International Trade

Important Definitions

International Trade = Exchange of goods and services between countries, involving the use of different currencies and crossing international borders
Free Trade = Absence of controls that affect the value and quantity of imports and exports
Comparative Advantage = Ability to produce a good at a lower opportunity cost
Dynamic Comparative Advantage = Changing pattern in comparative advantage
Dumping = Selling of goods in overseas markets below marginal costs of production

Advantages of International Trade

Microeconomic:

- ↑ world output and consumption of G&S ⇒ ↑ consumer welfare + ↓P + ↑ consumer choice
    - ↑ Quantity of goods consumed
        - Theory of Comparative Advantage
            - Theory of comparative advantage proposes that free trade based on comparative advantages, where countries specialise in production of goods which they have lower opportunity cost in producing and subsequently trade with other countries, would lead to all countries involved in trade being better off in terms of increased consumption of G&S
            - Differences in CA due to differences in factor endowments/technology/government policies
        - Trade allows a country to ↑ consumption of G&S to previously unattainable levels (outside the PPC) ⇒ ↑mSOL
            - Draw PPC curve (constant returns to scale) to illustrate
    - ↓Px
        - Domestic producers exposed to foreign competition ⇒ ↑ competition ⇒ ↓ Market dominance of domestic producers ⇒ ↓P + ↑ quality + ↓ X-inefficiency
        - Lower priced imported goods ⇒ ↓P imported G&S + {↓P imported factors of production ⇒ ↓MC ⇒ ↓P domestic goods with imported factors of production}
    - ↓Px + ↑Q ⇒ ↑ Consumer welfare
    - ↑ consumer choice
        - Proliferation of differentiated products due to importing ↑ variety of G&S + ↑ variety of brands catering to different tastes of consumers ⇒ ↑ consumer choice
- ↓ unit cost of production due to EOS ⇒ ↓P for consumers + ↑ profits for firms
    - Free trade ⇒ Larger export market ⇒ ↑DD for domestic goods ⇒ ↑Qd, c.p. ⇒ ↑

volume of output ⇒ Firms able ↑ scale of production to reap more iEOS and eEOS
    - iEOS
        - e.g. technical iEOS - specialisation and division of labour, financial iEOS - easier and cheaper to raise funds, R&D iEOS
        - Small countries too small to fully exploit iEOS ⇒ International trade allows these countries to specialise and export on a larger scale ⇒ ↑DD for G&S ⇒ ↑ output ⇒ Able to fully exploit iEOS
        - Larger countries able to reap iEOS in sub-product markets such as integrated circuits, aircraft components etc
    - eEOS
        - e.g. economies of concentration - training facilities + infrastructure + ↑ reputation
        - Exporting firms in the same country can join together to enjoy eEOS

Macroeconomic:

- Economic growth
    - AG
        - Countries able to produce for wider international market ⇒ ↑DD for exports ⇒ ↑X ⇒ ↑(X-M), c.p.
        - Open economy ⇒ Conducive environment for domestic and foreign I ⇒ ↑I
        - ↑I + ↑(X-M) ⇒ ↑AD ⇒ m.t.p. ↑ real NY via multiplier effect ⇒ AG + ↓ cyclical UnN since labour is a derived demand
        - ↑ real NY ⇒↑ mSOL assuming population size remains constant
    - PG
        - {International trade facilitates exchange of technology and ideas ⇒ ↑ technological levels ⇒ ↑ productivity} + {↑ competition ⇒ Domestic firms forced to innovate in order to ↑ productivity and efficiency} + {↑I ⇒ ↑ capital formation} ⇒ ↑ productive capacity ⇒ ↑AS ⇒ PG
    - AG + PG ⇒ Sustained economic growth
    - Dynamic gains from trade
        - ↑EG due to trade ⇒ ↑ real NY ⇒ ↑ savings ⇒ ↑SS of loanable funds ⇒ ↓i/r ⇒ ↑I due to MEI theory ⇒ ↑AD ⇒ Further ↑EG
- ↓ Inflation
    - Cheaper imported G&S (part of CPI)
    - Cheaper imported raw materials ⇒ ↓COP ⇒ ↑AS ⇒ ↓GPL
    - Domestic producers exposed to ↑ foreign competition ⇒ ↓ market dominance of domestic producers + ↓ complacency ⇒ ↓ price-setting ability + ↓ room for X inefficiency ⇒ ↓P

- Improvement in BOP position
    - Assumes inflows > outflows OR favourable TOT
    - ↑X ⇒ ↑(X-M), c.p. ⇒ Improvement in BOT ⇒ Improvement in current account ⇒ Improvement in BOP position
    - Inflow of FDI ⇒ Improvement of financial account ⇒ Improvement in BOP position

Disadvantages of International Trade

Microeconomic:

- Unfair competition + Dumping
    - Foreign firms sell goods in overseas markets below the MC of production in order to drive out domestic rival producers (Price competition) ⇒ ↑ market power of foreign firms
    - If production subsidised by govt of exporting country ⇒ ↓COP ⇒ Unfair competition with producers in importing countries
        - e.g. Steel industry in US heavily subsidised, Chinese solar panels heavily subsidised
    - Producers in importing countries unable to compete with foreign exporters in terms of low prices ⇒ Unable to develop close substitutes ⇒ Forced out of the market ⇒ ↓ consumer choice + ↑ market power of foreign firms
    - ↑ market power of foreign firms ⇒ ↑DD + ↓PED of foreign firms ⇒ Foreign firms able to restrict output in order to charge higher prices and earn more profits in the long term ⇒ ↑ extent of P>MC + ↓ consumer welfare ⇒ ↑ extent of allocative inefficiency (Draw diagram if have time)
- Imports of harmful goods
    - Free trade ⇒ Countries exposed to import of harmful goods ⇒ Adverse effects on consumption habits and social values
    - Demerit goods (e.g. cigarettes, alcohol) → Negative consumption externalities ⇒ External costs on society (explain) ⇒ Divergence of MPC and MSC curves with MSC>MPC ⇒ Individuals, in the pursuit of self interest, only take into account their private costs and benefits ⇒ Free market output > Socially optimal output ⇒ Overconsumption of demerit goods
    - Individuals underestimate the costs of consuming the good and overestimate the benefits of consuming the good ⇒ DD with imperfect info > DD if they had perfect info ⇒ Free market output > Socially optimal output ⇒ Overconsumption of demerit goods
    - Allocative inefficiency

Macroeconomic:

- Over-reliance
  - Over-reliance on foreign countries
    - **Government has little control over external economic conditions
    - Susceptible to external shocks → Economic recession ⇒ ↓ real NY of trading partners ⇒ ↓ purchasing power of trading partners ⇒ ↓X of country ⇒ ↓AD ⇒ m.t.p. ↓ real NY via multiplier effect + ↑ externally-induced cyclical UnN
    - Susceptible to external shocks → Economic boom such as in rapidly developing countries ⇒ ↑X of country ⇒ ↑AD ⇒ DD-pull inflation if economy is already operating close to full employment
    - Rely heavily on foreign imports for raw materials and G&S (esp if they import necessities like food and clothing) ⇒ Susceptible to import-push inflation → ↑P of G&S contributes to CPI + ↓AS due to ↑COP ⇒ Cost-push inflation + ↓ real NY
  - Over-reliance on specialised industry
    - If countries over specialise in certain industries ⇒ Narrowing of economic structure ⇒ Limited composition of G&S produced and types of jobs available ⇒ {Susceptible to changes in market conditions (e.g. demand for the good/↑P of raw materials) in that industry ⇒ ↓ real NY + ↑ UnN (cyclical + structural)} + {Susceptible to demands of countries which produce goods that they do not produce ⇒ Unfavourable terms of trade}
    - e.g. Oil exporting countries, African countries over reliance on mineral exports
  - ↑ risk of structural unemployment
    - Change in market conditions ⇒ ↓ comparative advantage due to emergence of more efficient competitors/change in cost conditions in the country + Industry made redundant due to ↑ technology ⇒ Decline in sunset sectors ⇒ Labour is made redundant in those industries ⇒ Retrenched workers unable to find new jobs due to a mismatch of skills (lack of occupational mobility) ⇒ ↑ structural UnN
- Worsening BOP position
  - Assuming outflow > inflows OR unfavourable TOT
  - ↑M ⇒ ↓(X-M), c.p. ⇒ Worsening BOT ⇒ Worsening current account ⇒ Worsening BOP position
  - Net outflow of FDI ⇒ Worsening of financial account ⇒ Worsening of BOP position
- ↑ Income inequality ⇒ ↑ social tensions ⇒ ↓nmSOL
  - Industries that the country has CA in grow faster than others which the country does not due to specialisation and international trade
  - ↑DD for workers in industries which the country specialises in ⇒ Faster ↑ in wages of workers in industries which the country specialises in compared to

other workers
    - Esp in open economies e.g. Singapore/HK

Evaluation for Singapore

- Singapore small economy
    - Stand to gain a lot from international trade due to ↑ global demand for exports ⇒ ↑X ⇒ ↑AD and ability to reap greater EOS due to ↑ production
- Singapore resource poor
    - Free trade necessary as Singapore unable to be self-sufficient without trade as Singapore unable to produce everything we consume (able to consume outside PPC) + need to source for cheaper raw materials
- However, at the same time, careful measures by the government needs to be taken in order to mitigate the negative effects of opening the economy up to trade, namely: to prevent Singapore economy from becoming too vulnerable to external shocks, to protect Singaporean firms from unfair competition, to set up regulations to restrict the import of harmful goods and to redistribute income to ensure social stability.

Singapore's Context

- Small open economy
    - Small domestic market size due to small population size ⇒ Unable to reap iEOS purely on domestic market
    - Small land area ⇒ No CA in producing labour/land intensive goods ⇒ Dependent on imports
    - Level of domestic demand low relative to external demand ⇒ Dependent on exports
    - Open to trade, labour and capital flows
    - Small population size ⇒ Tight labour market ⇒ Reliant on foreign labour
    - Vulnerable to external shocks
- Price taker
    - Unable to influence world interest rates
        - Deviation from world interest rate ⇒ Destabilising flows of hot money ⇒ Affect money supply ⇒ Undermine initial policy
        - e.g. ↓ interest rate ⇒ Hot money outflow ⇒ ↓SS_{LF} ⇒ ↑ interest rate
        - ∴ Use exchange rate as monetary policy tool
    - Unable to influence price of goods and services
        - Domestic demand and supply too small to influence world prices ⇒ World SS curve for imports perfectly price elastic
- Resource poor
    - Lack raw materials ⇒ Unable to produce what they need ⇒ Dependent on imports

Explain how you would decide whether the low price of _____ is a case of dumping

- Definition: Foreign firms selling goods in overseas markets below marginal costs
- Investigate whether firms are selling exports under MC:
    - Private initiative by companies in order to drive out domestic producers and increase their market power → Dumping
    - Country subsidising exports only but not goods sold domestically → Clearly a case of dumping
    - Country subsidises cost of production ⇒ Allows firms to ↓P to below original MC → Difficult to accuse country of dumping
- Investigate whether firms are selling exports at above MC but below P in domestic market
    - Could be due to 3rd degree discrimination as demand more price elastic in foreign market than in domestic market
        - Due to higher income/lower availability of close substitutes in foreign market
    - Profit maximising firms price according to differences in DD and SS conditions → Not dumping
- Investigate whether firms are selling exports at above MC but below P in foreign market
    - Could be due to differences in CA → Not dumping
- Evaluation:
    - However, in the real world, it is difficult for firms themselves to even calculate their own MC ⇒ Difficult to assess whether firms are dumping

Patterns of Trade

- Patterns of trade = Composition of trade + Direction of trade
- Direction of trade = Importing/Exporting + Trading partners
- Due to differences in DD and SS factors

Inter-industry Trade

- Law of CA → Specialisation + Trade leads to greater world output with all trading partners being better off
- SS-factors
    - Abundance in factor endowments + How abundance comes about ⇒ Lower opp cost in producing _____
    - According to Theory of CA, A has CA in _____ and hence should specialise in producing _____ and trade with other countries in order to achieve greater world output and be able to increase consumption of goods and services
    - Can be explained using DD-SS analysis
        - SS Country A > SS Country B + DD approximately equal

        - $P_A < P_B$
        - P_{world} in between P_A and P_B agreed by A and B
        - ↑ Price in A + ↓ Price in B ⇒ ↓ Quantity demanded for A + ↑ Quantity demanded for B
        - A export good as they have surplus, B imports good from A to meet increase in Qd
        - Thus, A exports to B
    - Singapore:
        - Possible sources of CA:
            - Abundance of skilled labour due to good education system
            - Abundance of capital goods due to high investment spending due to high FDI + high savings rate
            - High level of technology as govt actively promotes R&D
            - Strategic location for maritime services/transport hub/financial sector

Intra-industry Trade

- SS-factors
    - Components-Trade/Trade at different stages of production within the same industry
    - Similar to inter-industry trade
- DD-factors
    - Differences in DD due to:
        - Differences in tastes and preferences ⇒ Greater consumer choice
        - Differences in income levels
        - Differences in size of population
    - Explain using DD-SS analysis
        - DD Country A > DD Country B
        - SS side factors similar
        - Similar to inter-industry trade
    - Singapore:
        - e.g. Entertainment industry
            - Similar SS side factors as Singapore also has actors, actresses, equipment etc.
            - However, due to taste and preferences of Singaporeans, there is stronger demand by Singaporeans for K-dramas and Hollywood movies whereas South Korea and US does not demand as much of Singaporean dramas and movies
        - e.g. Financial sector
            - Singapore generally produces high value added goods and services such as financial sectors ⇒ Private banking services can be considered as a luxury good ⇒ Demand for such services depends on income levels in the countries ⇒ Demand for such services higher in richer countries such as US as compared to poorer

countries such as Malaysia ⇒ Singapore exports such services to US more than to Malaysia
        - e.g. Civil Aviation Industry
            - Singapore has its own airline, Singapore Airlines, but some consumer still choose to use foreign airlines due to differences in tastes and preferences ⇒ ↑ Consumer choice

Other Determinants

- Trading partners also determined by:
    - Transport costs
        - Trade based on geographical proximity
    - FTAs
        - ↓P of imports from countries that FTAs have been signed with ⇒ ↑ trade with those countries

Law of Comparative Advantage

Components of explanation

1. Statement
2. Assumptions
3. Initial output
4. Comparative advantage
5. Specialisation
6. Final output after trade

Statement of Law of Comparative Advantage
Under certain conditions, countries would gain from trade if there are differences in the relative opportunity costs of producing specific goods among them. Countries benefit from specialising and exporting products in which they have a comparative advantage in and importing products in which they do not.

Assumptions
For simplicity, we assume that there are:

1. Only 2 countries - USA and China
2. Only 2 goods - Wheat and Cloth
3. Each country devotes half her resources to the production of each good
4. **No transport costs/trade restrictions
5. **Labour is the only factor of production and is perfectly mobile within a country but perfectly immobile between countries
6. Constant opportunity costs of production (constant returns to scale)

Illustration of Law of Comparative Advantage (Only if question is specific to LoCA)

① Initial output

Table 1: Production pattern before specialisation

	Wheat	**Cloth**
USA	100	60
China	5	10
Total output	105	70

Explanation:
Referring to Table 1, USA has absolute advantage over China in the production of both goods since it is able to produce more of both goods with the same amount of resources.

② Comparative advantage

Table 2: Opportunity cost of producing

USA	1 unit of wheat for 0.6 unit of cloth	1 unit of cloth for 1.67 unit of wheat
China	1 unit of wheat for 2 unit of cloth	1 unit of cloth for 0.5 unit of wheat

Explanation:
However, referring to Table 2, USA has a comparative advantage in wheat production while China has a comparative advantage in cloth production. This is because in order to produce one unit of wheat, USA gives up less cloth than China while in order to produce one unit of cloth, USA gives up more wheat than China.

③ Specialisation

Table 3: Production pattern after specialisation

	Wheat	**Cloth**
USA	110	54
China	0	20
Total output	110	74

Explanation:

Referring to Table 3, we assume that USA undergoes partial specialisation, transferring 1/10 of her resources from cloth production to wheat production while China undergoes complete specialisation in cloth production.

④ Final output after trade

Table 4: Consumption after trade

	Wheat	**Cloth**
USA	100	64
China	10	10
Total output	110	74

Explanation:
Assuming that the terms of trade is 1 unit of wheat: 1 unit of cloth in the international market, the US can export 10 units of wheat to China in exchange for 10 units of imported cloth. Comparing Table 4 and 1, it can be seen that USA gains 4 units of cloth while China gains 5 units of wheat after specialisation and trade. This is because specialisation allows each country to concentrate on producing goods and services that it is efficient at producing while trading allows countries to obtain the goods and services that it does not produce. Hence, both countries stand to benefit from a higher level of total ouput consumed if they engage in international trade, allowing them to consume outside of their PPC curve.

Sources of comparative advantage:

1. Differences in factor endowments
    - Factor endowment = Quantity and quality of factors of production
    - Land, Labour, Capital
    - ↑ abundance of factors of production ⇒ ↓ opp cost to produce G&S that require the factors ⇒ Comparative advantage in production of those G&S
    - Depletion of natural resources over time may result in the country losing CA in those industries
    - ↑ savings ⇒ ↓ i/r ⇒ ↑I ⇒ ↑ capital formation
    - ↑ education ⇒ ↑SS of skilled labour
    - Globalisation ⇒ International mobility of resources and labour which opposes assumption made in Theory of CA about factor immobility between countries ⇒ Countries that are not naturally endowed with ample resources still able to develop CA in these areas by attracting suitable labour + Countries with CA may lose out in the future if they do not continue to improve
2. Differences in technology
    - Process innovation ⇒ ↑ output with same quantity of land, labour and capital

    - Product innovation ⇒ Creation of new products
    - Different rate of R&D + Different speeds of absorption of new technology ⇒ Countries that constantly seek to improve technology levels will gain CA while countries that are complacent will lose CA
3. Government policies
    - Industrial policy by the government can promote opportunities/choose direction for changes in comparative advantage over time
        - Development strategies (e.g. import of capital goods)
        - Tax and subsidies for R&D and investment
        - Labour training/education policies
        - Building of infrastructure relevant to the industry
4. Level of competition from other countries
    - Other countries ↑CA ⇒ Singapore ↓ competitiveness despite no change in the situation in Singapore
5. Level of economic growth
    - ↑ economic growth ⇒ ↑DD for labour in order to ↑ output ⇒ ↑ wages ⇒ ↓CA for labour intensive industries

Limitations:

- Artificial Barriers to Trade
    - Protectionism
        - Government restrictions (e.g. tariffs, quotas, preferential trading) on imports in order to prevent job losses/correct trade imbalances due to pressure from domestic producers/workers
        - Hinders free trade ⇒ ↓ amount of goods traded ⇒ ↓ gains from law of comparative advantage
    - Restriction on foreign currency holdings and convertibility
    - However, FTAs may also result in trade diversion from the country with CA to a member nation
- Natural Barriers to Trade
    - High transport costs for countries separated by vast geographical differences
        - ↑ Price of traded goods ⇒ ↓ gains from trade that arise from relatively lower opportunity cost
        - Countries may trade with neighbouring countries in order to reduce transport costs even if other trading partners have a bigger comparative advantage in those goods
    - Lack of mobility of factors of production
        - Structural unemployment due to specialisation
            - Mismatch of skills as low skilled labour lack skills for knowledge intensive industry that the country might have a comparative advantage in
        - Takes time to move factors of production between industries
- Increasing costs of production when specialising
    - Theory assumes constant returns to scale (PPC linear) but in reality, diminishing

returns to scale (PPC concave)
    - Excessive specialisation ⇒ Competition for scarce resources ⇒ Bidding up of factor prices + Use of factors less suited for the industry ⇒ ↑ opp cost to produce the good ⇒ ↓CA
    - ∴ Countries often engage in partial specialisation rather than complete specialisation
- Imperfect info on comparative advantage