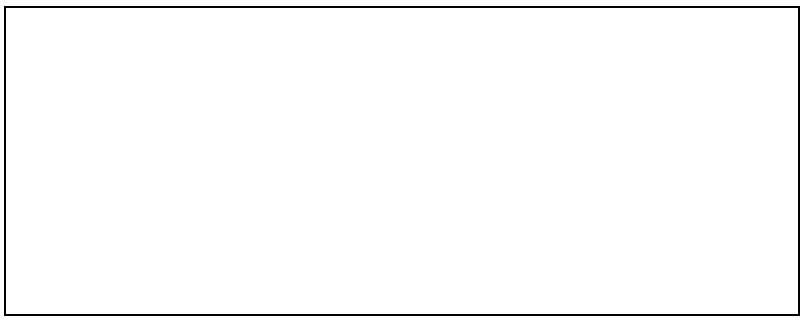
- Full employment ≠ Zero unemployment
  - Full employment: Zero demand-deficient unemployment
  - Zero unemployment: Zero cyclical and natural (structural, frictional) unemployment

Cyclical / Demand-Deficient Unemployment

Characteristics	1. Short-run in nature 2. Varies with the business cycle 3. All sectors are affected (not selective) 4. Job vacancies less than number of people unemployed
Cause	Decrease in AD during economic downturn
Explanation	[Reverse multiplier process] AD falls -> unplanned inventories rise -> firms reduce production levels • Derived demand for labour as an FOP falls • Household income falls: Induced consumption falls, GDP falls by size of k, since there is less production, derived demand for labour falls

Examples	• Singapore: X falls
	  ○ Due to global economic downturn, e.g. Subprime Crisis)
	• USA: C falls
	  ○ Due to economic downturn: households have poorer outlook, increased precautionary savings, shares and housing prices fall – wealth effect (less wealth) + less able to use as collaterals to obtain loans)
	  ○ Citizens always in debt: Must tighten belts to repay banks, unable to consume same amount so as to service loans
	• USA: High unemployment, households in debt (credit crunch: less availability of credit)

Policies	• Tackle root cause of unemployment (decrease in AD)
	(A) Fiscal Policy: Decrease taxes + Increase G
	  ○ Income tax: Disposable Y increases, C increases
	  ○ Corporate tax: Post-tax profits increases, I increases)
	• AD increases, multiplier process → fall in unemployment
	• Example: Resilience Package 2009 ($20.5bil, 6% of GDP), American Recovery and Investment Act (ARRA) (US$787bil)
	Evaluation
	• **Size of k**: Singapore (small, less effective) vs USA (large)

	• **Nature of economy** / size of domestic market: Singapore (X-dependency) vs USA (big domestic sector: G, I, C large)
	• **Budget position**: PIGS, USA (deficit) vs Singapore (reserves)
	  ○ **Crowding out**: Borrowing, depriving private sector of money (edging out C, I – HH and firms of loanable funds)
	
	 
	
	(B) Monetary Policy: Decrease interest rate
	• Cost of borrowing decreases
	  ○ C increases: more access to cheap credit, purchase big ticket items; opportunity cost of consumption decreases
	  ○ I increases: Compared to expected rate of returns, cost of production decreases -> profitability increases
	Evaluation
	• **Size of k**
	• **Nature of economy**
	• **Responsiveness**, especially during a recession: Poor / bleak outlook, expected rate of returns falls because consumers are not spending, C&I are interest rate inelastic
	  ○ e.g. Japan's negative interest rate to encourage spending
	
	(C) Cost Reduction: Decrease AS by reducing COP
	
	 
	
	AFC 1997:
	• COP reduced: CPF cuts
	• HOWEVER wages / purchasing power decreased
	Subprime Crisis 2008: Jobs Credit Scheme
	• COP reduced: Governments subsidized CPF (12% up to first $2500)
	  ○ X increases: gain price competitiveness
	  ○ C increases: higher purchasing power
	• Households' purchasing power does not decrease
	Evaluation
	• Greater degree of certainty: Not contingent on responsiveness

Structural Unemployment

Characteristics	1. Long-run in nature 2. Does not vary with business cycle 3. Particular sectors are affected (selective) 4. Job vacancies may exist
Cause	Mismatch of skills, occupational immobility
Explanation	(A) Economic restructuring • Agricultural to manufacturing sector or primary to secondary / tertiary sector • Occupational immobility ○ Workers may not have relevant skills to move up to higher value added sectors (B) Offshoring • Labour-intensive jobs move overseas

	○ Example: assembling in China, telecomm in India (C) Machinery • Use more labour-saving machinery • Capital-intensive methods of production to increase productivity
Examples	• Singapore: Rapid restructuring, moving up value chain rapidly ○ Income gap: demand for lower-skilled decreases and wages stagnate vs demand for higher-skilled workers increases and wages increase
Policies	<u>Retraining and Skills Upgrading</u> • Decrease mismatch of skills, increase occupational mobility • WDA: Workforce Development Agency ○ Subsidies (up to 95%) ○ Direct provision: Continuing Education and Training (CET) Centres, Workforce Skills Qualification (WSQ) <u>Evaluation</u> • Attitude: Workers' responsiveness – resistant or unreceptive • Time: Time-consuming • Aptitude: Some may lack basic literacy / numeracy skills

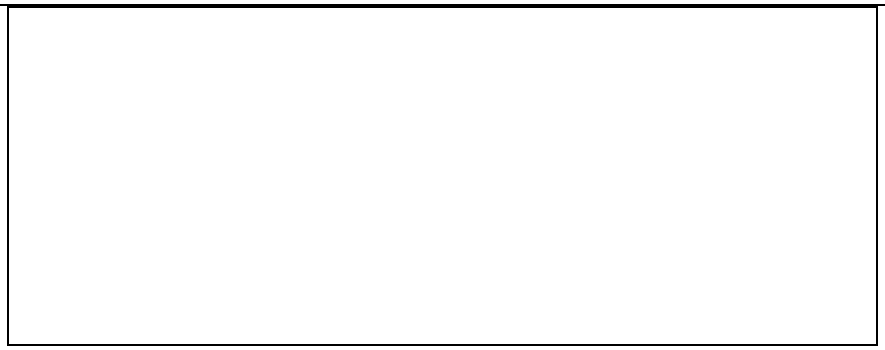
Frictional Unemployment

Characteristics	1. Does not vary with business cycle 2. Exists at Yf (natural unemployment) 3. Inevitable: Especially for Singapore (dynamic changes)
Cause	Imperfect information
Explanation	• Do not know what is available that matches expectations • Voluntarily unemployed (not due to lack of vacancy) • Hope to find job suited to expectations about wages / working environment • Not necessarily bad: With right match, allocative efficiency and reduction of imperfect information
Policies	• Job matching portals • MOM job fairs

<u>Inflation</u>

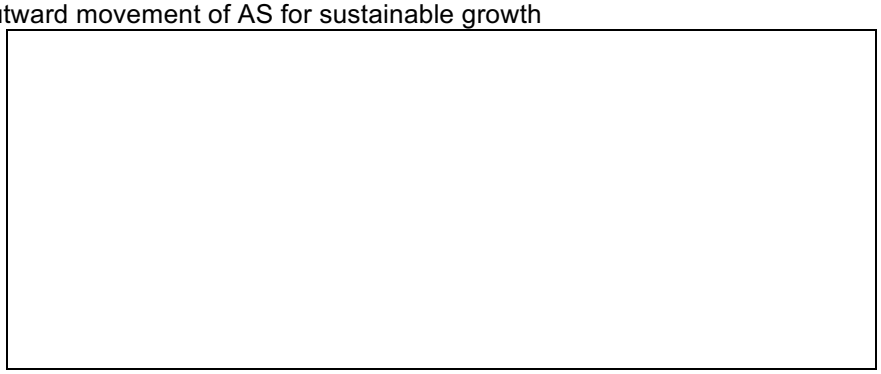
Demand-Pull Inflation

Cause	AD rises more than AS
Explanation	• No spare capacity approaching Yf, close to full employment levels • Competition for resources such as labour (wages), land (rental) – price rises • COP rises: Pass on to consumers as higher GPL  <u>Evaluation:</u> Not too detrimental • Closer to Yf: UN lowered, GDP high, resources fully utilised • Impact on other goals less detrimental
Examples	Singapore (Hypothetical) • High X, 200% of GDP • Trading partners recover: Global economic recovery, purchasing power increases • Income elastic exports: Y increases, Qd increases MTP USA (Hypothetical) • High C India (Actual) • Influx of FDI due to low / competitive wages, large labour force, large domestic market • No productive capacity due to poor infrastructure, e.g. roads, electricity, telecommunications
Policies	<u>(A) Contractionary demand management policies:</u> Lower demand • Decrease G, increase i/r, increase tax, decrease X (exchange rate appreciates)



Evaluation
- ☺ Fast
- ☹ Conflict of goals: EG decreases, UN increases

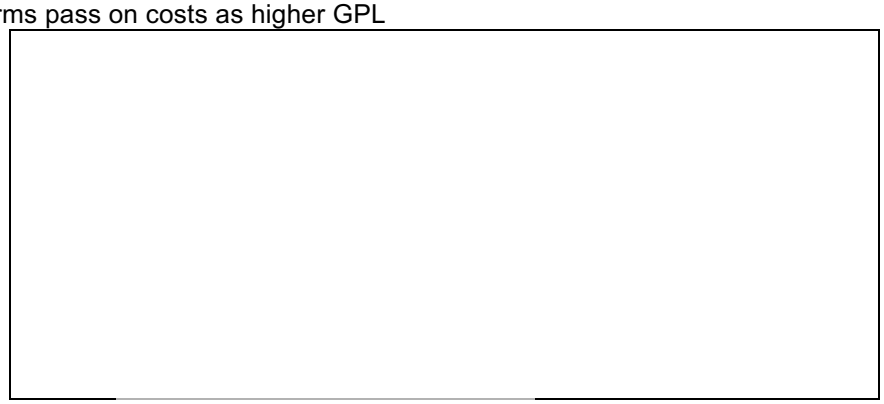
(B) Increase AS
- Outward movement of AS for sustainable growth



Evaluation
- ☺ No conflict of goals
- ☺ Greater outputs with low inflation (sustainable / non-inflationary growth)
- ☹ Takes time, e.g. retraining: attitude, time, aptitude
- ☹ Money, opportunity cost
    - However: Singapore's large reserves, prudent spending

Cost-Push Inflation

Cause	AS moves upwards (SRAS)

Explanation	• Rise in COP not to do with increase in AD
	• Firms pass on costs as higher GPL
	 
	(A) Imported inflation
	• No natural resources / local substitutes: Demand for imports is price inelastic
	• Supply shocks: AS increases
	  ○ China and India buying raw materials, global prices increase, Singapore as a price taker
	  ○ Natural disasters, supply for food decreases
	  ○ Political instability and civil unrest, e.g. oil in Middle East
	(B) Wage Push inflation
	• Wages rise above productivity
	• Tight labour market
	  ○ Foreign worker levy to ease inflow / congestion
	  ○ Discouragement of labour-intensive production methods: Machinery to boost productivity
	• Trade unions with strong bargaining power

	○ E.g. Lufthansa ○ Not Singapore, due to good tripartite relationship (government, employers, workers) Evaluation: Detrimental • UN increased, growth lowered • Rise in COP: AS shifts up, move along AD as higher prices, falling output ○ C: Decreased purchasing power ○ I: Decreased profits, less able to buy capital goods ○ X: Decreased price competitiveness
Policies	•

Policies

Fiscal Policy

Mechanism	• G spending ○ MRT, Terminal 4 construction • Decrease taxes ○ Income tax: Increase disposable income → WA increases → C increases ○ Corporate tax: Increase post-tax profits → WA to buy capital goods increases → I increases
Explanation	AD increases • G + I + C increases → AD increases → k process → GDP increases by k x injection • EG increases, cyclical UN decreases (derived demand for labour as FOP) AS increases • G spending ○ Transport (ports, roads): geographical mobility → transport costs decrease → productivity increases ○ Telecommunications: connectivity → communication costs decrease → productivity increases ○ Retraining and Skills Upgrading: ▪ Same quantity with higher productivity → potential output increases ▪ Increase in skills: Less mismatch / greater occupational mobility → structual unemployment decreases • Decreased taxes ○ Lower income tax: attract foreign talent → increase quantity and quality of labour, bring in skills and expertise ▪ Singapore: Small C (35%), exports with high import content ▪ Low taxes: Singapore (20%) vs France (55%) ○ Lower corporate tax: increase FDI → skills, expertise, capital goods increase → move up value chain through technology / skills transfer ▪ Low taxes: Singapore (17%)
Examples	2008-2009 Subprime Crisis • Singapore: Resilience Package - $20.5bil, 6% of GDP • USA: American Recovery & Reinvestment Act (ARRA) - $787bil
Limitations	1. Size of k: With a small k, for each round, induced consumption is small → overall increase in GDP is small → induced consumption falls a. Singapore: high MPS, high MPM b. USA: high MPC (HOWEVER: lowered size of k during 2008-2009 Subprime Crisis – uncertainty, precautionary savings) 2. Composition of GDP / Nature of economy: Impact of G + I + C a. Singapore: X 200%, G 10%, Resilience Package 6% - can only cushion against shocks due to export-dependent nature 3. Government's budget position: Affects ability and viability of fiscal policy a. ☺ Singapore: Significant reserves due to prudent spending b. ☹ USA: Constitutional limitations (borrowing cap) c. ☹ EU, PIGS: (i) Limited ability to increase G, should focus on how to reduce budget deficit, austerity measures (ii) If G > tax revenue, should decrease G and increase T → AD falls 4. Crowding out: Government borrows and offers higher interest rate, HH and firms borrow less: G increases but C, I decreases a. BUT: HH and firms tend to borrow less during recession, not priority 5. Responsiveness: G vs reduced taxes a. G is more certain than taxes i. During recession, less responsive (precautionary savings, overcapacity and machines not at full capacity) b. Depends on how prolonged tax cuts are

	i. Will respond if future / permanent income is affected

Monetary Policy

Mechanism	• Money supply • Interest rates ○ Inverse relationship

Explanation	• Economic overheating: decrease money supply, increase interest rates → COB increases
	• Recession: increase money supply, decrease interest rates
	AD increases (decrease i/r) – internal impact (C + I increases)
	• C increases
	  ○ Interest rate decreases → COB decreases
	  ○ Access to cheap financing to purchase big ticket items → C increases
	  ○ Savers: less i/r returns from savings, less incentive to save → C increases
	• I increases
	  ○ Expected rate of returns higher relative to COB → more profitable projects available → I increases
	  ○ Move along MEI curve, increase investments → I increases
	External impact (if i/r of A lower relative to B)
	• Foreign deposits are more attractive
	• Hot money outflow: deposit funds in B's banks
	• Ex/r of A decreases, ex/r of B increases
	• P_X decreases in foreign \$, P_M increases in domestic \$ → (X-M) increases
	• BUT: impact depends on **relative** i/r

Examples	Ultra-low i/r (0% < x < 1%) post-2009 • UK: 0.5% • USA: increase i/r in 2015 • Japan: 0.25%

Limitations	1. Interest rate elasticity/Responsiveness: Recession – Poor economic outlook, uncertainty
	  a. HH: increase precautionary savings
	  b. Firms: HH demand decreases → expected ROR decreases + overcapacity → lower incentive to invest in more capital goods
	2. Deflationary expectations
	  a. Expect GPL to reduce in future → Withhold savings, purchase in LR
	  b. Real value of debt increases with time, will not borrow (even if central bank reduces i/r to 0%): Real i/r increases due to inflation
	3. Nature of economy: Export **and** import dependent – rigid ex/r policy stance
	  a. US: Allows for fluctuations
	  b. Singapore: Stable – does not allow for ex/r depreciation
	  i. Resource-poor country, vulnerable to imported inflation: i/r cannot decrease relative to other countries, risk of outflow
	  ii. Cannot compromise export price competitiveness: i/r cannot significantly increase relative to other countries, risk of inflow
	  iii. Limit flow of hot money and ex/r fluctuations: Peg ex/r to major economies
	4.

Exchange Rate Policy

Mechanism	• Exchange rate increases
	  ○ P_X increases in foreign currency, Q^d_x decreases MTP
	  ▪ $PED_x > 1$
	  ○ P_M decreases in domestic currency, Q^d_M increases LTP
	• AS moves downwards

Explanation	• P_X increases + Q^d decreases MTP => X revenue decreases
	• P_M decreases + Q^d increases LTP => M expenditure decreases
	• Change in (X-M) depends on Marshall-Lerner condition
	  ○ $\|PED_X + PED_M\|>1$
	  ○ ex/r increases, (X-M) decreases
	  ○ ex/r decreases, (X-M) increases
	Singapore Context
	• Exports: High-end goods – $PED_X>1$, M-L condition holds
	• Imports: Resource poor with no local substitutes, import-dependent for essentials – $PED_M<1$
	  ○ E.g. FOPs (oil) and semi-finished goods
	HOWEVER: Singapore's ex/r stance
	• Modest and gentle appreciation (prevent imported inflation)
	  ○ If P_M decreases, COP decreases
	  ○ SRAS shifts downwards
	  ○ COP of C + I + X decreases
	  ▪ X: gains price competitiveness
	  ▪ C: price decreases, HH's PP increases
	  ▪ I: profits increase, ability to spend on cap goods increase

Limitations	1. Conflict of goals (Singapore): Imported inflation vs EG + UN + BOP
	  a. Ex/r increase: P_M decreases but P_X loses P competitiveness
	  i. $PED_X>1$ => Q^d decreases MTP
	  ii. X: 200% of GDP
	  iii. AD falls: UN increases + EG decreases
	  b. BUT: Cushioned by fall in AS
	  i. Though X may lose P competitiveness, imports are cheaper
	  ii. X have significant import content → manufacturing benefits, services move up value chain
	  c. BUT: MAS insists on modest/gentle currency appreciation
	  i. Minimise impact of X losing P competitiveness
	  ii. Not an explicit pro-growth policy (AD does not rise)
	  iii. Price stability: pre-condition for growth, prevention of imported inflation
	2. Domestic sector not addressed though external stability is improved

<u>Supply-Side Policies</u>

Mechanism	1. Shift AS out 2. Shift AS down

Explanation	(A) Market-Oriented
	• Remove barriers preventing free market / price mechanism from functioning efficiently
	(1) Taxes (AS shift outwards)
	• Income tax decreased
	  ○ Attract foreign talent (supplement small talent pool): Quantity, expertise and skills → improve productive capacity → AS shifts outwards
	  ○ Incentive to work: Increases motivation to keep larger proportion of income
	• Corporate tax decreased: Attract FDI, capital goods, skills and expertise, train local workers → increases state of technology and factor endowment (develop new comparative advantage) → AS shifts outwards
	• BUT: Global competition for FDI and talents, concerns about budget (cannot lower too much, may lower budget position)
	  ○ Taxes cannot be lowered too much: May lower budget position
	  ○ Tax cuts are inflexible downwards (else other forms like regressive taxes)
	(2) Taxes (AS shift outwards)
	• Immigration / labour policies that prevent free movement of labour (AS shifts outwards / downwards)
	  ○ Liberalisation: More workers and increased supply → drive down wages of foreign workers

Examples	•
Limitations	

Policy options with budget deficit

- Monetary Policy (i/r)
- Signing FTAs
- Deregulation
- Cost-cutting measures

International Trade

(re-do based on two country two good model)
Explanation
Assume countries A and B have 10 units of resources (R).

- Country A: 1 unit of R can produce 10 units of Wheat (W) or 40 units of Cloth (C)
- Country B: 1 unit of R can produce 2 units of Wheat (W) or 20 units of Cloth (C)

Absolute Advantage
Country A has **absolute advantage** in both sectors.

- Absolute advantage: If a country can produce the same amount of output using fewer units of inputs or if it can produce more units of output using the same amount of inputs

Comparative Advantage
Country A:

- Opportunity cost of producing 1 W = 4 C
- Opportunity cost of producing 1 C = 0.25 W

Country B:

- Opportunity cost of producing 1 W = 10 C
- Opportunity cost of producing 1 C = 0.1 W

Country A incurs a lower opportunity cost in the production of W and a higher opportunity cost in the production of C. Hence, A has a comparative advantage in W, while B has a **comparative advantage** in C.

- Comparative advantage: If a country incurs a lower opportunity cost than the other country in the production of that good
- According to Ricardo, Country A should specialise in the production of W while country B should specialise in the production of C.
- This means that resources are more **efficiently** allocated, leading to **higher global output.**

Terms of Trade
When Country A specialises in W, it has to give up 4 C for every unit of W. For it to benefit from trade, it has to exchange 1 W for more than 4 C. Hence, a favourable terms of trade should be 1 W $\geq$ 4 C or 1 C $\leq$ 0.25 W.

When Country B specialises in C, it has to give up 0.1 W for every unit of C. For it to benefit from trade, it has to exchange 1 C for more than 0.1 W. Hence, a favourable terms of trade should be 1 C $\geq$ 0.1 W or 1 W $\leq$ 10 C.

For trade to be mutually beneficial, the terms of trade should be

- 0.1 W < 1 C < 0.25 W or
- 4 C < 1 W < 10 C
- An example would be 1 C = 0.2 W or 1 W = 5 C

With a favourable terms of trade, countries are able to enjoy consumption possibilities beyond their PPC, leading to higher material standard of living.

Examples (Comparative advantage, factor endowment)
LDCs: Relative abundance in low-skilled labour and land ® lower opportunity cost (CA) in LiLiLva

- Labour intensive
- Land intensive
- Low value added
- E.g. Toys, tyres, textiles, coffee, etc

DCs: Relative abundance in high-skilled labour, state of technology, infrastructure and capital stock. Thus, countries like Singapore should not devote limited land and labour to produce LiLiLva as the opportunity cost to produce high-end products will be very high. ® lower opportunity cost (CA) in KiKiHva

- Knowledge intensive
- Capital intensive
- High value added
- E.g. Biotech, high end electronics, pharmaceuticals

Extent that Theory of CA explains Trade Patterns
Discuss to what extent the Theory of Comparative Advantage explains trade patterns between countries.

Introduction
Define trade pattern

A country has a comparative advantage in the production of a good if it can incur a lower opportunity cost when producing a good, possibly due to its factor endowment.

- If countries specialise in the products in which they have CA, global output will increase as resources are more efficiently utilised.
- With favourable Terms of Trade, i.e. lies between the opportunity costs of both countries, trade would be mutually beneficial

Thesis

1. Comparative advantage theory explains trade patterns.

Developed countries such as US, Germany and Singapore generally have a **relative abundance in high-skilled labour, technology, infrastructure and capital stock.**

- Given these factor endowments, they are thus able to produce knowledge intensive and capital intensive goods such as biotechnology, high-end electronics and pharmaceuticals at a **lower opportunity cost relative** to less developed countries such as China that generally possesses an abundance of land and low-skilled labour.
- For instance, if Singapore were to utilise its limited land and labour into the production of land- and labour-intensive products such as tyres, textiles and agriculture, the **amount** of high-end products that **could have been produced** using the same resources that would be forgone is much **higher** than countries such as China.
- According to the Theory of CA, Singapore should specialise and export goods which can be produced at a lower opportunity cost and import those that can be produced at a higher opportunity cost. Thus, goods such as rice and apparel are imported from countries like Thailand, China or Mexico which are endowed with land and low-skilled and have a comparative advantage in producing such goods.

Explain how differences in opportunity cost also accounts for the phenomenon of off-shoring where firms relocate part of their production process overseas.

- Explain the rationale for off-shoring: firms seek to reduce COP and focus on core business. For a global MNC, it can seek to relocate part of its production process away from its home country to other countries where the cost of production is lower.

Eg. Global MNCs has taken advantage of the low cost labour and relative abundance land in countries like China to off-shore its manufacturing and assembly facilities. This has resulted in greater flows of FDI to China and also promoted the exports of goods such as finished consumer electronics which is in line with the theory of CA due to the differences in opportunity costs as explained earlier more cost efficient to specialise and engage in such production activities.

Eg. Global MNCs has taken advantage of the low cost, relatively abundant higher skilled labour in countries like India to off-shore its IT operations. As India has relatively more abundant labour than developed countries, wages are relatively lower than in developed countries, ceteris paribus. Eg. global firms like HP IBM, Intel, AMD, Microsoft, Oracle Corporation and Cisco have off-shored their IT services. This is in line with the theory of CA. India with its relative abundant skilled labour would have a lower opportunity cost in providing IT related services more cost efficient to specialise and engage in such activities

Antithesis

2. Comparative advantage does not explain trade patterns

2.1. The theory of comparative advantage **assumes no transport costs**. In reality, this is not true and countries may instead trade with partners in the same region. This geographical proximity means that countries like USA and Mexico would trade with one another although they may not produce at the lowest opportunity cost.

2.1.1. However, technological advancements lower opportunity cost of production and transport costs play a less important role as a consideration for trading partners. With the rise of methods such as containerisation, countries have a standardised method of transporting goods which thereby increases productivity and efficiency.

2.1.2. Moreover, the value of products is no longer commensurate with bulk and weight. For high-end services such as banking consultancy which can be conducted online, transport costs play a minimal role in determining trading partners

2.2. Due to intra-trade, countries with similar factor endowments made trade with each other in similar products as a result of **consumers' demand**. Consumers may want variety and differentiated products due to diverse tastes and preferences

- Japan and Germany are countries that produce cars, but continue to trade to cater to consumers' nuanced demand, for family-oriented fuel-efficient cars from the former country and luxurious cars from the latter.

2.2.1. Intra-vertical trade occurs not due to tastes and preferences, but when a country is part of the global supply chain.

- Singapore's imports are primarily not meant for final consumption but value-adding. For example, semi-finished electronic components are imported but are processed and are exported as higher value added products

For FDI flows due to off-shoring.

- Ability to respond to more quickly to changing local demand

Global MNCs may value proximity to the local market. They want to be in, or close to markets where the consumer base is large, making customised products and responding quickly to changing local demand.

Eg. Bombardier, a Canadian maker of aeroplanes and trains, used to focus on cost savings made by off-shoring jobs abroad; now Bombardier is in China for the large Chinese market.

Lenovo, which has its own factories in China is moving some production to America is so it will be able to customise its computers for U.S consumers and respond quickly to them.

For trade and FDI flows due to off-shoring

- Diversification argument

To reduce the vulnerability to economic shocks stemming from a too narrow a specialization, countries have increasing sought to diversify their economy by pursuing industrial policies to also develop the sectors for exports which they traditionally have been a net importer.

- Role of FTAs: With the signing of FTAs, along with the lowering of trade barriers, the easing of investment rules has facilitated the shifting of production facilities overseas between the partner countries, eg. From U.S to Mexico with NAFTA promotes off-shoring

- Economies of scale to produce a specific good within the broad product category. Intra-industry trade allows countries to specialise in a limited variety of production and thus reap the advantages of increasing returns (i.e., economies of scale), but without reducing the variety of goods available for consumption.

Advantages and Disadvantages of CA

Advantages: With more specialisation and trade based on CAFE, there will be a more efficient allocation of resources. As a result, global output will rise as countries can consume beyond their PPC

Microeconomic Advantages

1. Consumers are able to enjoy **lower prices** and **higher purchasing power** that leads to a higher material standard of living. Prices of imports fall because:

1.1. Trading partners are able to produce goods at a lower opportunity, for example, developing countries can produce consumer goods at a lower cost.

1.2. The scale of production increases and the **unit COP is lowered** as producers **enjoy iEOS**

1.3. More **competition from foreign substitutes** makes the demand curve of local producers more price elastic as they lose market power. This makes it more difficult for local firms to raise prices as their Q^d will fall MTP and they will lose TR

1.4. Costs can be further lowered when firms offshore their more labour-intensive production processes to other countries with lower labour costs. For example, iPhones are assembled in China

2. **Inter-industry trade**, the exchange of products from different industries, is an advantage. Developed economies, such as the USA, are able to enjoy more labour- and land-intensive consumer goods manufactured by developing countries, like China. This increases both countries' purchasing power and hence material standard of living. Due to their differences in factor endowment, developed and developing countries have lower opportunity costs of production for certain goods, which can thus result in comparative advantages.

2.1. Furthermore, less developed countries can import more capital goods – for example, machinery – from developed countries. Beyond increasing their SOL, capital goods also help them move up the value chain and increase their productive capacity, thereby resulting in sustainable economic growth.

3. Furthermore, **intra-industry trade** can occur where similar products from the same industry are both imported and exported. This is due to consumers' varied tastes and preferences. Thus, product differentiation will cater to their demand for wider variety, increasing their satisfaction. As firms specialise more in a limited variety, their scale of production increases, enabling them to enjoy greater iEOS, hence lowering AC.

3.1. For example, cars and smartphones are traded between USA and Japan.

4. Producers are able to enjoy **larger markets** beyond their domestic markets, raising the demand for their products and the TR of firms thus increases. Higher production levels also help firms to reap iEOS, lowering their AC. This will help firms to gain price competitiveness if cost savings are passed on to consumers

4.1. This advantage is especially important for countries with small domestic markets such as Singapore, with agencies like IESingapore that actively encourage Singapore companies to move overseas.

Macroeconomic Advantages

5. Trade can help an economy achieve its **macroeconomic goals**. Due to the rising income of trading partners through trade, countries' export revenue (X) will increase as there is a higher demand for a country's goods and services. Through the multiplier process, AD rises, leading to more real economic growth. Furthermore, the derived demand for labour increases and cyclical unemployment is decreased, especially in developing countries which specialise in labour-intensive sectors.

5.1. Resource poor countries also benefit as they enjoy a greater quantity of factors of production, increasing its productive capacity. The AS curve moves outwards, reducing demand-pull inflation and increasing potential

growth. Cheaper imports can also lower cost of production as the AS curve moves downwards, reducing cost-push inflation.

5.2. Increasing export revenue, assuming that import costs do not rise as quickly, also improves countries' current account and hence, BOP.

5.3. **EVALUATE:** These benefits are particularly important for open economies such as Singapore. She has a small domestic market with small C (with a small population and high savings rate) and is thus dependent on trade as a major engine of growth. Moreover, Singapore is resource poor and dependent on imports, for example for factors of production and semi-finished goods.

Disadvantages:

Microeconomic Disadvantages

1. Producers in sunset industries, especially in developed countries, would not benefit from globalisation. The emergence of lower cost countries would erode their comparative advantage in the more labour-intensive sectors, reducing their demands and hence total revenue. Consumers also have more close substitutes, and the demand for goods become more price elastic. Thus, firms lose market power and their ability to set prices.

1.1. For example, the apparel and steel industry in developed countries face greater competition.

2. Unfair competition & Dumping

3. Trade may lead to **negative externalities in production**, costs borne by third parties. As production levels rise, some countries compete significantly on cost – for example, China uses cheap coal to lower COP and raise export price competitiveness, which leads to pollution which worsens non-material SOL. Moreover, countries like Brazil and Russia export primary products such as natural gases but the environmental problems and depletion of these resources means that this export-driven growth is not sustainable.

Macroeconomic Disadvantages (SHOCKSHOCK SUEWIG)

4. Countries that are over dependent on trade for growth are more vulnerable to **external shocks**. During global recessions, such as the 2008 Subprime Crisis, incomes of major trading partners fall and their demand for exports decreased. Especially for countries like Singapore which exports high-end goods that are relatively income elastic, demand for our exports fall more than proportionately. As X falls, AD will fall as a result of the multiplier process.

4.1. As Singapore's exports take up 200% of our GDP, economic goals such as **economic growth** and **unemployment** are worsened, and the current account balance is worsened.

5. Moreover, open and resource-poor economies have price inelastic demand for exports and are thus susceptible to **supply shocks**. Prices of imported factors of production may increase due to natural disasters or political instability. These countries will face a significant increase in COP as they are unable to switch to local substitutes. The SRAS curve moves upwards and costs increase, leading to **imported inflation**.

5.1. For countries like Singapore, economies are greatly impacted especially as exports have high import content, thereby impacting the major engine of growth.

6. Higher import expenditure may also **worsen current account**, as the decrease in net exports worsens the current account balance. For example, the widening trade balance between USA and China indicates that countries are consuming beyond their means, resulting in a current account deficit. By incurring foreign debt, they are undermining their future SOL.

6.1. Additionally, the outflow of capital through FDI may also lead to a worsening of the financial accounts.

6.2. Depends on state of economy. Rising export demand may contribute to **demand-pull inflation** when the economy is approaching full employment levels and is thus running out of spare capacity. Furthermore, exports are consumed by foreigners and not locals, thus exports may not improve a country's **domestic material SOL**.

7. Countries may also be at greater risk of **structural unemployment**. For sectors which the country has a comparative disadvantage in, the derived demand for labour may fall. For example, consumers in DCs switch to cheaper imports and firms offshore to lower costs, emerging economies. Foreign competition thereby worsens structural unemployment as older and low-skilled workers may have less occupational mobility to move to sunrise sectors.

7.1. Furthermore, economies such as Singapore may move up the value chain to specialise in high-end sectors, which would worsen the mismatch of skills for low-skilled workers. The falling demand for their services leads to a fall in their wages, lowering their purchasing power and standard of living.

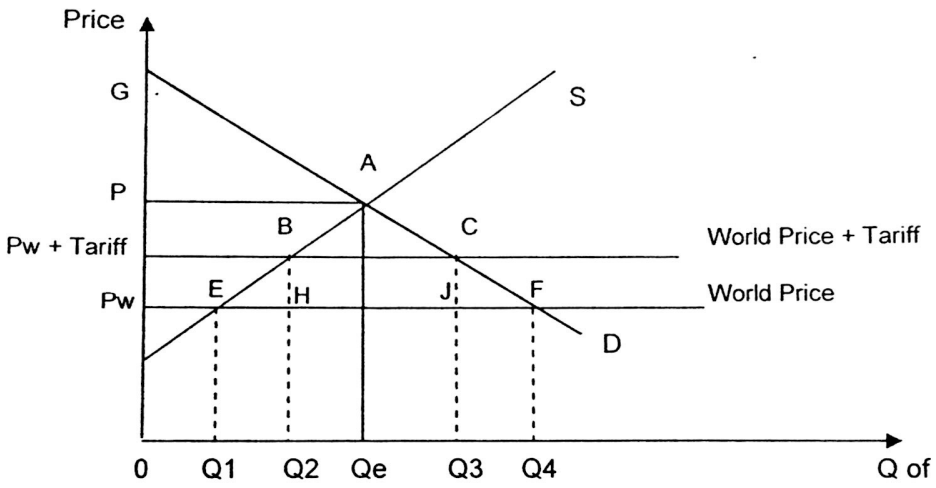
7.2. On the other hand, wages for high-skilled labour such as engineers and financial analysts will rise. This **widens the income gap**, even in Singapore which has a high GINI coefficient, the indicator of income inequality. Thus, while trade leads to economic growth, it may not be inclusive and income redistribution by the government is necessary, such as the Workfare Income Supplement (WIS).

Protectionism

Definition: A policy of sheltering domestic industries from foreign competition through the imposition of trade barriers on imports

Mechanism: Tariffs

Tariffs are taxes imposed on imports to raise import prices. This leads to lower consumption and gives consumers incentive to switch from imports to local goods. **Evaluate:** The extent of switching depends on the PED_M and XED



- Without international trade, the domestic price is set at P and output is Q_e
- If foreign producers supply goods that are demanded at world price, P_w. Under free trade, domestic prices cannot differ from P_w especially if the country is a price taker

At P_w,

- Domestic production is Q_1 and domestic consumption is Q_4
- Dependence on imports Q_1Q_4
- Consumer surplus is GFP_w

Specific tariff of $t per unit is imposed

- Supply curve shifts up by t since the tariff is added to the price of every unit of import domestically sold
- Domestic price rises from P_w to P_w+tariff

At P_w+tariff,

- Domestic production is increased to Q_2 and domestic consumption is reduced to Q_3
- Dependence on imports reduced to Q_2Q_3
- Consumer surplus is reduced to GCP_w+tariff

As a result

- Consumers reduce consumption from Q_4 to Q_3, switching from imports to less price competitive domestic goods. Consumer surplus falls from GFP_w to GCP_w+tariff
- Domestic producers increase production from Q_1 to Q_2 and increase revenue (due to higher Q, higher P), increasing producer surplus
- Governments receive tax revenue of BCJH (extra amount paid by consumers for imported quantity)

Protectionism may lead to an inefficient allocation of resources as there is less trade and specialisation based on countries' comparative advantage and factor endowment. Consumers now buy from less price competitive local producer, leading to lower SOL and consumer welfare.

Reasons for Protectionism

1. It is used to **protect infant industries** that may bear **heavy initial costs** that cannot be covered by the small initial output. With protectionism, there will be less foreign competition and local producers can increase their scale of production and exploit iEOS, leading to lower average costs and greater price competitiveness. Over time, local firms are able to conduct R&D and use non-price competition such as branding and advertising.

1.1. **Evaluate**: However, with imperfect information, governments may not be able to determine the potential of industries accurately and they may incur an opportunity cost of spending on such subsidies. Furthermore, reduced competition may make domestic firms complacent and they have less incentive to improve cost-efficiency or conduct R&D. In the long run, failed protected infant industries are unable to compete internationally, leading to higher unemployment over time.

1.1.1. Successful examples are the car and manufacturing industries in Japan while there are failures such as Malaysia's car and Brazil's computer industry

2. Matured industrialised economies may **protect sunset industries**. With the emergence of low-cost countries such as China and India which have an abundance of low-skilled labour, developed economies lose comparative advantage in labour-intensive sectors, as has happened in the British textile and shipbuilding industries. Low-skilled workers in these sectors are unable to move up to higher value added sectors in which the countries have CA. This **occupational immobility** contributes to **structural unemployment**. With protectionism, consumers switch from imports to goods from these mature industries, where workers will see a higher demand for their

services, increasing their wages and hence SOL. Thus, the decline of the industry may be slowed down and time is gained for workers to undergo retraining and industries to restructure.

2.1. **Evaluate:** Protectionism does not solve the root of structural unemployment may **lower the incentive** for industries to restructure or workers to upgrade their skills, especially if protectionism is perpetuated under strong pressure of trade unions where wages rise faster than the growth of labour productivity. It does not increase employment and instead prolongs domestic allocative inefficiency and also harms trading partners who will experience a decline in exports and consequently, lower unemployment that may even trigger off retaliatory measures. Moreover, given pressures to maintain domestic stability, these barriers may be difficult to remove.

3. Protectionism can in some cases be used as an **expansionary demand-management policy** measure to reduce unemployment during a recession. Demand for local goods and services will rise, increasing AD and higher GDP and lower unemployment via the k processes. Since money spent on imports will only create employment in foreign countries, protectionism can create jobs by raising the prices of imports and diverting demand towards domestic production. Furthermore, import restrictions may correct the BOP disequilibrium by reducing imports and reducing the depletion of foreign currency reserves.

3.1. **Evaluate:** However, other countries may retaliate and impose trade barriers, leading to lower X and AD. With lower global trade volumes, countries will see falling AD, lower global income and worsening the current account deficit, perpetuating the recession.

3.1.1. For example, Smoot-Hawley tariffs in the 1930s worsened the Great Depression as it was a "beggar-thy-neighbour" policy as it seeks to alleviate a nation's economic difficulties at the expense of other countries.

3.2. **Evaluate:** The effectiveness of tariffs depends on the PED and PES of imports and exports. At best, it is a short term measure to improve the BOP deficit and in the long run, it would be better to solve the root problem.

3.2.1. For example, the root problem may be the inflation rate which should be solved by supply side policies.

4. Protectionism may somewhat be justified as a measure against **unfair trade practices such as dumping**, the sale of goods in an overseas market below the marginal cost of production often through government subsidies. The objective is to drive out rival domestic producers so that the foreign exporter can monopolise the market in the long run. As a result, domestic output and employment reduces as local firms may not be able to compete against foreign exporters. After the collapse of the domestic industry, prices would be increased with the increased market power.

4.1. For example, China's solar panels are sold at lower prices and the country often faces allegations of its artificial export price competitiveness with currency manipulation. Thus, the price distortion involved in dumping leads to an inefficient allocation of resources.

4.2. **Evaluation:** However, foreign producers may be selling at lower prices due to their country's comparative advantage and factor endowment or due to price discrimination, which may be beneficial to the importing country in the long run.

Conclusion

- While the use of protectionism may be justified in some situations, it is ultimately a short-run policy which fails to address the root cause of economic problems and should be complemented by the use of other more appropriate policies in the long run.
- Furthermore, the potential costs may outweigh the benefits if protectionism leads to retaliation or lowered incomes of trading partners which would lead to the fall of a country's AD, especially export-dependent countries.
- Higher import prices may also lead to cost-push inflation, especially for resource poor countries like Singapore. Even if countries are resource rich, domestic producers cannot produce at as low an opportunity cost as trading partners and P will still rise.
- With less trade and specialisation based on countries' CA, resources are less efficiently allocated and consumers' welfare is not maximised and protected firms have less incentive to respond to changes in market conditions, to reduce prices, improve quality or raise productivity.
- Arguably, the gains and costs of protectionism are not equitably distributed – few producers gain at the expense of many consumers who have to bear with higher prices and lower SOL.
- For trade-dependent countries like Singapore, protectionism is not a viable policy option, given the nature of economy and dependence on X and M, as well as the legal obligations of FTAs.

Globalisation

Definition: Facilitated by improvement in **technology** and breaking down of **artificial barriers**, economic interdependence of countries worldwide grows through an increase in

- International trade of goods and services
- International flow of FDI/technology
- International movement of labour

Mechanism of Economic Integration

(insert effects, pg3)

Benefits

For Recipient Country

1. Increased volume of trade in goods and services

1.1. Free trade agreements **lower the price of imported raw materials** and finished goods from countries with CA in its production. If the PED_X is higher than the PED_M, the net export revenue increases, leading to an improvement of balance of trade and ultimately in balance of payment position. Singapore's exports tend to be price elastic due to the availability of close substitutes and imports tend to be price inelastic due to a paucity of resources. Thus, there will be an increase in net exports, where **(X-M) increases and AD increases** via the multiplier process.

1.2. In the long run, greater trade links have allowed for **diversification of sources** of imported raw materials and other commodities. This reducing the risk of overdependence on one source of import, reducing the country's vulnerability and decreasing the market power and ability of an importer to increase prices. Thus, the country would be able to procure at the lowest cost possible. The lowered cost of production shifts the **SRAS curve downwards** and GPL is reduced.

1.3. Evaluate:

1.3.1. Nature of economy: X/gdp

1.3.2. Effectiveness of government policies, e.g. 2009 Resilience Package

2. Through lowering non-tariff barriers such as ownership restrictions and restrictions on movement of funds, capital flows lead to an **increase in FDI**, and hence **AD increases** in the short run as factories are built and capital goods are purchased. In the long run, **AS increases** as the stock of capital goods is increased and better production technology may be introduced. This increase AD (actual growth) and AS leads to sustained and low-inflationary economic growth in the long run (draw diagram).

2.1. FDI also creates jobs, leading to lower unemployment and wages may increase due to high value added jobs created. Lastly, FDI can create new production capabilities that helps to improve X, for example, pharmaceutical and aerospace industries.

2.2. Firms may offshore and input FDI in low cost countries, such as China, to tap onto the cheaper factors of production and larger domestic market. On the other hand, firms may offshore to Singapore due to its political stability, skilled labour, infrastructure, corporate tax, etc. This increases AD and in the long run, the current account improves as profits are repatriated.

3. Greater flows of labour

3.1. Migrant workers, especially from developing countries, are more willing and able to supply labour at lower wages than native workers. This increased supply of labour lowers the wage rate, benefitting producers due to a lower cost of production, shifting AS downwards and reducing inflation.

3.2. The increase in labour supply and brain gain increases both quantity and quality of labour, leading to a rightward shift of the LRAS. If immigrants are highly skilled and educated, productivity increases and the possibility of positive externalities through knowledge and skills transfer is greater.

Costs

1. Shock: Vulnerability to external shocks
2. Shock: Supply shocks – imported inflation
3. SUE
4. WIG
5. Strain on infrastructure

Evaluation

Extent of benefits depends on:

1. State of economy: If near full employment, globalisation may overheat the economy with little actual economic growth and high inflationary pressures

1.1. State of global economy: Vulnerability to global recession

2. Nature of trading partners' economies
3. Competitiveness of local economy
4. Ability to attract the right type and sufficient amount of FDI
5. Ability to retain local talent while attracting foreign talent
6. Government intervention to mitigate negative effects such as structural unemployment

Policies

To reap the full benefits of globalisation, Singapore government should try to achieve the following:

- Improve the competitiveness of Singapore's X industry through:
  - Improving its price competitiveness
  - Improving the quality of its X
- Improve the attractiveness of Singapore as a FDI destination for overseas MNCs.
- Attract top talent to augment the quantity and quality of its labour force.

To mitigate the negative effects of globalisation, Singapore government should try to achieve the following:

- Reduce the volatility of Singapore economic performance
- Address structural unemployment that might arise
- Manage income inequality in Singapore
- Enhance and expand its public infrastructure to cope with increasing labour force and resident population

Improve competiveness of Singapore's X industry include:

1. Exchange rate policy to ensure low stable inflation in the LR
   - In times of economic boom, policy of modest, gradual appreciation of SGD moderates imported inflation and DD-pull inflation in Singapore. This helps Singapore manage its inflation rate at low, stable levels. It also helps to avoid vicious cycle of wage-price spiral. Over the long term, effective management of Singapore's inflation rate through the use of modest, gradual appreciation of SGD policy helps to improve price-competitiveness of Singapore's exports, vis-à- vis economies that experience relatively higher inflation rates.
   - Evaluate: However, a modest, gradual appreciation of SGD policy compromises actual growth in the SR as (X-M) decreases (assuming MLC holds).

2. Wage policies that allow wages to grow in line with productivity gains
   - Through National Wage Council guidelines, Singapore government has been able to influence the rate of wage growth in Singapore. It has consistently recommended that wage growth should be in line with productivity gains. This helps to prevent an increase in the per unit cost of production in Singapore, maintaining price competitiveness of Singapore's exports.
   - Evaluate: However, NWC guidelines are guidelines which are not mandatory for employers to follow. There is unevenness in the adoption of NWC guidelines among employers. Moreover, NWC guidelines only cover labour cost of production. There are other types of cost of production, such as rental cost, raw material cost and equipment cost incurred by businesses.

3. Supply side policies which help to improve productivity or improve quality of goods/services such as:
   - Subsidies for upgrading technology level to improve productivity. The Productivity and Innovation Credit Scheme (PIC) scheme was introduced by the government to encourage productivity and innovation activities in Singapore. It provides support to businesses that make investments to improve their productivity. Under the PIC Scheme, businesses can enjoy 400% tax deductions/allowances and/or 60% cash subsidies for investments.
   - Evaluate: However, the PIC is an expensive scheme for the government to fund. The incremental gain in productivity of businesses is uneven. Some businesses have been able to tap on the scheme to purchase equipment which significantly improved business processes such as automating production processes. However, there were businesses which used the PIC to purchase photocopying machines and other equipment which did not improve productivity.

Improve attractiveness of Singapore as a FDI destination for overseas MNCs:

1. Competitive corporate tax rates
   - Singapore has lowered corporate tax rates over the decade from 20% to 17%. Lower corporate tax rates increases after-tax profits of firms. This stimulates both investments by local firms and FDI. Corporate tax rate is an important factor in attracting FDI as it directly affects profits.
   - Evaluate: However, lowering corporate tax rates reduces tax revenue of the government. It may require the government to increase other types of taxation, such as GST. Otherwise, the government's ability to spend will be curtailed. Corporate tax cuts can also trigger similar tax cuts from other countries competing to attract FDI. Competitive tax cuts result in a lose-lose situation among the competing countries.

2. Enhancement of infrastructure to increase productivity of businesses in Singapore.
   - For example, air, road infrastructure and industry infrastructure such as Jurong Island. Jurong Island boasts a set of seamlessly integrated infrastructure solutions which includes service corridors, logistics and warehousing, as well as a comprehensive host of shared third-party utilities and services. With its dedicated "plug and play" infrastructure, companies are able to enjoy cost savings.
   - Evaluate: However, the development of large industry infrastructure requires a long planning and construction period. The industry-specific nature of Jurong Island also requires the government to correctly identify potential CA industries.

Attract top talent:

1. Competitive income tax rates
   - Singapore's personal income tax rate is progressive in nature. It is competitive with a highest marginal tax rate of 20%. A relatively low personal income tax regime helps to attract top talent as they retain a greater proportion of their earnings.
   - Evaluate: [The limitations of a low personal income tax are similar to those of corporate tax. See previous discussion about corporate tax.]

Reduce volatility of Singapore's economic performance:

1. Sign FTAs with diverse trading partners.

- This will help cushion the negative effect of economic slowdown of any one of Singapore's trading partners.
- Evaluate: However, given the inter-connected nature of the global economies, Singapore will inevitably be significantly affected by economic slowdown of the biggest economies in the world, such as the US and Chinese economies.

2. Flexible wages that allow wages to fall during times of economic recessions.
   - This will help save jobs. The NWC has recommended businesses to adopt a flexible wage model which comprises salary components which vary with the profitability of firms. This allows businesses to reduce wage costs and cope better during economic recessions. Consequently, there will less retrenchment arising from business closures.
   - Evaluate: However, workers must be willing to accept such flexible wage structures. Trust between employers and workers have to be built and there has to be platforms for employers and workers to meet to negotiate the details of such flexible wage arrangements.

3. Use of foreign exchange and fiscal policy to stabilise the economy in times of global economic recessions.
   - In times of economic recession in Singapore caused by fall in X, the Singapore government can adopt a once-off depreciation of SGD and/or expansionary fiscal policy. Depreciation of SGD increases (X-M) component of AD (assuming MLC holds). Expansionary fiscal policy of reducing taxes and/or increasing G results in increases in C/I and G respectively. Both policies result in more than proportionate increase in real NY, reduces cyclical unemployment and improves BOT.
   - Evaluate: However, depreciation of SGD results in imported inflation. Hence, the extent of depreciation is limited. Expansionary fiscal policy is limited in effectiveness due to the relative size of C and I, relative to X. Hence, it is at best able to reduce the negative effects of a fall in X but not offset it.

Reduce structural unemployment

1. Subsidies for retraining of displaced workers.
   - SkillsFuture credit is a cash subsidy given to mid-career individuals to support their learning needs, including learning skills to re-enter the workforce. Government is also involved in sourcing relevant skills based modular courses that help to equip Singapore workers with relevant skills to support CA industries. Through these subsidies and sourcing initiatives, it facilitates the process of individuals learning relevant skills to be employed in the Singapore economy.
   - Evaluate: However, these initiatives are only receptive if workers are receptive to the idea of life-long skills retraining and upgrading. Hence, the government's efforts in using educational campaigns to bring across this idea. In addition, these initiatives are expensive and need to be funded using tax revenue. In order to be effective, the skills taught at these courses must be relevant and the quality of these courses must be good.

Reduce income inequality

1. More aggressive redistribution policies including more progressive taxation and generous transfer payments.
   - Workfare Income Supplementation programme is a subsidy which seeks to supplement
   - wages of low wage workers. More generous transfer payments in the form of subsidies of essential merit goods such as healthcare and housing also helps to reduce the effects of increasing income inequality.
   - However, increasing corporate taxes reduces the incentive for businesses to invest. It also reduces Singapore's attractiveness as a FDI destination. It goes against the earlier mentioned policy of reducing corporate taxes to attract FDI. Increasing personal income taxes can reduce an individual's motivation to work and goes against the earlier mentioned policy of maintaining a competitive personal income tax regime to attract foreign talent.