International Trade

- International trade refers to the exchange or transaction of g&s between countries.
- The theory of **comparative advantage** states that trade can benefit all countries if they specialise in the goods in which they have a comparative advantage in production[1] (i.e. she can produce it at a lower opportunity cost compared to her trading partner).
- Terms of trade (TOT) is the rate at which exports can be exchanged for imports.
- Protectionist measures are policies which distort market forces in order to give **competitive advantage** to the domestic industries of an economy.
- An import quota is a legal limit on the amount of a particular commodity that can be imported in any period of time.
- Infant industries refer to newly established industries which are perceived by the government to have potential comparative advantage in the production of certain goods.
- A recession is defined as a fall in output/ GDP/ negative economic growth lasting at least 2 consecutive quarters.
- Dumping occurs when goods are sold in overseas markets at a price below marginal cost.
- A country's pattern of trade concerns the composition[2], direction[3] and volume[4] of her trade
- FTA refers to an agreement between 2 or more countries in which all or some tariffs on some products are eliminated.

Theory of Comparative Advantage

The Singapore economy is open to the world, in trade and investment. This is both a matter of policy and necessity because of our size and limited resources. In 2008, our trade to GDP ratio was 360%, the highest in the world.'

(Ministry of Trade and Industry, Singapore, 2009)

Discuss whether the openness of the economy is beneficial or harmful to the standard of living in Singapore. [25]

Note: Students should discuss the openness of the Singapore economy **to international trade, foreign direct investment and labour flows**. As this question is asking about the effect of the openness of the economy on the standard of living, students **need to explain the theory of comparative advantage**.

[1] countries differ in factor endowments (CELL)

[2] what goods are being exported and imported
[3] whom economy trades with
[4] level of exports and imports

Checklist
✓ Define TOCA
✓ Assumptions
✓ Before specialisation and trade
✓ Benefit of Trade and opp cost
✓ After specialisation, before trade
✓ Define and explain TOT
✓ After specialisation and after trade

Explaining Theory of CA

(Define Theory of CA)

Suppose that there are two countries:

1. Japan and Thailand
2. Producing 2 goods cars (C) and rice (R)
3. Each country has 10 units of resources
4. which are fully employed
5. and fully mobile
6. Constant costs of production
7. No barriers to trade
8. No transport costs

Suppose with 1 unit of resources:

	Can produce
Japan	10 C or 50 R
Thailand	2 C or 40R

Then, suppose that both countries allocate 5 unit of resource to production of each good:

**	C	R
Japan	50	250
Thailand	10	200
World	60	450

Explain that trade brings benefit:

- Japan has **absolute advantage** in producing both cars and rice.
- But it does not mean that Japan should produce both goods (and not trade with Thailand).
- As long as **opportunity cost of production differs**, there will be **gains from specialisation and trade**.
- Instead, a country **should specialise in the production of the good for which it has a CA in and import the other good for which it does not have a CA in**.

Explain link between opp cost of pdtn and CA:

- Opportunity costs of production tells us which good a country has CA in producing

	Opportunity cost of producing	
	1 C	1 R
Japan	5 R	1/5 C
Thailand	20 R	1/20 C

- Japan has a lower opportunity cost, hence CA in producing cars, it should specialise in it.
- Thailand has a lower opportunity cost, hence CA in producing rice, it should specialise in it.

Explain consequence of specialising in areas with CA:

Assume that Japan decides to specialise partially: 8 unit of resource to cars. 2 units of resource to produce rice

Assume that Thailand decides to specialise completely by devoting all 10 units of resource to rice production

Output **after** specialisation and **before** trade (increase compared to before):

	Car	Rice
Japan	80	100
Thailand	0	400
World	80	500

Explain what must happen before trade:

For both countries to benefit, they need to trade.

They must first agree on a TOT (define), which **should fall between opportunity costs ratios for each good**, though in reality, the exact **TOT depends on relative strength of bargaining power** of each ctry.

TOT for cars is $5R < 1C < 20R$.

- Japan won't accept less than 5R for 1C → in that case, she might as well give up 1C and produce 5R
- Thailand won't give up more than 20R for 1C → in that case, she might as well give up 20R and produce 1C

Explain what happens after specialisation and trade:

Suppose TOT is agreed at 1C for 10R, and Japan exports 18 cars to Thailand.

Each ctry now enjoys more of both goods before specialisation and trade, beyond their country's PPC.

Output **after** specialisation and **after** trade:

**	Car	Rice
Japan	62	180
Thailand	18	320
World	80	500

Terms of Trade

- Improve/ deteriorate[5]
- Improvements can be caused by changes in e/r or DD/SS condition:
- Fall in M price, constant X price
- Constant M price, rise in X price
- Both M and X price fall, but fall in M price larger than fall in X price
- Both M and X price rise, but rise in X price larger than rise in M price
- Global recession → fall in DD SG X → fall in P of SG X → TOT deteriorate, cp → extent depend on **PES of X** → more px inelastic the supply → greater the extent TOT deteriorates

[5] compare qty of m/p vs x/p

Benefits of Trade

<table>
<tr><th colspan="2">Consumers enjoy wider product range/ better quality products/ lower prices</th></tr>
<tr><td>Gain access to a wider range of products that cater to their various tastes and preferences (e.g. consumers may not be able to enjoy certain goods due to the lack of appropriate resources or climate + ctries with CA in pdtn of certain g/s will still import some from other ctries) → improve consumer welfare and material SOL</td><td>Trade → domestic producers exposed to foreign competition → pressure on domestic firms to lower cost and price, while raising pdt quality to maintain market share</td></tr>
<tr><th colspan="2">Producers can enjoy lower cop</th></tr>
<tr><td colspan="2">Enlarge markets for industries in small economies → export to the world → bigger export market → able to reap huge EOS i.e. technical EOS: able to use more superior / specialised machines, marketing EOS: able to buy raw materials in bulk → lower cop

Able to seek out lowest cost countries for raw materials → lower prices of final products → improving X competitiveness

Firms seek to maintain their CA → incentivised to try out new production processes, technology or adopt more R&D → decrease cop, increase qly of pdts

Example: N.B. Allows SG to overcome constraint of small physical size and lack of natural resources allowing her to exploit EOS, boost NX, AD and EG</td></tr>
<tr><th colspan="2">Governments can ensure allocative efficiency (P=MC), EG and low UnE, and grow their productive capacity</th></tr>
<tr><td>Trade → domestic producers are exposed to greater foreign competition → prevent formation of domestic monopoly and reduce likelihood of domestic monopolies exploiting market power by raising prices and restricting o/p → greater AE</td><td>① Firms seek to maintain their CA → incentivised to try out new production processes, technology or adopt more R&D → increase I

② Greater trade flows → facilitates technology transfer from DCs to LDCs

∴ [SR] Increase AD → Actual growth, reducing unemployment, assuming that the economy is not at full employment

∴ [LR] Increase qty/ qly of capital → raise productive capacity → allow for potential growth</td></tr>
</table>

N.B. [EV] Benefits of free trade dependent on the outlook of the economy.

During recession, the economic outlook is bleak → poor DD conditions → even with no trade restrictions, consumers may not be willing to spend unnecessarily → concerned about the future of the economy and their livelihood.

Limitations of Trade

Factor Immobility	Increasing Opportunity Cost
Resources are often not fully mobile both geographically and occupationally → even if e.g. steel pdtn has lost CA in US → difficult to transfer workers from steel pdtn to pdtn of gds which US has CA in like designing high end electronic devices → cannot fully reap benefits of CA	Opportunity cost don't stay constant as resources are transferred from one industry to another → resources used to produce on type of good are unlikely to be equally suited for the production of another good → **specialise and expand her production of a particular good beyond a certain point → opportunity costs will start to rise** → reduce or remove the country's initial CA in this area.
Presence of Transport Costs	**Presence of Trade Restrictions**
Substantial transport costs exist, esp for goods which are bulky and low value like bricks → possible that a country with a **comparative disadvantage** in the production of certain goods may still find it **cheaper to produce the goods domestically/ import from a neighbouring country**	Discourage imports and protect domestic industries from foreign competition → some countries **may not be able to export all the goods that they hope to** due to trade barriers imposed by trading partners. Example: EU's Common Agricultural Policy (CAP), where EU farmers receive large subsidies despite it not having CA → to protect agricultural sector
No suitable TOT	
No guarantee that trade will lead to better outcomes for the countries involved. • Mutually beneficial trade → **TOT should lie somewhere between the opportunity cost ratios for each good** → if ctries cannot agree on a suitable TOT → gains from trade will not materialise. • One of the countries has greater bargaining power to influence the relative prices and/or exchange rates and thus gain more, leaving the other country worse off.	

- Differing opportunity costs stem from differences in factor endowments → change in the quantity or quality of FOP → change in opportunity cost → **CA change with time**
  Example: Natural resources may be depleted, causing a country to 'lose' its initial CA in certain area (refer to page 13 for example in SG context).

- Given <u>limitations that contradicts the theory assumptions</u>, advantages from devoting more resources to _____ **may not turn out to increase the output and SOL as much**.

- **CA should not be the only factor governments consider**.
  - Should consider other pressing immediate macro concerns such as economic growth and unemployment
  - Whether country should continue to specialise in _____ depends on other considerations such as changing CA, protectionist measures by trading partners etc
    Example: Brunei CA in oil and gas → will run out of reserves → diversify economy to gain CA in other areas

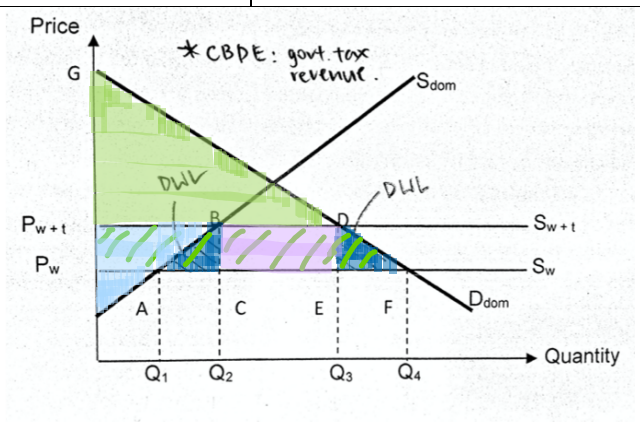
Protectionist measures

<table>
<tr><th>Measures</th><th>How they work</th><th>Benefit</th><th>Cost</th></tr>
<tr><td rowspan="2">Import Tariffs (specific or ad-valorem)</td><td>Make imported goods less price <u>competitive</u> compared to domestically produced goods (see more below)</td><td>The increase in level of domestic output will lead to a rise in NY and decrease in cyclical unE

Assuming DD for import is price elastic → increase in price of imports due to tariffs → more than proportionate fall in Qd for imports → fall in import expenditure → improve the current a/c in BOP</td><td rowspan="2">Loss of consumer welfare: consumers pay higher prices and enjoy less gds

Increase in producer surplus: enjoy larger mkt share and expand sales

Government gains tax revenue; partly spent on administration such as extra custom officials to enforce and administer tariff, causing unproductive use of resources

DWL cld be due to tariff impositions encourage inefficient local firms to survive and expand</td></tr>
<tr><td colspan="2"> 

Consumer surplus, Producer surplus, Tax Revenue, DWL

N.B. Effectiveness of tariffs in controlling imports is still dependent on the nature of M (i.e. PED and PES) and government's intention.

- Goal to limit imports → should impose tariffs on goods whose DD is relatively price elastic → increase in price of imports, more than proportionate decrease in Qd.

- Goal to raise tax revenue →should impose tariffs on goods whose demand is relatively price inelastic → increase in P imports, less than prop. decrease in Qd → increase in tax revenue</td></tr>
</table>

<table>
<tr><th>Measures</th><th colspan="2">Benefit</th><th>Cost</th></tr>
<tr><td>Import Quota (physical terms or value terms- bid for license to import)</td><td colspan="2">Tariffs raise the price of imports → Cr can import unlimited quantities of the good as long as they are willing and able to pay for the import duty → not very effective in reducing the Qd

Import quotas completely prohibit imports once the quotas are filled

∴ Import quota preferred to a tariff if DD of import is relatively price inelastic</td><td>No tax revenue</td></tr>
<tr><td>Administrative Restriction (strict and complex product standards)</td><td colspan="3">Example: U.S. government requires all imported steel pipes to be marked with its country of origin OR requirement of imports to meet pollution control standards / health standards → raises COP → raise price of imported steel pipes → indirectly reducing DD for imported steel pipes.</td></tr>
<tr><td></td><td>How they work</td><td colspan="2">Limitations</td></tr>
<tr><td>Export Subsidies</td><td>Subsidising domestic producers → reduce COP → domestic output can be more price competitive compared to imports</td><td colspan="2">Allow inefficient domestic producers to survive even though they should have been eliminated in the wake of stiff competition from foreign producers

Drain government funds</td></tr>
</table>

(+) Exchange rate control (BOP Notes)

Arguments on Protectionist Measures

* After explaining about 2 reasons, draw tariff diagram to explain benefits!

Protect infant industries
SG: infant industries include biomedical science, environment and high tech farming. Perceived by the government to **have CA** in the production of certain goods → **currently too small to have gained substantial EOS** to compete against well-established foreign producers. Protectionist measures → **time** to develop their managerial and labour skills, master the technological knowhow and to establish a reputation → **reap EOS, acquire CA** → if infant industries to **become competitive in future** → **reduce imports and increase exports** → **improving BOP position** + more jobs → **lowering unE rate** Limitations: - Difficult to identify industries that have potential to reap EOS → info about LRAS of firms not easily available - Reduce firm's incentive to reduce AC → over reliant on protection + cause pr to call for continual protection + difficulty in removing such 'protection' due to massive unE that may ensue if firm closes down → strain govt. budget ∴ Need to withdraw protection once they have achieved desired EOS - Results are usually low quality goods →waste of valuable national resources - Cr have to put up with paying higher prices for overextended period of time - Employees are unlikely to benefit from higher pay and better employment opportunities that would come with an enlarged industry ∴ Instead of protecting these industries, govt should make massive loans to them, allowing them to begin largescale production at once rather than undertake protectionist measures which usually hurt domestic consumers more. → SG: does not implement protectionist measures, but ties up with research industries. R&D grants/ tax rebates etc. are provided to attract foreign firms to help domestic firms to venture abroad.

Reduce domestic UnE	
[Declining Industries] Fundamental changes in DD for a good or the presence of lower priced imports → domestic industries to lose their CA and face the danger of closing down/ collapse →high UnE Protectionist measures **slow decline in the industry** (i.e. help to lessen the shocks to the economy and allow for a more gradual transition to a new industrial mix) → sufficient **time to acquire relevant skills to take on employment in new industrie**s[6] → helps **prevent massive structural UnE** Limitations: May **perpetuate domestic inefficiencies** → industries have lost CA due to tech lagging behind competitor and wgs rising faster than labour productivity → should be allowed to contract ∴ Should be temporary to not hinder restructuring process. ∴ Should fund programme to retrain or upskill worker.	[Recession] Global recession → fall in world trade → restrict imports in order to ensure that i**ncome is spent on domestically produced goods** due to higher P of M → increase DD of domestic gds → increase P, Q, pdtn → increase DD labour→ **provide income and hence employment** for domestic industries → **limiting cyclical UnE** Limitations: - Invite **retaliation** with tit-for-tat measures to protect domestic industries → increase P of X → **reduces Qd for gds produced by non-protected sectors** → fall in pdtn → fall in DD for FOP like labour → increase UnE - Even w/o retaliation e.g. protectionist measure → US citizens buy less M → foreigner less income to buy US X → lower purchasing power → lower ability to import → hurt US X ∴ Affect overall UnE adversely in LR ∴ Perhaps better for the world to coordinate macro policies to stimulate global economy

[6] specialized machinery can also be allowed to wear out naturally

<table>
<tr><th>Protect against dumping</th><th>Strategic reasons</th></tr>
<tr><td>Charge lower pxes (often below MC) and undercut rivals→ drive competitors out of the domestic market → establish market power → take advantage of its monopoly position and charges a higher price

ST benefit → receiving the cheap goods

LT, there may be reduction in domestic output and employment since domestic producers are unable to compete in terms of pricing

∴ High UnE and higher prices for locals

Protection may be valid → producers that truly have CA can continue to contribute to X of country → increasing AD and EG → positively impact producers, employees and consumers as greater output leads to greater revenue, (assuming costs remain unchanged), more employment opportunities and greater choice

Limitation:

- Difficult to prove dumping → foreign pr may genuinely have CA in producing certain goods and this will lead to retailiation
- Unlikely foreign firms will raise pxes aft attaining monopoly position → limited gains as high px reduce competitiveness in globalised context</td><td>Too dependent on foreign sources of goods which are of strategic importance (e.g. oil, iron, steel) → danger of supply being cut off in the event of war or any other conflict → protect industries essential for national survival (even if they are not very efficient)

Limitations:

- Not easy to identify the industries of strategic importance
- Defined too broadly, many industries will be able to win protection since almost every industry makes indirect contribution to national defence</td></tr>
<tr><th colspan="2">Improve BOP</th></tr>
<tr><td colspan="2">Persistent BOP deficit arising from current a/c deficit → import expenditure has to be reduced via expenditure switching policies such as imposing protectionist measures → consumers ‘switch’ their DD for imports towards domestically produced goods.

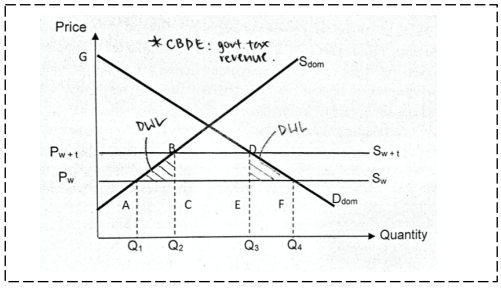
Limitations:

- ST measure <u>don’t address the root cause</u> of the problem which may be a lack of competitiveness or loss of CA
- Effectiveness also <u>depends on PED and PES of imported goods</u>. If the DD for imports is price inelastic, an increase in price of imports leads to a less than proportionate decrease in Qd of imports which does not correct BOP deficit.</td></tr>
</table>

Other general pointers/ EV

- **Case or protecting infant industries is probably more justifiable as compared to that of supporting the declining industries**
  Benefits in the LR is more significant for the former and protecting an industry with CA is consistent with the theory of CA

- **Protectionist measures forgoes the benefit of international trade**
  - Runs contrary to the law of CA (define) → reduced world output, quantity and variety of g&s enjoyed by consumers in each country smaller and more expensive (reference import tariff diagram) → consumers worse off



  - Retaliation / escalating trade wars → reduce international trade → discourage specialisation and forgoing the benefits as given by the theory of CA

- **Protectionism does not seem justifiable when we take into account the costs to producers and employees beyond the protected sector**.
- If commodity is a raw material or intermediate product for the other industries → consumers in this industry are in fact the producers in other industries → higher costs for producers making use of this factor input → raising COP → **final products less competitive**
- Example: Protecting the textile industry may raise the cost of cloth to clothing manufacturers as they would now have to pay higher prices to obtain the textiles
- Production may fall and unE may increase

- Conclusion
- To sum up, the <u>costs of protectionism is likely to outweigh the benefits</u> in most cases.
- There exists <u>alternative measures</u> that can be put in place to bring about the benefits as argued by advocates of protectionism
- For instance, restructuring of economy and retraining of workers might be a better way to support employment in declining industries while **expansionary DD mgmt and ST SS side policies might be more effective** in supporting employment during recession especially for <u>larger economies</u>.
- <u>Smaller countries</u> like SG would have to implement policies to **stimulate external DD** to drive their economies
- Nonetheless, in cases where protectionism seems more justifiable, like in the case of infant industries , <u>CA of the countries should be rather **obvious** to keep probability of retaliation **low**</u>.

Pattern of Trade

Supply factors

Comparative Advantage	Trade Barriers
Countries have different factor endowment (different population density, labour skills, climate) → relative cost of producing goods varies from country to country → used to determine what countries should specialise in, export and import. Theory of comparative advantage states that countries can gain in terms of increase in output and consumption from mutual trade, if each country specialises in producing goods they have lower opportunity cost in producing → opp cost will change when there are changes in factor endowment and quality of FOP →so pattern of trade will change SG: relatively abundant capital and skilled labour → specialised in producing capital and knowledge intensive goods such as integrated circuits and pharmaceutical drugs with lower opportunity costs relative to other countries → largely export such capital and knowledge intensive goods to trading partners such as US and Indonesia. SG: lacks lowly skilled workers and natural resources → higher opportunity cost if she produces low skill labour Intensive goods → imports low skilled labour intensive g&s such as food, textiles, iron and steel from countries such as **China** and **Malaysia** who are endowed with land and low skilled labour	FTA → facilitate greater movement of g/s between member countries → change the relative price of import and export between countries that sign FTAs and those without → stimulate trade between member countries while diverting trade from non-member countries → shift pattern and volume of trade between countries

Demand factors

Rising affluence	Changing taste and preference	Changing demographics
Emerging economies with strong rates of EG like China → stronger purchasing power → increase DD for g&s produced by other countries such as tourism related services or luxurious items → increases imports → changing their composition of trade	Advances in technology → innovations and improvements in product design → consumers have large myriad of goods and services available →change their taste and preferences → change the composition of trade	Changing population demographics affects DD of imports → ageing countries like Japan and Sg → increase DD for g&s like medical tourism and wheelchairs for elderly

Glossary of EQs

(1) Free trade is considered an essential part of the macroeconomic policy of many countries and yet protectionism is still widespread throughout the world.

(a) Explain how free trade can be mutually advantageous to all countries that agree to it including those countries that are the most efficient at producing all products (10m).

Structure:

must include a ctry in explanation of TOCA that has an absolute advantage
N.B. **Absolute advantage ≠ comparative advantage ≠ competitive advantage**

- Explain TOCA (pg 2 to 3)
- Other benefits of free trade (Wider pdt range, lower prices, higher quality pdts) are optional (not the focus)

(b) Discuss whether the decision to introduce protectionist measures can ever be justified in today's globalised world (15m).

Structure:

- Explain the argument (x3)
- Explain the benefit (x3)
- Explain the cost (x3)

Evaluation Points (Economic Theory, Duration and Extent of Protection):

- **Protecting declining industries is not justified based on economic theory**
  Unlike infant industries, **declining industries have already lost CA and should be allowed to contract**. Therefore, protection given to the declining industries should at most only be **temporary so as not to hinder the restructuring process**. In other words, it is not justified as the main solution to resolve the issue of job loss. A better solution which addresses the problem of unemployment at the **root cause** is for the government to fund programs to retrain workers for jobs that are in greater demand or invest in the new growing industries so that more jobs can be created in these industries.

- **The extent and duration of protectionism matter in determining whether such actions are justified**
  Should industries be granted protection indiscriminately without information to corroborate its potential development of comparative advantage or should protection be extended for a protracted period of time, this may induce complacency and ultimately result in inefficiencies in the affected industries. In such cases, protectionism is unjustified. In view of the above, any protection given to infant industries should ideally be temporary and removed once they have become more established or have achieved substantial economies of scale.

(2) [H2 2013] On 14 October 2011, Premier Wen Jiabao of China called for joint international efforts to combat rising trade protectionism, which he said was damaging the world economy amid ongoing global economic turbulence.

Discuss whether the use of protectionist policies can ever be justified during a period of worldwide recession or whether governments should follow Premier Wen's advice and adopt a policy of greater free trade. [25]

External Ans:

Part 1	Part 2
What are protectionist policies? How do they work? Why govt need to intervene during a period of worldwide recession? What are the impacts of worldwide economic recession? POV1: protectionist policies justified as they are able to cushion the negative impacts of recession Imposition of tariffs → effects on 4 macro goals Other measures... POV2: protectionist policies unjustified as they are unable to cushion the impacts of recession (limitations of protectionist policy) EV on protectionist measures	What is greater free trade? Less / no trade restrictions POV1: why govt should adopt free trade? i.e. benefits of free trade during a worldwide recession Theory of CA POV2: why govt should not adopt free trade? i.e. free trade cannot revive economy during a worldwide recession However, during recession, the economic outlook is bleak. There are poor DD conditions. Even with no trade restrictions, consumers may not be willing to spend unnecessarily as they are concerned about the future of the economy and their livelihood.