FACTORS CAUSING PARALLEL SHIFT OF AE FUNCTION

Factors affecting Autonomous Consumption:

1. *Expectations of future incomes*

(A) Consumer optimism
- Expect rising future incomes (higher consumer confidence)

(B) Consumer pessimism
- Incomes expected to stagnant, might decide to save more
- Called Paradox of Thrift – consumers save, contraction of NI, decrease in incomes of consumers, save more

2. *Wealth*

Wealth includes real assets like houses, jewelry and financial assets like stocks and shares
- Wealth effect
- When a person's wealth increases (value of stock increases), makes him feel rich
- Spends more

3. *Consumer credit (Monetary policy)*

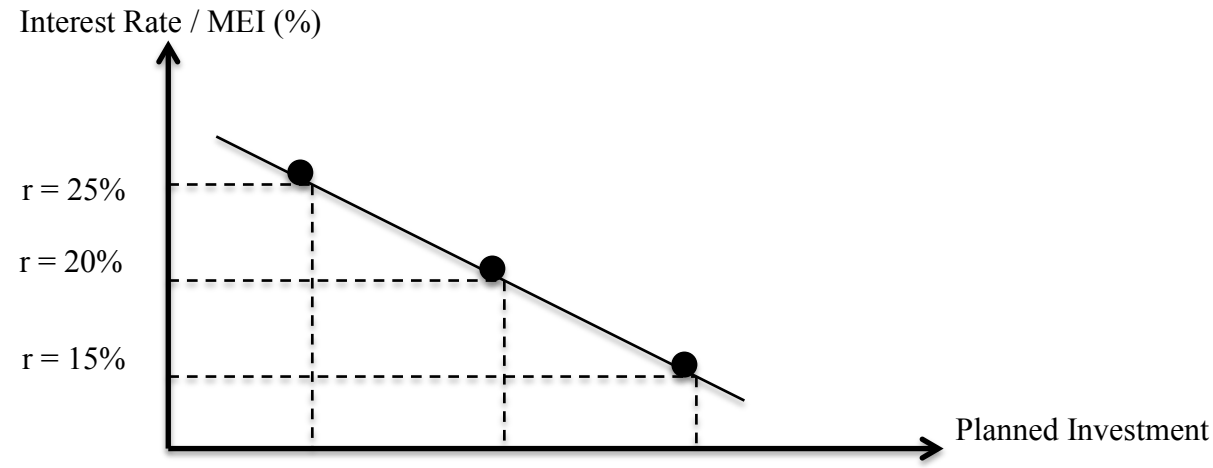
Credit represents loans or borrowed funds
- Consumptionikly to rise if it is cheap and easy to borrow

Interest rates = Cost of borrowing / Credit

Monetary policy: Regulates banks' ability to lend money through controlling interest rates
- **High interests**: More likely to save
- **Low interests**: More likely to spend

Factors affecting Investment:

1. *Interest rates (**movement** along MEI)*



Relationship: Fall in interest rates causes investment to increase

Chapter 4: AD-AS Analysis

AGGEGATE DEMAND

Definition: Total level of expenditure on domestically produced goods and serves by households, firms, government and foreigners at each general price level for a given period of time

$$\mathbf{AD = C + I + G + (X - M)}$$

Movement along AD curve: Change in general price levels

Factors that shift AD curve:

Any change in non-price determinants will shift the AD curve:
- Consumption, Investment, Government expenditure, Net Export Revenue
- Policy options also shift the AD

Non-price determinants of AD	Component

Fiscal Policy
 	
Government influences AD through spending and tax policies
• **Expansionary policy**
  ○ Aim to increase AD by budgeting for a deficit (G > T)
  ○ Reducing direct taxes
  ▪ Income – Increase disposable income
  ▪ Corporate – Increase expected rate of return on investment
• **Contractionary policy**
  ○ Reduce AD by budgeting for a surplus (G < T)
	C, I, G

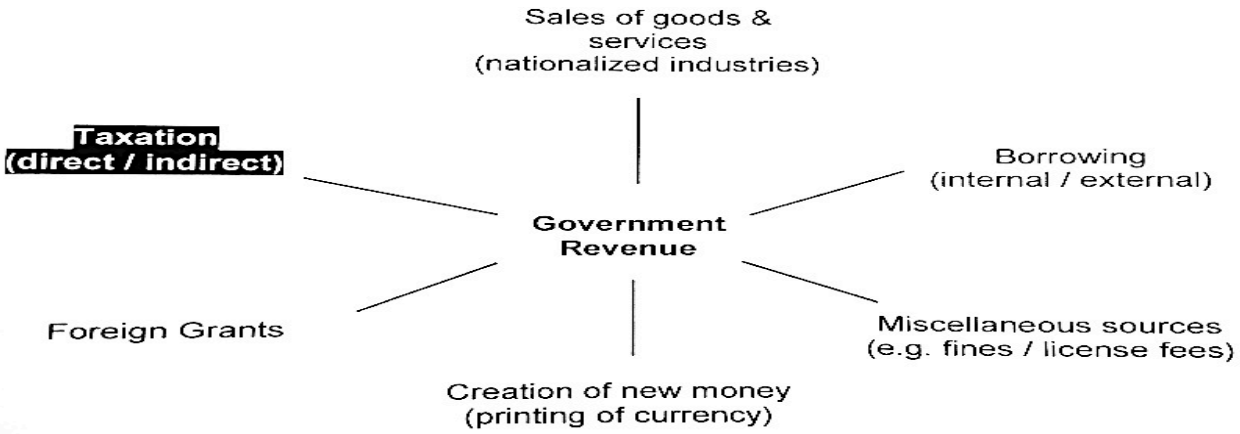
Monetary Policy / Credit Conditions
 	
Consumption can be financed by both income and by borrowing or incurring debt
• **Credit value**
  ○ Making credit cheaper or more easily available
  ○ Increasing money supply (printing more money)
• **Interest rates**
  ○ Lower interest rates → lower cost of borrowing
  ▪ Households – purchase more consumer goods
  ▪ Firms – purchase more capital goods
• **Exchange rates**
  ○ Causes a shift in quantity demanded for exports and imports
	C, I, X – M

Trade Policy
 	
Achieved through trade agreements
• **Free Trade Agreements**
  ○ Reduces tariffs (tax on imports)
  ○ Ease and facilitate investments
• **Trade Barriers**
	I, X, M

Chapter 8: Fiscal Policy

GOVERNMENT REVENUE (TAXATION)

There are actually 6 principle methods of raising revenue to finance government expenditure



Functions of Taxation:

Microeconomic –

1. Correct market failures related to negative externalities: discouraging consumption of undesirable goods
2. Reduce income inequality by redistributing income and wealth through progressive tax rates on personal income taxes, using tax collected to provide essential goods and services to all

Macroeconomic –

1. Promote actual and potential growth: taxes raise revenue for government expenditure and giving tax rebates/incentives as part of supply side policies to encourage investments
2. Encourage external trade: Tax rebates given to infant industries to develop comparative advantage and tariffs on exports as an expenditure switching method

Systems of taxation:

Marginal Rate of Taxation: It is the proportion of additional income paid in taxes	Change in Taxes Change in Y
Average Rate of Taxation: It is the proportion of total income paid in taxes	Total Tax Payable Total Income

Progressive Tax System

The tax takes a higher proportion of one's income as income increases; the percentage of income paid in taxes rises as income rises

- Regarded as equitable as it takes into account the ability to pay
- Example: Singapore's income tax (from 0% to 20%, depending on income)

Regressive Tax System

Tax takes a smaller proportion of income as income increases; the percentage of income paid in taxes falls as income increases

- Example: Goods and Services Tax (GST) [Singapore 7%] or Value Added Tax (VAT)
- Deemed as less equitable

GOVERNMENT EXPENDITURE

Refers to the spending of the government sectors

Purpose of government expenditure:

1. Provide for public goods and merit goods
2. Redistribute income from rich to poor through benefits and pension
3. Regulate economic activities and promote economic growth
4. Pay interest to national debt (interest payment on treasury bills and bonds)

Categories of government expenditure:

- *Current/Ordinary Expenditure* – expenditure incurred in day-to-day routine (wage of civil servants)
- *Development/Capital Expenditure* – includes spending on public investment (new hospitals and schools)

Economic effects of government expenditure:

Effect on Resource Allocation
By varying the types of government expenditure, the government can affect the pattern of production → if government encourages movement to labour intensive industries, will thus hand them subsidies
Effect on Income and Wealth
Expenditure on health, educational services, social welfare, old age pensions will mainly benefit the poor. Together with a progressive tax system, this will serve to reduce the extent of income inequalities
Effect on Economic Growth
Expenditure on infrastructure, improvement and extension of transport improves productive capacity and efficiency of a country Thus this boosts output and employment and increases national income
Effect on Stability
It is used as a tool to influence the level of economic activity, such as increasing AD in times of recession and lowering it in times of inflation

FISCAL POLICY

The aims of fiscal policy is to stimulate economy closer to full employment without inflation, promote economic growth and maintain price stability

There are two main tools of fiscal policy: automatic stabilizers and discretionary fiscal policy

Automatic fiscal stabilizers:

They are built-in features of the economy that operate automatically where changes in aggregate demand occur without any deliberate intervention by the government

They are thus known as counter-cyclical forces

- When times are good: contracts AD
- When times are bad: expands AD

They are beneficial as they avoid problems with time lags that include recognition lags and legislative lags

Fiscal policy to solve slow/negative economic growth and cyclical unemployment:

(1) Stimulates AD as it is part of the components, resulting in unplanned decrease in stocks and firms thus up production AND decrease T to increase disposable incomes and investments (2) Briefly explain multiplier effect (3) Draw Y-AE / AD-AS diagram and explain the diagram (4) Limitations (5) Conclusion

Limitations

1. *Small multiplier*

- Singapore economy is small and open, thus having to import our raw materials and intermediate goods
- As import leakage is large, MPM is high
- Also a significant proportion of Singapore's wealth is locked up in CPF, which is a form of mandatory savings, MPS is high

2. *Relative small size of government spending to other components of AD*

- Fall in export revenue of 5% requires more than 20 times increase in G
- Makes fiscal policy less effective

3. *Economic outlook*

- If the economic outlook is bad, consumers might not increase consumption with a corresponding increase in government spending

Conclusion

Even though fiscal policy in Singapore faces many limitations, it is still used by our government

- Boosts confidence of investors and consumers as it sends strong signal that government is trying to resuscitate the economy
- Will not lead to crowding out effect as government has huge budget reserves
- It is also easier/flexible for Singapore to use off budget as parliamentary debates are minimal

Fiscal policy to solve demand-pull inflation:

(1) Reduces AD as it is part of the components, resulting in unplanned increase in stocks and firms thus down production AND increase T to reduce disposable incomes and investments (2) Draw AD-AS diagram and explain the diagram (3) Limitations (4) Conclusion

Limitations

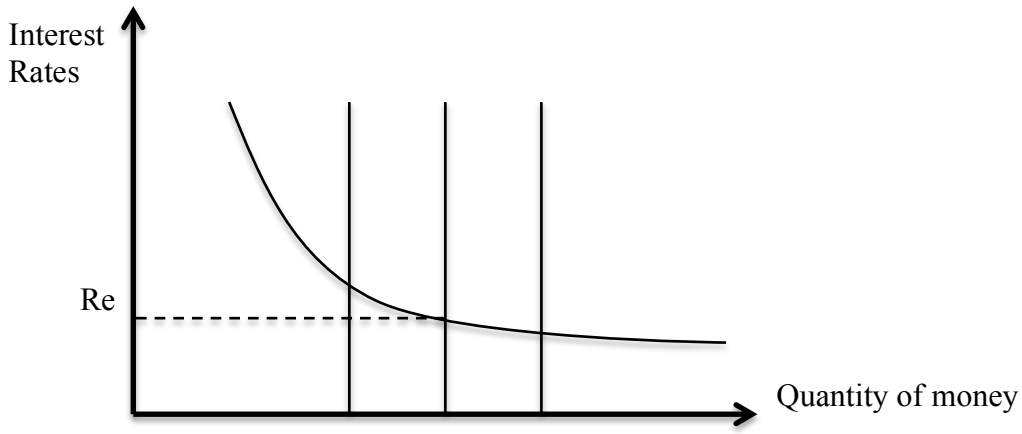
1. *Relative inflexibility to change government spending*

- Difficult to reduce spending in times of inflation as they are tied to long term contracts which cannot be easily switched

2. *Ineffectiveness of using taxes due to good economic outlook*

- They will not deter spending if economic outlook is good
- Increasing direct taxes has long term supply side effects on incentive to work and invest

Changes in Equilibrium interest rates:



Increase in Money Supply

When monetary supply increases, interest rates will fall, known as expansionary monetary policy

- This encourages consumption and investment since the cost of borrowing is lower
- Stimulates the AD

Decrease in Money Supply

When monetary supply decreases, interest rates will rise, known as contractionary monetary policy

- This discourages consumption and investment since the cost of borrowing is higher
- Lowers the AD and fights demand pull inflation

TOOLS OF MONTARY CONTROL

Monetary policy is a policy to affect the AD by altering the interest rates, usually involves the central bank intervening in the money market to ensure interest rate announced is also equilibrium interest rate.

Central bank lending rate:

Also known as the rate at which the Central Bank lends reserves to commercial banks

- Changing this rate serves as a signal of the stand of the Central Bank
- If the rate is raised, commercial banks become more cautious and selective in lending, thereby raising their interest rates
- If the rate is lowered to below that at which banks charge their customers, they take advantage of the cheap source of funds to create credit and give out more loans

Open Market Operations:

It is the purchase and sale of government bonds (usually short term bonds or Treasury Bills) by the Central Bank in the money and capital markets

- If government wishes to reduce money supply, Central Bank would sell treasury bills and short-term government bonds to reduce cash holdings of commercial banks
- If they wish to increase money supply, the Central Bank would purchase bonds preveiously issued – also known as “Quantitative Easing”

Using monetary policy (via ER) to solve cyclical unemployment via improving BOT:

(1) Exports being relatively cheaper in foreign currency and imports relatively more expensive in domestic currency (2) Assuming ML holds, depreciation will improve net exports and thus AD (3) Draw AD-AS diagram and explain the diagram (4) Limitations (5) Conclusion

Limitations

1. *J-curve effect*

- Depreciation will first worsen the BOT before eventually improving it
- Due to less responsiveness of both quantity of exports and imports to price change
- Time needed for people to adjust

2. *Demand for imports price-inelastic*

- Demand for imports is price-inelastic due to limited natural resources and needs to import for consumption and production of exports
- Thus increase in price of imports leads to less than proportionate fall in Qd, leading to increase in import expenditure and worsens BOT
- However as long as ML holds, depreciation will lead to improvement in BOT

3. *Drive up cost of imported inputs*

- Offsets advantage gained by exporters from the initial depreciation of S$

Conclusion

MAS stand is to slow-down gradual appreciation of S$ to mitigate effect on gradual appreciation

- Encourages exporters to improve product attractiveness by improving quality, productivity, product innovation, marketing and branding
- Aim to make exports more price inelastic

~ END ~

Consequences of a Deterioration of BOP:

Deterioration in Current Account

Contractionary effect on the economy

- Assuming decrease in current account is due to decrease in (X-M), this will decrease the AD
- NI will decrease via the multiplier process
- Draw AD-AS diagram

However it is important to note that a worsening BOT is not necessarily bad as it depends on the original state of the economy (cool inflation) and the impact on SOL (increase in material goods)

Deterioration in Financial Account

Outflow of FDI: less employment opportunities for domestic economy

- An outflow of FDI away from domestic economy towards lower labour cost countries
- Hence country will experience a decrease in the AD and even productive capacity

Outflow of hot money: increases funds for investment

- Leads to decrease in the supply of loanable funds, thus raising interest rates
- This discourages consumption and investment since the cost of borrowing is higher

Outflow of portfolio investment

- Government will have lesser funds to finance their spending

Consequences of an overall BOP deficit

Persistent BOP deficit will cause a country to draw down on its reserves as it needs to be financed by government's official reserve transactions.

This reduces a country's ability to intervene in the forex market and problematic for countries with fixed exchange rate system as it reduces her ability to defend her currency

CAUSES OF DETERIORATION IN BOP

Worsening Current Account:

1. Reduction in export revenue

Loss in comparative advantage due to emergence of low cost competitors

- Law of CA states that countries should specialize in production of goods in which it has a lower opportunity cost
- Developed countries slowly lose their CA in production of low-end manufacturing goods with low-cost economies like China
- Her abundance in cheap labour, vast land and resulted in lower opportunity costs
- This causes a loss in export competitiveness of the developed countries and Chinese products are preferred due to their lowered price
- Domestic consumers also switch to cheaper imports causing increase in import expenditure assuming demand for imports is price elastic
- Many MNCs have outsourced / offshored their production into these emerging economies to take advantage of their CA

Relationships between money supply and supply of currency when government intervenes
Money supply is the stock of money consisting of notes, coins and demand deposits

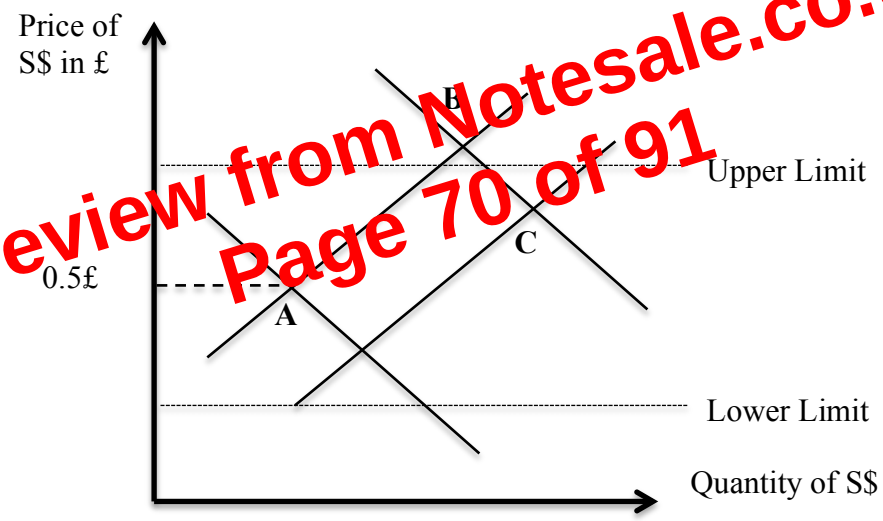
When government intervenes in the forex, there is **direct impact** on the money supply

- Each time the MAS intervenes to sell S$ in the forex, not only the supply of S$ increase, the money supply also increases
- It is important to note that the increase in money supply will not result in a change in the supply of a currency
- In the event that the increase in money supply causes people to have more money at hand, hence buying more imports and selling the S$, raising supply of S$, it is known as an **indirect impact** via changes in demand for imports

Note: If the government intervenes in the forex market, it will have to forgo interest rates as an economic tool to pursue macroeconomic aims

Managed Floating Exchange Rate System:
Although the government allows the exchange rate to find its own level, the government still intervenes to manipulate the exchange rate once it goes out of a certain range, or "band"

How the Exchange Rate Band System works
Consider the Exchange Rate Band System where the government sets an upper and lower limit to the exchange rate of the currency and allows it to fluctuate freely in this limit



Referring to the above figure

- Initially the exchange rate was at point **A**. A rise in the demand for S$ causes it to appreciate to point **B**, which is beyond the upper limit
- The MAS of Singapore intervenes by selling the S$ to a point **C** which is within the band
- On the other hand, if the supply increases until the exchange rate is below the lower limit, MAS will step in to buy back the S$

USING EXCHANGE POLICY TO ACHIEVE MACROECONOMIC AIMS

Impact of ER on BOP, Unemployment and Economic Growth:

(1) Impact on BOT of current account
- Exports relatively cheaper in foreign currency and imports relatively more expensive in domestic currency
- Assuming ML holds, depreciation will improve net exports and thus BOT

(2) Impact on Financial account where it lowers the cost of setting up operations in foreign land, hence improving financial account
(3) Improves Employment and Growth as (X-M) and I are both components of AD, allowing for increase in AD and thus NI via multiplier effect
(4) Draw AD-AS diagram and explain the diagram
(5) Limitations (Refer to Cures for BOP Deficit)

Impact of ER on BOP, Unemployment and Economic Growth:

(1) Reducing import-price-push inflation as appreciation makes imports relatively cheaper in domestic currency and lowers COP, important as Singapore is import dependent
(2) Reducing demand-pull inflation as appreciation makes exports relatively more expensive in foreign currency
(3) Draw AD-AS diagram and explain the diagram
(4) Limitations

SINGAPORE'S EXCHANGE RATE POLICY

Singapore uses a managed floating exchange rate system where the MAS. MAS also relies on reducing business cost and improving labour productivity to manage our AD

During normal times, gradual and modest appreciation:
It helps to reduce imported inflation as well as lower the cost of production of our exports. However, if ML holds, an appreciation actually leads to deterioration in our BOT

However the negative effects is mitigated to some extent
- Fall in prices of imported inputs (hence lower COP) and also through implementation of supply side policies
- Export competitiveness is made up of both price and quality
- Singapore's supply side policies make use of R&D to develop more efficient and effective technology to produce higher quality goods and retraining of workers also help to reduce the unit cost of production, allowing for a lowering of prices of exports

Note: A strong dollar also helps to instill confidence in investors and attracts FDI due to higher expectations of economic growth and hence profitability, and higher rate of returns when profits are converted back to their home currency if the currency continues to appreciate.

However, too strong a currency might also deter them since they it increases their COP. FDIs are attracted to a country for other reasons as well like: low corporate tax rates, good infrastructure, skilled labour and political stability

~ END ~

Area of comparative advantage

	1 unit of tablet	1 unit of textile
USA	0.25T	4C
Vietnam	2T	0.5C

For USA, to produce each unit of computer, she has to give up 0.25 units of textile. But to produce 1 unit of textile, she has to give up 4 units of computer. Hence, using the same argument, we can see that USA has a comparative advantage in the production of computer, as it needs to give up lesser units of textile as compared to Vietnam while Vietnam has a comparative advantage in the production of textiles

Production after specialization

If each country specializes completely in the production of the good in which it possesses a comparative advantage, the production pattern would be as follows:

	Computer	Textile
USA	80	0
Vietnam	0	20
Total world output	80	20

Hence, after specialization, USA produces 80 units of computer and no textile while Vietnam produces 20 units of textile and 0 units of computer

Consumption after trade

Note: The terms of trade (TOT) measures the rate of exchange of one good or service. The TOT must lie within the limit of 0.5C < 1 Textile < 4C, where the closer it is to 0.5C, the more Vietnam loses and the closer it is to 4C, the more USA loses

Assuming that the terms of trade is 1C for 1T, and they trade 10 units of computers, the consumption levels will be as follows

	Computer	Textile
USA	80 - 10 = 70	0 + 10 = 10
Vietnam	0 + 10 = 10	20 - 10 = 10
Total world output	80	20

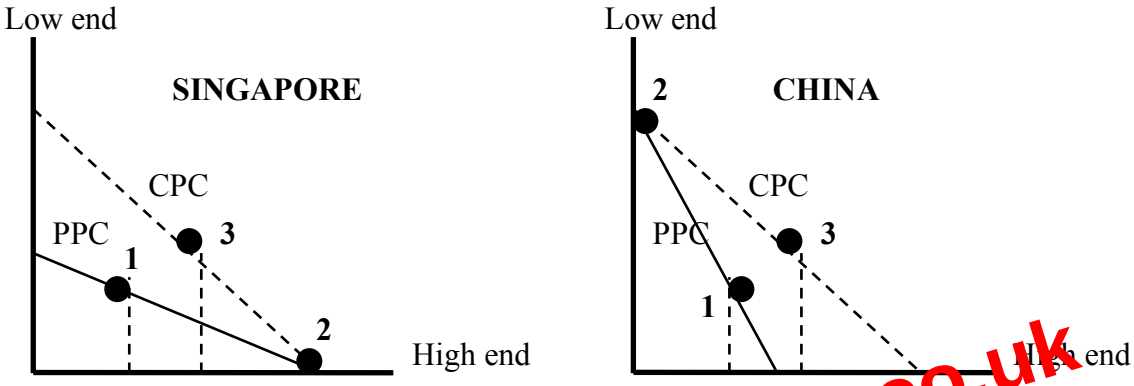
Gains after trade

	Computer	Textile
USA	70 - 40 = 30	10 - 10 = 0
Vietnam	10 - 5 = 5	10 - 10 = 0

Hence, by look at the above table, we realize that both countries are able to consume more than before after complete specialization and trade. This results in a higher standard of living.

Option B – Consumption out of PPC

- Trade between two countries lead to higher level of welfare or living standards as they can consume beyond a country's production possibility
- Prior to specialization and trade, Singapore and China would be producing a point 1 on their PPC – this point represents self-sufficiency
- However if countries specialize, Singapore in high-end manufacturing and China in low-end, the would produce at point 2 on their PPC
- If they trade on mutually benefiting TOT, they can now **consume** more of both types of goods which is point 3 on their **consumption possibility curve (CPC)**
- This is due to higher efficiency gains which are possible through specialization due to their respective CA and better rate of exchange or favorable TOT



Technological factor:

A major limitation to free trade is high/prohibitive transaction/transportation costs

Geographical distances and poor communication are potential hindrances or limitations to free trade

- In international trade, countries have to factor in transaction costs such as freight costs for shipping or airlifting goods from one country to another
- According to the Law of CA, too high or prohibitive transportation costs can wipe out gains from trade arising from difference in CA
- If difference in opportunity cost was $100, but transportation costs alone is higher than that, then potential gains from trade are wiped out by too high/prohibitive transaction costs
- Hence technological advancements have facilitated trade by reducing transportation or transaction costs
- **Communication** is now cheaper and more efficient such as the growth of e-commerce via the internet
- It enhanced the flow of information and facilitated cross border business transactions
- It is a very cost efficient way for countries to reach out to a huge global market using on-line marketing tools like the internet (Amazon to sell books)
- **Transportation** of goods, resources and people is cheaper and more efficient
- This has enhanced global trade and investment as well as tourism (use of giant container ships to transport bulky goods)

Costs of globalization:

Brain drain

- Talent is highly sought in a globalized world thus people who are talented, skilled and enterprising are more internationally mobile due to a combination of pull and pull factors
- Pull factors include attraction of better job prospects, opportunities and way of life by vibrant global cities in developed countries
- Push factors include backwardness, lack of job opportunities, low living standards, corruption and poverty in poor countries
- Poor developing countries thus lose out as their talented people are likely to migrate to developed countries for better jobs and living standards
- It thus slows down their economic growth and development as it deprives them of talent to spearhead it

GLOBALISATION AND SINGAPORE

Globalization and Singapore's POT:

Underlying principle determining the POT for an inter-industry model is the Law of CA. However globalization can affect or alter the underlying factors behind Law of CA

Composition of Trade

Globalization has impact on comparative advantage (gain/loss)

Loss in CA

- Trade liberalization led to emergence of new rivals causing countries like Singapore to lose her CA in production of cheap low-end labour intensive products
- Many MNCs have taken advantage of globalization to cut costs and be more efficient in production via offshoring or relocation, outsourcing to cheaper production centres

Gain in CA

- Mobility of resources or productive factors across national boundaries have allowed Singapore to acquire new CA in producing high value add, capital and knowledge intensive products
- Capital mobility takes the form of FDI inflows whilst labour mobility takes the form of influx of foreign talent / skilled workers

Trade partners

- Globalization has also altered composition of trade partners – in the past it used to be advanced economies like US, EU and regional economies like ASEAN
- Due to growing network of FTAs, trade has extended to emerging economies like China, India and non-traditional trade partners like Peru, Panama and Russia
- Forging of FTAs is prompted by the need to diversify our markets to cushion the economy against the threat of contagion and protectionism in a globalized world

Protection against dumping:

Dumping: refers to the selling of the same good to a foreign country at a lower price than that charged to the domestic buyers and below the marginal cost of production

The objective is to drive out rival producers in the importing country and thus monopolize the market

- Developed economies have often been perceived as victims of unfair trade practices like dumping
- It usually involves the use of state subsidies to sell their exports at artificially low prices, resulting in depressed wages and job losses
- Protectionism such as tariffs thus used to reduce imports and increase domestic production

There are also several limitations

- When domestic producers accuse of dumping, it might simply be that foreign firms are more efficient and thus able to 'undercut' domestic producers by selling similar products at lower or more competitive prices
- In instances where foreign producers are more efficient (due to a CA), the ultimate cost of protection is borne by domestic consumers (welfare loss)
- It is also often very difficult to prove 'dumping' in practice as there is a fine line between discriminatory pricing and differential pricing

Protection to improve trade balance and domestic employment:

Sometimes a BOP deficit is caused by excessive import expenditure over export revenue

- Governments may resort to trade barriers to reduce import expenditure
- Through the use of tariffs or quotas, causing imported goods to be more expensive and reduce import expenditure – improving BOP
- When trade balance improves, AD will also improve, NI will increase via multiplier and employment will increase

There are several limitations

- They will harm the trade position of major trading partners and cause them to retaliate with their own set of protectionist measures
- Cause world trade to fall and impede recovery and growth from worldwide recession
- Effectiveness of tariff also depends on price elasticity of demand for imports

Protection of declining or 'sunset' industries:

Massive structural unemployment often occurs due to globalization

- Faster rate of economic transformation and technology results in new machines and methods that make old skills obsolete
- Greater flow of cheap imports competing with domestic producers → reduce demand for domestic goods → retrenchment of workers as domestic firms lose their CA and close down → workers face difficulty in seeking employment in other industries
- Protectionism such as tariffs to reduce imports and increase domestic production provides buffer for workers in these industries to retrain and seek employment elsewhere
- They can also take the opportunity to reorganize and restructure themselves to compete efficiently with foreign rivals again

There are several limitations

- It may slow down the restructuring process and prolong inefficient use of economy's resources as they hold on to 'dying' industries relying on artificial support
- Protection may also be difficult to remove once it is introduced because of resistance from parties with vested interest
- Policy makers should thus render adjustment assistance to structurally unemployed workers rather than using protectionist measures

Protection of others:

1. Strategic Industries

- Strong political and strategic reasons for protecting an industry which has no CA
- Such as the need to be self-sufficient in times of war and not dependent on insecure sources
- Some industries are indispensable to any war effort such as steel, transportation equipment, aircraft and mining of strategic materials

2. Protection against 'Bads'

- Prevent the import and consumption of harmful goods such as narcotic drugs, pornography as well as firearms

3. Protection to achieve political objectives

- Used as a weapon of foreign policy to achieve political objectives
- Embargoes and other import controls are often imposed on trade in armaments and military goods

~ END ~