Benefits of International Trade

Ridley College
since 1889

Assessment Objectives

	Specific Expectations
AO2	Explain the various benefits that countries can expect from trade
AO4	Draw diagrams illustrating free trade resulting in export or in imports
AO4	Calculate, from free trade diagrams; quantity of exports, export revenue; quantity of imports, import expenditure

Introduction to International Trade

- **International trade** occurs when two or more countries engage in the exchange of goods and services and invest in one another's real and financial assets.
  - The study of international trade examines the flows of imports and exports into and out of a country, foreign investment at home and domestic investment abroad, and the determination of exchange rates of international currency markets.
    - International trade results in a number of important benefits of **gains from trade**.
  - **Free trade** refers to the absence of government intervention of any kind in international trade, so that trade takes place without any restrictions (barriers) between individuals, firms or governments of different countries.

Balance of Trade

- The **balance of trade** is the most basic factor on the impact of foreign trade on a country's economy.
  - It is computed as the value of a country's exports minus the value of a country's imports and can be either positive (in surplus) or negative (in deficit).

$$\text{Balance of Trade} = \text{Export Revenue (X)} - \text{Import Spending (M)}$$

  - A **trade surplus** yields a positive balance of trade value ($X > M$), as the country's export revenues are greater than the amount it spends on imports.
  - A **trade deficit** yield a negative balance of trade value ($X < M$), as the expenditures on imports exceed the revenues from its exports to the rest of the world.

Benefits from International Trade

1. **Increased competition:** domestic firms become exposed to competition from products produced by firms in foreign countries.
   - In addition, they export products to other countries so their own products are forced to compete with other products produced in those countries.
2. **Greater efficiency in production:** increased competition leads to greater efficiency.
3. **Lower prices for consumers:** increased competition among firms and greater efficiency lead to lower prices for consumers.
   - As imports consist of goods that are produced more efficiently in other countries, this also leads to lower prices for consumers.
4. **Greater choice for consumers:** by trading with each other, countries can import a larger variety of goods and services, possibly of higher quality, than the ones they can produce themselves.

Benefits from International Trade

5. **Acquiring needed resources:** countries are likely to need for their domestic production a variety of natural resources of capital goods that are not available domestically.
    - Trade allows countries to import inputs they need for domestic production.
6. **Sources of foreign exchange:** when countries export, they acquire foreign exchange (or foreign currencies), which allows them to make payments to other countries for goods and services they import, or make other payments abroad.
    - Acquiring foreign exchange from exports increases their ability to import.
7. **Access to larger markets:** with trade and exports to other countries therec may be an expansion in the size of the market and therefore the possibility of expanding sales of the firm.

Benefits from International Trade

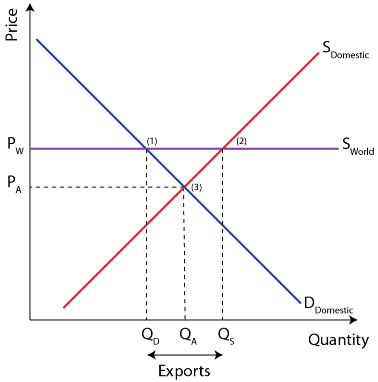
8. **Economics of scale in production:** economies of scale involve the ability of firms to decrease average costs of production (cost per unit of output) by becoming larger and increasing the quantity of output produced.
    - With lower average costs, they can lower their prices and enjoy greater export competitiveness, or the ability to compete better and sell more in foreign markets.
9. **Increases in domestic production and consumption as a result of specialization:** if a country uses its resources to specialize in the production of the goods and services it can produce more efficiently (with lower costs of production, or with fewer resources), it can produce more of these, and trade some of them for other goods produced more efficiently in other countries.

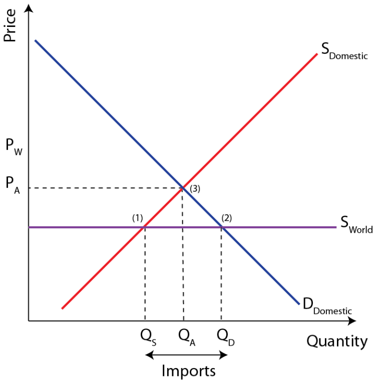
Benefits from International Trade

10. **More efficient allocation of resources:** if each country specializes in producing teh goods it can produce relatively more efficiently with lower costs of production or fewer resources compared with its trading partners, there will be less waste of scarce resources and therefore more efficient resource allocation.
11. **Trade makes possible the flow of new ideas and technology:** as goods and services flow from one country to another, they enable new ideas and new technologies and skills to be transferred from one country to another.
12. **Trade makes countries interdependent, reducing the possibility of hostilities and violence:** strong international trade links between countries can form the basis for economic relationships that reduce the possibility of war or other hostilities.
13. **Trade as an "engine for growth":** increases in real GDP within a country.

International Trade: Free Trade

- A country will export a good if its domestic price without trade is lower than the world price and it will import a good if its domestic price without trade is higher than the world price.





Comparative Advantage & Gains from Trade

Assessment Objectives

Specific Expectations	
1.A	Define absolute advantage and comparative advantage.
1.A	Determine (using data from PPCs or tables as appropriate) absolute and comparative advantage.
1.B	Explain (using data from PPCs or tables as appropriate) how specialization according to comparative advantage with appropriate terms of trade can lead to gains from trade.
1.B	Calculate (using data from PPCs or tables as appropriate) mutually beneficial terms of trade.

Absolute advantage and trade

- By examining the opportunity costs faced by two different individuals or countries, we can determine whether it may be beneficial for trade to take place.
  - Trade can be beneficial to those who participate in it if it allows an individual or country to acquire a good at a lower opportunity cost than it could be acquired without trade.
  - **Absolute advantage:** refers to the ability of a country to produce a good using fewer resources than another country.
  - **Theory of absolute advantage:** if countries specialize in and export the good in which they have an absolute advantage (can produce with fewer resources), the result is increased production and consumption in each country.

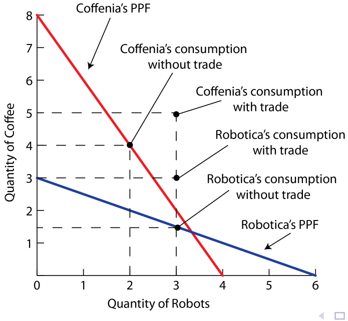
Absolute advantage: Example

- Consider a simple world economy of two countries Coffenia and Robotica, that produce coffee and robots.
    - Under autarky, assume that each worker in Coffenia and Robotica allocate their time evenly between production of robots and coffee
    - Suppose that the countries would trade 1 coffee (C) : 1 robot (R) and that 3 units are traded.

	Production (Before)		Production (Autarky)		Specialization (Production)		Specialization (Consumption)	
	Coffee	Robots	Coffee	Robots	Coffee	Robots	Coffee	Robots
Coffenia	8	4	4	2	8	0	5	3
Robotica	3	6	1.5	3	0	6	3	3
Total	–	–	5.5	5	8	6	8	6

Absolute advantage: Example (Continued)

- Originally, both countries were producing on their PPF
  - Trade allows countries to consume at a point outside of their PPF
  - Specialization increases production by 2.5 units of coffee and 1 robot
- Specialization according to absolute advantage leads to a global reallocation of resources where production takes place by the most efficient producers.



Comparative advantage and trade

- **Comparative advantage:** arises when a country has a lower relative cost, or opportunity cost, in the production of a good than another country.
- **Theory of comparative advantage:** as long as opportunity costs in two or more countries differ, it is possible for all countries to gain from specialization and trade according to their comparative advantage.
  - Mutually beneficial trade can occur when two countries specializing in two different goods can agree upon terms of trade that allows each country to import the good the other is producing at a cost lower than it could be produced in the domestic market.

Comparative advantage: Example 1

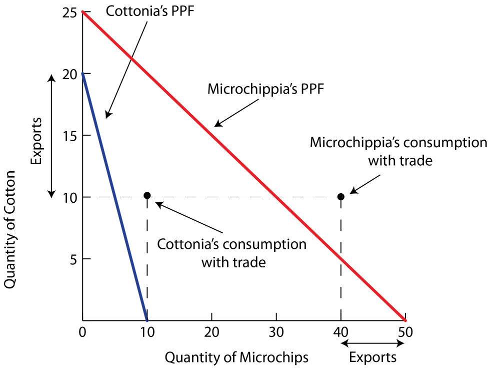
- Consider a simple world economy of two countries Cottonia and Microchippia, producing cotton and microchips.

	Production		Coffee	Microchips
	Coffee	Microchip	Opportunity Cost	Opportunity Cost
Coffenia	20	10	0.5	2
Microchippia	25	50	2	0.5

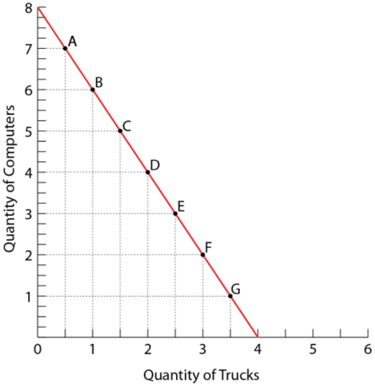
- Suppose that the countries trade 1 cotton: 1 microchip and that 10 units are traded.
- Since Cottonia has a lower opportunity cost in the production of cotton the country would specialize in cotton production.
  - Cottonia would export cotton and import microchips

Comparative advantage: Example 1 (Continued)

- Microchippia has a lower opportunity cost in the production of microchips and would specialize in microchip production.
- Microchippia would export microchips and import cotton.
  - Trade allows both countries to consume at a point outside of their PPF

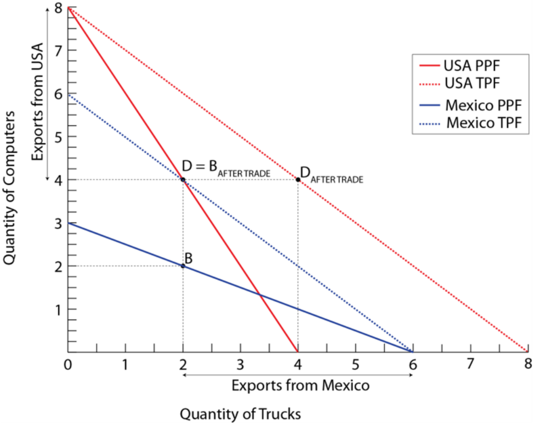


- Suppose that the chosen production bundle under autarky for the United States was D (2 Trucks, 4 Computers) and similarly for Mexico it was B (2 Trucks, 2 Computers).
  - Assume the negotiated terms of trade are 1 Truck: 1 Computer



Comparative advantage: Example 2

- The **trading possibilities curve** represents all combinations of the maximum amount of two goods that can consumed by an economy after specialization and trade.



Sources of comparative advantage

- Source of comparative advantage stem from differences in quantities and quality of factors of production, as well as technology, which altogether are called **"factor endowments"**.

1. **Land**
   - Endowment of natural resources
   - Climate
2. **Labour**
   - Quality of labour force – skilled and qualified workforce
   - Quantity of labour – size of the labour force
   - Wage costs of labour
3. **Capital**
   - The quality of capital
   - Quantity of capital – capital to labour ratio
4. **Enterprise**
   - Managerial processes to ensure the efficiency
   - Utilising technological change
   - Leading research and development

Strengths and Limitations of Comparative Advantage

- The theory of comparative advantage concludes that free trade increases global production and consumption, leading to an improved global allocation of resources.

  - However, the theory of comparative advantage is subject to several limitations:

1. The theory of comparative advantage depends on many unrealistic assumptions.

   i. **Factors of production are assumed to be fixed** – in other words they do not move from one country to another and do not change.

   ii. **Technology is assumed to be fixed** – this is highly unrealistic since new technologies are continuously being introduced.

Strengths and Limitations of Comparative Advantage

iii. **Perfect mobility of factors of production within the country** – meaning that factors of production can be instantly and costlessly moved from one line of production to another.

iv. **Full employment of all resources** – this is hardly ever met, especially in developing countries, where there is often high unemployment and underemployment of labour.

v. **Free trade** – meaning that trade flows are determined entirely by market forces; in reality, there is strong government intervention in markets that influences quantities of imports and exports.

vi. **Homogeneous products** – the product is identical in every respect.

vii. **Transportation costs are ignored** – there are costs of transportation for imports and exports that change relative prices and may limit the benefits of specialization.

2. Specialization according to comparative advantage may not allow necessary structural changes to occur in an economy

3. Trade on the basis of comparative advantage may lead to excessive specialization

Summary

- **Enduring Understanding**
  - Production and consumption increase by engaging in trade.
- **Essential Knowledge**
  - **Absolute advantage** describes a situation in which an individual, business, or country can produce more of a good or service than any other producer with the same quantity of resources.
  - **Comparative advantage** describes a situation in which an individual, business, or country can produce a good or service at a lower opportunity cost than another producer.
  - Production specialization according to comparative advantage results in exchange opportunities that lead to consumption opportunities beyond the PPC.
  - Comparative advantage and opportunity costs determine the terms of trade for exchange under which mutually beneficial trade can occur.

Types of Trade Protection

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Assessment Objectives

Specific Expectations	
AO4	For tariffs, quotas, subsidies, and export subsidies - Explain the effects on markets and stakeholders - Draw diagrams illustrating effects on price, production - Illustrate effects on consumption, revenues and welfare - Calculate, from diagrams, effects on stakeholders
AO2	Explain administrative barriers
AO3	Discuss the advantages and disadvantages of tariffs, quotas, subsidies, export subsidies, and administrative barriers

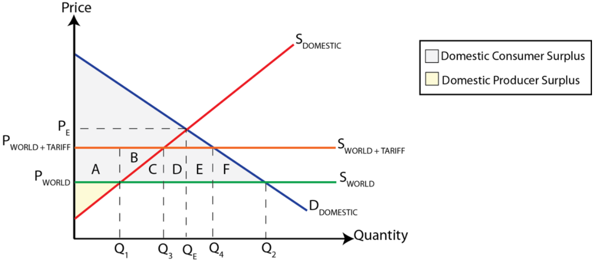
Trade protection

- **Trade protection** is government intervention in international trade through the imposition of trade restrictions (or barriers) to prevent the free entry of imports into a country and protect the domestic economy from foreign competition.
  - In contrast, **free-trade** is a situation where there are no barriers to trade.
  - There are five main types of protectionism:
    - Tariffs
    - Quotas
    - Subsidies
    - Export subsidies
    - Voluntary export restraints (VERs)

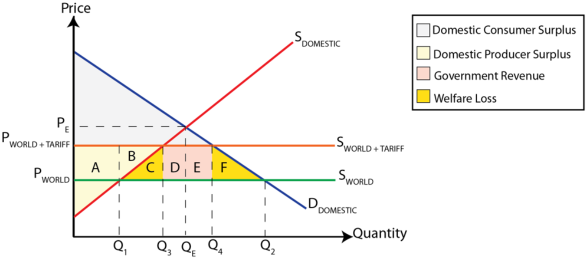
Tariffs

- **Tariffs** are taxes on imported goods; they are the most common form of trade restriction.
  - Taxes are viewed as an added cost of production by firms.
  - A tax on imported goods shifts the supply curve S_{World} upwards, reflecting higher costs imposed by the tax.
  - At the new price $P_{\text{World + Tariff}}$, domestic quantity supplied increases from Q_1 to Q_3, domestic quantity demanded falls to Q_4 and the quantity of imports falls to $Q_4 - Q_3$.
  - Tariffs may serve two purpose:
    - Protect domestic industry from foreign competition (**protective tariff**)
    - Raise revenue for the government (**revenue tariff**)

Tariffs



Price
$S_{DOMESTIC}$
P_E
$P_{WORLD+TARIFF}$
$S_{WORLD+TARIFF}$
A
B
C
D
E
F
P_{WORLD}
S_{WORLD}
$D_{DOMESTIC}$
Quantity
Q_1
Q_3
Q_E
Q_4
Q_2
Domestic Consumer Surplus
Domestic Producer Surplus



Price
$S_{DOMESTIC}$
P_E
$P_{WORLD+TARIFF}$
$S_{WORLD+TARIFF}$
A
B
C
D
E
F
P_{WORLD}
S_{WORLD}
$D_{DOMESTIC}$
Quantity
Q_1
Q_3
Q_E
Q_4
Q_2
Domestic Consumer Surplus
Domestic Producer Surplus
Government Revenue
Welfare Loss

Tariffs – Beneficiaries

1. **Domestic producers are better off**
   - Domestic producers who receive the protection gain from the tariff, because they receive a higher price, $P_{\text{World + Tariff}}$, and they sell a larger quantity, Q_3 (rather than Q_1).
2. **Domestic employment in the protected industry increases**
   - Since domestic producers sell a larger quantity, this has the effect of increasing employment in the protected industry.
3. **Government gains tariff revenues**
   - The amount of revenue the government receives from the tariff is shown by D + E, determined by multiplying the amount of the tariff (per unit of the good) times the quantity of imports.
   - Since the tariff is paid by consumers (who pay the price $P_{\text{World + Tariff}}$), the government's tariff revenue represents income that is transferred from consumers to the government.

Tariffs – Losers

1. **Domestic consumers are worse off**
   - Consumers lose from the tariff, because they must pay a higher price, $P_{\text{World + Tariff}}$; and they can only buy a smaller quantity, Q_4 (rather than Q_2).
2. **Domestic income distribution worsens**
   - There is a negative impact on income distribution, because the tariff is a type of regressive tax.
   - Tariff burden people on lower incomes proportionately more than people on higher incomes; as income increases, the proportion of income paid as tax falls.
3. **Increased inefficiency in production**
   - The increase in domestic output represents an increase in production by relatively inefficient domestic producers, resulting in waste of scarce resources (inefficiency).

Tariffs – Losers

4. **Foreign producers are worse off**

   - The producers of the exporting countries are worse off, because whereas they receive the world price, P_{World}, for their exports, they export a smaller quantity, since the quantity of imports in the importing country is reduced.

   - The exporting countries therefore lose export revenues due to the fall in the quantity of exports.

5. **Global misallocation of resource results**

   - The decrease in consumption, and shift of production away from more efficient foreign firm producers and towards more inefficient domestic producers, indicate that there is an increase in the misallocation of resources both domestically and globally.

   - The welfare loss is $C + F$. It results from the misallocation of resources caused by increased production by inefficient producers (Area C) and decreased consumption of consumers (Area F).

Effectiveness of Tariffs

- A tariff, which raises the price of a good, will be most effective the more price elastic in demand the good is.
  - If the price increases by a certain percentage, the quantity demanded falls by a more than proportionate percentage.
- In developing countries, tariffs are often used as a source of government revenue.
  - In this situation, the more price inelastic in demand the product is, the higher the revenue collected.
  - If the price increases by a certain percentage, the quantity demanded falls by a less than proportionate percentage.

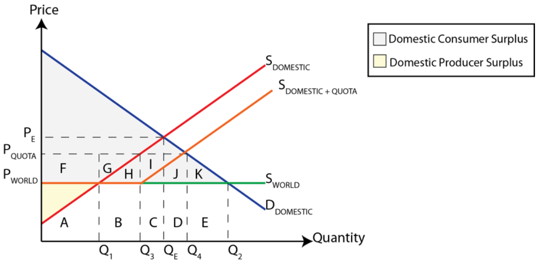
Import Quotas

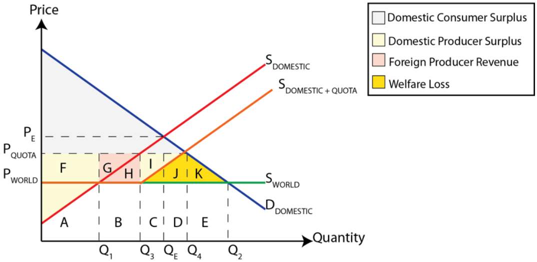
- **Import Quota (Quota)** a type of trade protection that involves setting a legal limit to the quantity of a good that can be imported over a particular time period (typically a year).
  - The effects of quotas are similar to the effects of tariffs, expect that they usually do not create revenue for the government.
  - When the government sets a quota, it issues a limited number of import licenses determining the legal limit on the quantity of imports.
    - The holders of these licenses are the only individuals with the legal right to import.
    - Usually, the government gives the licenses to governments of exporting countries, which then distribute them to their own producers or exporters.
    - As result, the exporters (or producers) of exporting countries receive the quota revenues.

Import Quotas

- Suppose that the quota on foreign producers limits imports to $Q_3 - Q_1$.
  - So at P_{World}, the domestic market still supplies only Q_1 and $Q_3 - Q_1$ is imported.
  - From this point onwards, there is a gap between the amount demanded Q_2 and the amount supplied, which has stopped at Q_3.
  - This shortage will cause producers, including foreign ones, to start raising prices.
  - Producers begin to supply more to the market at the higher pries, and consumers reduce their quantity demanded along the demand curve. This continues until the market clears at P_{Quota} and Q_4.
  - Therefore, the market settles at a price below the domestic equilibrium P_E, but above the free trade price P_{World}.

Import Quotas





Import Quotas – Beneficiaries

- With the new supply curve, $S_{\text{Domestic+Quota}}$, domestic production increases by $Q_4 - Q_3$, domestic quantity demanded falls to Q_4, and the quantity of imports falls to $Q_3 - Q_1$.

1. **Domestic producers are better off**
   - Domestic producers who receive protection gain from the quota, as they receive a higher price, P_{Quota}, and they sell a larger quantity $Q_1 + Q_4 - Q_3$, rather than Q_1.
2. **Domestic employment increases**
   - Domestic employment in the protected industry increases since producers increase the quantity of output they produce.
3. **Government neither gains nor loses**
   - Since the government usually gives the import licenses to foreign governments, the government budget is not affected.

Import Quotas – Losers

1. **Domestic consumers are worse off**
   - Consumers lose from he quota, because they must pay a higher price, P_{Quota}, and they can only buy a smaller quantity, Q_4 (rather than Q_2).
2. **Domestic income distribution worsens**
   - Quotas result in a higher price, and the difference $P_{\text{Quota}} - P_{\text{World}}$, or the increase in price, has the same effect as the tariff in that it is regressive.
   - Quotas have the effect of worsening the distribution of income.
3. **Increase inefficiency in production**
   - There results an increase in production by relatively inefficient domestic producers.
4. **Exporting countries may be worse off or better off**
   - The producers of the exporting countries export a smaller quantity, resulting in a loss of export revenues.

Import Quotas – Losers

- The producers of the exporting countries export a smaller quantity, resulting in a loss of export revenues.
- Since the exporting countries receive import licenses, they gain the quota revenues.
- Therefore, whether they will be worse off or better off depends on which is larger; the loss of export revenues or the gain from of quota revenues.

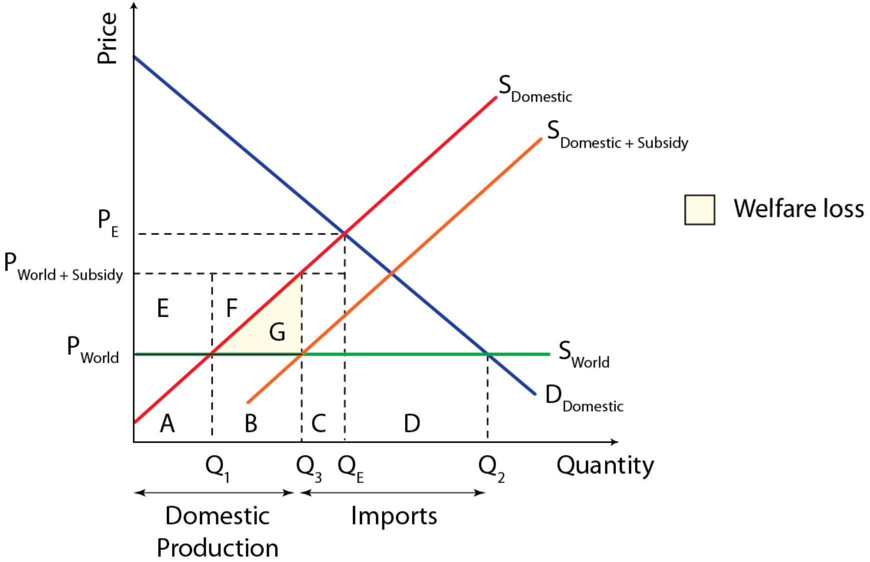
5. **Global misallocation of resources**

- The decrease in consumption, and the shift of production away from more efficient foreign producers and towards more inefficient domestic producers indicates that there is an increase in the misallocation of resources globally, affecting both consumers and producers.
- The welfare loss due to the import quota is J + K. Depending on which stakeholder captures quota rents, this may also include G + H.
- Quotas result in a greater welfare losses for the domestic economy than tariffs.

Production Subsidies

- **Production subsidies** an amount of money paid by the government to the firm as a form of protection against imports due to the lower costs and lower prices that arise from the subsidy.
  - **Production subsidy** is intended to protect domestic firms that compete with imports.
  - **Export subsidy** is a subsidy intended t protect domestic firms that export
  - The subsidy causes the domestic supply curve to shift downward by the amount of the per unit subsidy to $S_{\text{Domestic+Subsidy}}$.
  - The good continues to sell domestically at the world price, P_{World}, though the price received by producers is now $P_{\text{World+Subsidy}}$.
  - Domestic firms supply the larger quantity Q_3, determined by the intersection of the after-subsidy supply curve with the world price line. As a result the quantity of imports fall from $Q_2 - Q_1$ to $Q_2 - Q_3$.

Production Subsidies



Production Subsidies – Beneficiaries

1. **Domestic producers are better off**
   - As a result of the subsidy, domestic producers in the protected industry receive the price $P_{World+Subsidy}$, which is P_{World} plus the subsidy per unit.
   - Domestic production expands from Q_1 to Q_3.
2. **Domestic employment increases**
   - The increase in domestic production from Q_1 to Q_3 causes domestic employment in the protected industry to increases.
3. **Consumers are not affected**
   - Consumption of the good before and after the subsidy is at Q_2 units of output, and the price stays the same, P_{World}
   - Following the imposition of the subsidy, consumers buy more of the domestic good whose production has increases, and less of the imported good.

Production Subsides – Losers

1. **Government budget**
   - The government budget is negatively affected as the government must spend tax revenues on the subsidy equal to,
     $\Delta G = \text{Subsidy} \times Q_3 = E + F + G$
2. **Taxpayers are worse off**
   - Taxpayers lose as a portion or their tax revenues is spend on production subsidies that have the effect of increasing production of inefficient producers.
   - The amount lost is what is spent on the subsidy out of the government budget.
   - These funds could have been spent elsewhere with benefits for taxpayers.
3. **Increased inefficiency in production**
   - Production of domestic inefficient producers increases, while the production of more efficient foreign producers falls.

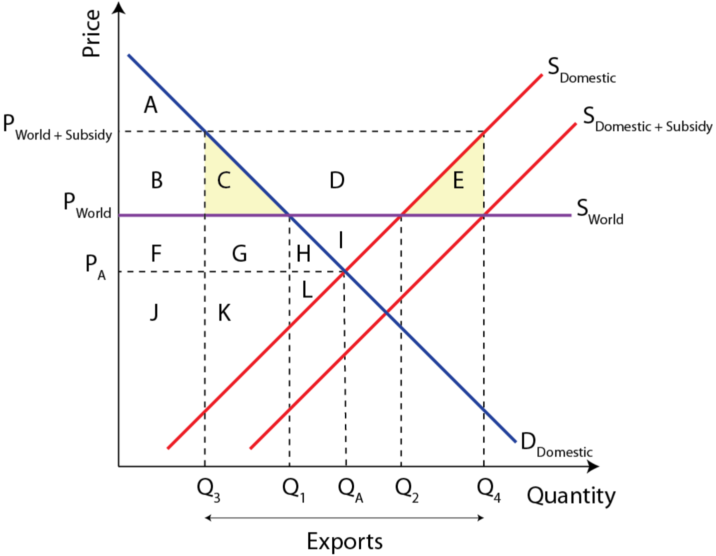
Production Subsides – Losers

4. **Exporting countries are worse-off**
   - Foreign producers exporting the good are worse off because they can export less of the good, and export revenue of these countries fall.
5. **Global misallocation of resources**
   - The shift of production from efficient to inefficient producers involves an increase in the global misallocation of resources, negatively affecting economies.
   - The welfare loss to society is $\Delta \text{DWL} = -\text{G}$.
   - From an efficiency point of view the effect of production subsidies may not be as harmful as those of tariffs and quotas.
   - They encourage inefficient production, but they do not have negative effects on consumption which remains the same before and after the subsidy.

Export Subsidies

- **Export subsidy** a payment made by the government to a producer or exporter per unit of the subsidized good, where a subsidy is paid for each unit of the good that is exported.
  - The government decides to grant an export subsidy per unit of the good exported in order to increase the quantity of exports.
  - The supply curve moves downward by the amount of the subsidy per unit from S_{Domestic} to $S_{\text{Domestic+Subsidy}}$.
  - At the higher price $P_{\text{World+Subsidy}}$, producers increase the quantity they supply to Q_4, while consumers decrease the quantity they demanded to Q_3.
  - The quantity $Q_4 - Q_3$ represents exports.
  - The price paid by foreigners remains at the world price, P_{World}.The higher domestic price, $P_{\text{World+Subsidy}}$, applies only to domestic producers and consumers.

Export Subsidies



Export Subsidy – Beneficiaries

1. **Producers are better off**
   - Producers receive a higher price, $P_{World+Subsidy}$, and sell a larger quantity, Q_4 rather than Q_2, since the volume of exports increases from $Q_2 - Q_1$ to $Q_4 - Q_3$.
2. **Domestic employment increases**
   - The increase in domestic production causes domestic employment to increase.

Export Subsidies – Losers

1. **Consumers are worse off**
   - Consumers must pay a higher price for the good, $P_{World+Subsidy}$, and they consume a smaller quantity, Q_3 rather than Q_1.
2. **Negative effect on the government budget**
   - The government must pay for the subsidy an amount which is equal to the subsidy per unit times the quantity of exports.
3. **Taxpayers are worse off**
   - Taxpayers must pay indirectly for the subsidy, as the subsidy is financed out of tax revenues; moreover they lose by not having the subsidy funds available for alternative uses (such as merit goods).
4. **Increased inefficiency in production**
   - Inefficient domestic producers are protected by the higher price.

Export Subsidies – Losers

5. **Domestic income distribution worsens**
   - While there is no regressive tax, consumers do have to pay a higher price, and the increase in price represented by $P_{\text{World+Subsidy}} - P_{\text{World}}$, is regressive because it is a higher fraction of lower incomes.
6. **The exporting countries are worse off**
   - Foreign producers are worse off as they lose a share of their global market through the increase in subsidised exports, and their export revenues fall.
7. **Increase in the global misallocation of resources**
   - Consumers and producers around the world are negatively affected since the inefficiency of resource allocation around the world increases.
   - The welfare loss to society is equal to, $\Delta \text{DWL} = -\text{C} - \text{E}$.

Administrative Barriers

- **Administrative barriers** trade protection measures taking the form of administrative procedures that countries may us to prevent the free flow of imports into a country.
  - Often considered to be a kind of "hidden" trade protection.
  - **Bureaucratic barriers** – countries can impede the entry into their markets with waves of paperwork and legal requirements that raise the cost of importing.
  - **Product standards** – health, safety and environmental considerations can be used to exclude goods from the domestic market.
    - Imports may be required to meet specific technical standards, and importers may be required to test and prove the safety and quality of their products.
    - **Example;** UK, EU and Japan have restricted hormone-fed beef from the US on the grounds of health and safety concerns.

Administrative Barriers

- **Environmental standards** – A country may set certain environmental requirements on products in circumstances where there is depletion of common access resources or endangered species are involved.
- **Qualifications** – providers of domestic services such as teachers, physicians, lawyers and many others typically require specific qualification to work legally in any given country.
  - Such qualifications may prevent capable workers from relocating to other countries.
  - This keeps domestic prices (wages) high and protects domestic employment in these fields.
- **Exchange rates** – an exchange rate is basically the amount of one currency accepted for a unit of another.
  - Lower exchange rates make a countries exports less expensive and therefore, more attractive.

Administrative Barriers

- They also make imports less desirable, effectively protecting domestic markets at the same time.
- Countries can choose to intentionally manipulate their exchange rate to encourage exports.
- However, a country runs the risk of overpricing significant imported resources and therefore limiting aggregate supply, negating the boost that the lower exchange rate might provide.

- **Nationalistic campaigns** – an industry attempting to regain market share may also promote their product in patriotic terms.
  - In theory, this should boost domestic demand for locally produced goods.
  - These campaigns often claim product superiority and appeal to protect domestic employment.
  - **Example;** Buy USA campaign with slogan "Have you lost your job yet? Keep buying foreign."

Administrative Barriers

- **Local content requirement** – is a regulation that requires a specified fraction of a final good to be produced domestically.

Arguments for and Against Trade Protection

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Assessment Objectives

Specific Expectations	
AO2	Explain and provide examples of arguments in favour of trade protection
AO2	Explain and provide examples of arguments against trade protection
AO3	Evaluate free trade versus trade protection, referring to the following: the arguments in favour of and against trade protection, the advantages and disadvantages of the various trade protection measures.

Arguments for trade protection

- Trade barriers create some winners and some losers, but in all cases result in inefficiency in production and global resource misallocation.
- The validity of trade protectionist policies may depend on non-economic considerations, or on the expectation that longer-term economic benefits of trade protection are greater than short-term costs.

1. **Infant industry argument**
   - A new domestic industry (sunrise industry) that has not had time to establish itself and achieve efficiencies in production, and may therefore be unable to compete with more "mature" competitors firms from abroad.
   - Considered to be one of the strongest arguments in favour of trade protection in developing countries.

Arguments for trade protection

2. **National security**

   - Certain industries are essential for national defence, and should be protected so that a country can produce them itself.
   - A problem is that it can be used by industries that have an indirect use in defence to try to acquire protection against foreign competition.

3. **Health, safety and environmental standards**

   - Many countries maintain health, safety and environmental standards that all imported products must meet before they are allowed to enter.
   - Each country sets its own standards, and governments are justifiably concerned that imported goods may fall short of these.
   - There is a concern that these standards may be used as a form of "hidden" protection to keep certain goods out if they are competing with domestically produced goods.

Arguments for trade protection

4. **Efforts of a developing country to diversify**
    - Refers to change involving greater variety, and is used to refer to increasing the variety of goods and services produced and/or exported by a country; it is the opposite of specialization.
    - A number of developing countries, especially **economically least developed countries (ELDCs)** are very highly specialized in producing and only exporting a few primary commodities.
    - Such excessive specialization carriers its dangers, and countries may be better off diversifying their production and exports.
    - To be able to diversify, countries may have to use trade protection policies to keep out imports of good they would like to produce themselves.
5. **Anti-dumping**
    - **Dumping** refers to the practice of selling a good in international markets at a price that is below the cost of producing it (usually by providing export subsidies).

- Dumping is considered an unfair trade practice, and is illegal according to international agreements.
- **Anti-dumping** an argument that justifies trade protectionist policies; if a country's trading partner is dumping, then the country should have the right to impose trade protection measures (tariffs or quotas) to limit imports of the dumped good.
- It is often difficult to prove dumping is being practised.

6. **Unfair competition**

- Practices that countries may use in order to gain a competitive advantage over other countries in order to unfairly increase their exports at the expense of other countries.
- **Example(s):** Maintaining an undervalued currency whereby countries seek a lower value of their currency in order to make their exports more competitive in foreign markets.

Arguments for trade protection

7. **Correcting a balance of payments deficit**
   - A balance of payment deficit occurs when the outflow of money from a country is greater than the inflow, and usually happens when there are more imports than exports.
   - Trade protection can be used as a short-term emergency measure if there is a serious balance of payments deficits.
   - Limits imports and therefore the need to make payments abroad, but decreased imports would come at the expense of falling exports in exporting countries, and there is a risk of retaliation.
8. **Tariffs as a source of government revenue**
   - Tariffs may be used as a source of government revenues, but should be a temporary measure and gradually phased out as countries develop.
   - Tariffs are a regressive type of tax, and so have negative impacts on income distribution; in addition, they have negative effects of allocative efficiency.

Arguments for trade protection

9. **Protection of domestic jobs**

   - According to this argument, restrictions on imports are needed to protect domestic employment.
   - Import restrictions increase domestic production, thus increasing employment.
   - If restrictions apply to goods that are used as inputs in the production of other goods, it is likely that there will be higher costs of production due to higher prices of the imported inputs, lower production in these industries, and therefore increased unemployment.
   - If unemployment in the domestic economy falls due to import restrictions, this means that unemployment increases in countries that are forced to export less.

Arguments against trade protection

1. **Producers and workers gain from all types of trade protectionism**
   - Protectionist policies are usually undertaken with a view to protecting domestic production and domestic employment.
2. **Higher production costs and reduced efficiency**
   - Long-term reliance on protection against foreign competition eliminates incentives for firms to lower costs and operate efficiently.
3. **Consumers lose in most cases**
   - Higher prices of protected goods and lower quantities of goods available in the market.
   - The exception is production subsidies, where the quantity consumed and price paid by consumers remain unaffected.
   - Consumers also face reduced consumer choice through lower imports.

Arguments against trade protection

4. **Income distribution in most cases worsens**
   - The only exception is production subsidies, where the price paid by consumers does not change.
5. **Foreign producers are worse off in all cases**
   - This is apparent from the reduction in imports of the country imposing protectionist measures.
6. **Domestic and global resource allocation lose**
   - Domestically, the appearance of welfare loss means resource misallocation.
   - There is resource misallocation on a global scale as protection means that production moves away from lower cost producers in other countries to higher cost producers who are enjoying protective measures.

Arguments against trade protection

7. **Negative effects on the price level, real GDP and employment**
   - Some domestically produced goods that are protected may also be used as inputs in the production of other goods.
   - The short-run aggregate supply curve (SRAS) decreases, causing cost-push inflation.
   - Real GDP falls and unemployment increases, while the price level also increases.
8. **Negative effects on a country's export competitiveness**
   - Some domestically produced goods that are protected may be used as inputs in the production of other goods that are exported.
   - This results in lower competitiveness in export markets due to higher prices.

Arguments against trade protection

9. **Trade protection may give rise to trade wars through retaliation**
   - As one country imposes barriers on imports, other countries may retaliate by imposing their own barriers.
   - This can produce chain reactions with countries becoming more and more protectionist, with serious negative effects on global output and resource allocation.
10. **Trade protection creates a potential for corruption**
    - **Example(s):** Restrictions on imports may pave the way for bribes and smuggling goods illegally into a country, or may result in tariff and other revenues going into the pockets of bureaucrats rather than the government budget.

Arguments against trade protection: Summary

Stakeholder	Tariffs	Quotas	Production Subsidies	Export Subsidies	Administrative Barriers
Producers	Gain	Gain	Gain	Gain	Gain
Workers	Gain	Gain	Gain	Gain	Gain
Government	Gain	Neutral	Lose	Lose	Natural
Taxpayers	Neutral	Neutral	Lose	Lose	Natural
Consumers	Lose	Lose	Neutral	Lose	Lose
Producer Efficiency	Lose	Lose	Lose	Lose	Lose
Income Distribution	Lose	Lose	Neutral	Lose	Lose
Resource Allocation	Lose	Lose	Lose	Lose	Lose
Foreign Producers	Lose	Lose	Lose	Lose	Lose

Economic Integration

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Assessment Objectives

Specific Expectations	
AO1	Distinguish between preferential trade agreements: bilateral, regional, and multi-lateral.
AO2	Explain and provide examples of different types of trading blocs: free trade area/agreement.
AO3	Discuss the advantages and disadvantages of economic integration arising from the different types of trading blocs, free trade area/agreement, customs union, common market.
AO3	Discuss the advantages and disadvantages of economic integration arising from the different types of trading blocs
AO1	Explain monetary union.
AO3	Discuss the advantages and disadvantages of monetary union.

- **Economic integration** refers to economic interdependence between countries, usually achieved by agreement between countries to reduce or eliminate trade and other barriers between them.
  - There are various degrees of integration, depending on the type of agreemnt and the degree to which barriers between countries are removed.
    1. Preferential trade agreement
    2. Free trade area
    3. Customs union
    4. Common market
    5. Economic and monetary union
    6. Complete economic integration

Preferential Trade Agreement

- **Trade liberalization** the policy of liberalizing (freeing up) international trade by eliminating trade protection and barriers to trade (tariffs, quotas, etc.)
- **Preferential trade agreement (PTA)** an agreement between two or more countries to lower trade barriers between them on particular products.
  - Trade barriers may remain on the rest of the products, and on imports from non-member countries.
  - Results in easier access to the markets of other members for the selected products, compared with the access of countries that are not members.
  - PTAs sometimes involve co-operation between members on other issues, such as labour standards, environmental issues or intellectual property laws.

Bilateral, region, and multilateral (WTO) trade agreements

- **Bilateral trade agreement** any agreement to lower international trade barriers involving two trading partners, usually two countries.
  - It may also involve a trade agreement between one country and another group of countries when this groups acts as a single unit (European Union).
- **Multilateral trade agreement** is a trade agreement to lower international trade barriers between many countries.
  - At the present time these are mainly carried out within the framework of the World Trade Organization (WTO), and involve agreements between WTO member countries.
- **Regional trade agreements** a trade agreement (or agreement to lower international trade barriers) between several countries that are located within a geographical region.

Trading Blocs

- **Trading bloc** is a group of countries that have agreed to reduce tariffs and other barriers to trade for the purpose of encouraging free trade or freer trade and cooperation between them.

   1. **Free trade area (agreement)** – a type of trading bloc, consisting a group of countries that agree to eliminate trade barriers between themselves.

      - It is the most common type of integration area.
      - In trade relations between members, there may be free trade in some products, and some protection in other products.
      - Each country maintains the right to pursue their own trade policy towards non-member countries (to impose its own trade barriers).
      - One problem that arises in free trade areas is that a product may be imported into the FTA by the country that has the lowest external trade barriers, and then sold to countries within the FTA that have higher external trade barriers.

Trading Blocs

2. **Customs union** – a type of trading bloc, consisting of a group of countries that fulfil the requirements of free trade area (elimination of trade barriers between members) and in addition adopt a common policy towards all non-member countries.

    - Members of a customs unuon also act as a group in all trade negotiations and agreements with non-members.
    - Customs union have the advantage over FTAs that they avoid creating complication "rules of origin" for imports, since they all have the same common external barriers.
    - However, customs union face the problem of that they must co-ordinate their policies toward non-members.

3. **Common market** – a type of trading bloc in which countries that have formed a customs union proceed to eliminate any remaining tariffs in trade between them.

- They continue to have a common external policy (as in a customs union), and in addition agree to eliminate all restrictions on movements of any factors of production within them; factors affected are mainly labour and capital.
- Workers are free to move and work in any member country without restrictions, and capital (physical and financial) can also flow from country to country without restrictions.
- This results in a better use of factors of production and factor mobility across countries improves the allocation of resources.
- The development of a common market requires greater policy co-ordination among members, and requires the willingness of member governments to give up some of their policy-making authority to an organization with power over all member governments.

4. **Monetary union** – a high form of economic integration, involving the adoption by a group of countries of a single currency.

Trading Blocs

- The formation of a single currency can be partly thought of as a system of “fixed” exchange rates among participating countries, but one in which there is no possibility ever of changing the value of one currency in relation to another.
- Monetary union in addition involves the adoption of a common monetary policy carried out by a single central bank, which is necessitated by the use of a single currency.

Trading Blocs – Advantages

- Economic integration over the long term can be expected to bring forthe many benefits of free trade.

1. **Trade creation** – the replacement of higher cost products (imported or domestically produced) by lower cost imports that results when a trading bloc is formed and trade barriers are removed.
    - In general, trade creation has the effect of increasing social welfare.
2. **Increased competition**
    - Removal of trade barriers within trading blocs results in increased competition among producers in member countries.
    - Increased competition offers major advantages in term of production by more efficient producers, lower prices for consumers and improved allocation of resources.

Trading Blocs – Advantages

3. **Expansion into larger markets**
   - Arises from the ability of firms to sell beyond their national boundaries, and increasing their exports.
4. **Economies of scale**
   - When an economy opens itself up to free trade with other countries, its exports are likely to increase and as the size of the market expands, the firm can achieve lower average costs.
5. **Lower prices for consumers & greater consumer choice**
   - The elimination of trade barriers (along with increased competition and economies of scale) results in lower prices for consumers
   - Increased imports means a greater variety of goods from which consumers can choose.

Trading Blocs – Advantages

6. **Increased investement**
    - Enlarged firms often give rise to increased investment by firms that want to take advantage of the larger market size
    - A major incentive faced by outsider firms to set up production unit within the bloc is that they escape the protection that the trading bloc imposes from outside.
7. **Improved resource allocation & greater employment**
    - If a trading bloc develops into a common market, which involves free movement of factors of production, specifically capital and labour, there will also be a better use of these within the bloc.
    - Capital can also move freely in search of greater profits.
8. **Improved efficiency & greater economic growth**
    - Inefficient producers lose their protection, leading to better prospects for achieving more rapid economic growth.

Trading Blocs – Advantages

9. **Stronger bargaining power**

   - When countries bargain individually in multilateral negotiations, such as the WTO, they do not have much bargaining power especially if they are relatively small.
   - If they bargain as a trading bloc, they have much greater power, increasing their chances of being heard and achieving their objectives.

10. **Political advantages**

    - Greater economic integration is likely to result in a reduced likelihood of hostilities arising between countries whose economies are becoming more interdependent through increased trade, investment, labour, and financial flows.
    - Economic integration may lead to political stability as well as co-operation, resulting in further benefits for member countries.

Trading Blocs – Disadvantages

1. **Trade diversion** – the replacement of lower-cost products (imported or domestically produced) by higher cost imports that results when a trading bloc is formed and trade barriers are removed.
   - Trade diversion occurs when an importing country is forced to import from a higher cost producer within a trading bloc, whereas before it joined it was importing from a lower-cost producer elsewhere.
   - Resource allocation will improve only if trade creation effects are larger than trade diversion effects.
2. **Challenges multilateral trading negotiations**
   - Trading blocs are inferior to the WTO's multilateral approach of reducing trade barriers towards all countries.
   - Some large trading blocs may enjoy free trade and all its benefits within the bloc, but may impose high trade barriers on non-members, and the result may be to limit trade which may worse global allocation of resources.

Trading Blocs – Disadvantages

3. **Unequal distribution of gains**
   - Countries forming a trading bloc are unlikely to gain equally from the operation of the trading bloc, and this creates the potential for conflicts between the members.
   - It is also possible for some countries to gain while others become worse off in some respects.
   - The same applies to gains and losses within the member countries, as some stakeholders are likely to gain while others lose.
4. **Economic integration involves loss of sovereignty**
   - Sovereignty refers to authority over decision-making with the national economy.
   - The formation of trading blocs involves giving up some domestic decision-making power to a supranational authority.

World Trade Organization

Assessment Objectives

Specific Expectations	
AO2	Explain the objectives, functions and factors affecting the influence of the World Trade Organization (WTO) including difficulties in reaching agreement and members' unequal bargaining power.

WTO Functions and Objectives

- **World Trade Organization (WTO)** an international organization that provides the institutional and legal framework for the trading system that exists between member nations worldwide.

  - It has the following objectives and functions:

  1. **Administers WTO trade agreements**
     - Helps in the implementation and administration of international trade agreements.
  2. **Provides a forum for trade negotiations**
     - Provides a forum for members to discuss their trade problems and negotiate trade agreements on how to liberalize trade.
  3. **Handles trade disputes**
     - When members disagree on trade issues, the WTO makes decisions to resolve the differences on the basis of the legal foundations of the trade agreements.

WTO Functions and Objectives

4. **Monitors national trade policies**
    - The WTO subscribes to the policy of trade without discrimination where the most preferential tariff offered to any member country can be claimed by another member nation.
    - Carriers out periodic review of its members' national trade policies.
    - Members are required to notify the WTO of any changes in policy.
    - The WTO also examines new trading bloc arrangements
5. **Provide technical assistance to developing nations**
    - Provides assistance in the form of training of government officials as well as journalists, academia and private sector representatives in developing countries on trade related issues.
6. **Facilitates cooperation with other international organizations**
    - The WTO co-operates with other international organizations (such as the World Bank and International Monetary Fund), in order to facilitate co-ordination of global policies.

WTO: Criticisms and Challenges

- The WTO claims to offer benefits to the global trading system arising from its contribution to the development of free trade, the establishment of an effective system of trading rules and a mechanism to resolve trade disputes between countries.

1. **Accused of promoting trade rules unfavourable to ELDCs**
   - Developed countries received greater tariff reductions than developing ones
   - Protection of intellectual property increased the costs of acquiring new technology by developing countries.
   - Practice of making increased use of non-tariff and hidden barriers against developing country exports has not been sufficiently addressed.
2. **Unable to reach an agreement on agricultural protection**
   - Developed countries have long been protecting their farmers through production and export subsidies, with numerous negative effects on farmers and economies of developing countries

WTO: Criticisms and Challenges

3. **Accused of not distinguishing between developed & ELDCs**
   - The WTO treats all countries as if they are at the same level of development, with the sole exception of **least developed countries** (low income countries identified by the UN which face severe constraints in achieving sustainable development).
   - There are many developing countries that may need protection on the grounds of developing infant industries or diversifying their production and economies to reduce the reliance on primary products.
4. **Accused of ignoring environmental and labour issues**
   - The WTO is accused of not paying enough attention to issues relating to the environment and labour standards.
5. **Members have unequal bargaining power**
   - Critics argue that decisions are based on the power of members in spite of one vote per member rule.

WTO: Criticisms and Challenges

6. **Fragmentation of global trade**
   - WTO has come to a stalemate created by developed countries demands that developing countries open up their markets to industrial products and services, while they continue to offer protection to their farmers.
   - Growing trade protection tendencies around the world.
   - Growing impatience with the WTO as the main mechanism for trade liberalization.
7. **Blocking of its power to resolve disputes**
   - One of the most important roles of the WTO is its ability to resolve trade disputes between countries that disagree on trade practices.
   - This function is carried out through its "Appellate Body" a committee of seven judges who hear complaints of WTO members.
   - In recent years, countries have blocked appointments to the body

Floating Exchange Rates

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Assessment Objectives

Specific Expectations	
AO2	Explain how exchange rates are determined by demand and supply of a currency in the foreign exchange market
AO4	Draw diagrams illustrating exchange rate determination and exchange rate changes showing appreciation and depreciation.
AO4	Calculate prices of goods in different currencies.
AO2	Explain the various factors that may cause changes in demand and/or supply of a currency.
AO4	Calculate changes in the value of currencies, arising from changes in currency demand or supply.

Foreign Exchange and Exchange Rates

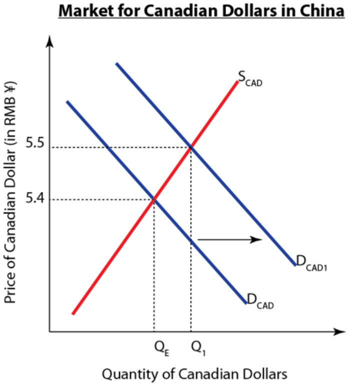
- **Foreign exchange** refers to foreign national currencies.
  - For any country, it refers to currencies other than its own.
  - **Foreign exchange market (FOREX)** are competitive markets linked to all domestic and foreign prices, where foreigners and domestic citizens swap dollars for foreign currency.
- **Exchange rate** the rate at which one currency can be exchanged for another.
  - The number of units of foreign currency that correspond to the domestic currency.
  - Can be thought of as the "price" of a currency, which is expressed in terms of another currency.
  - **Example:** 1 USD : 1.27 CAD $\Leftrightarrow$ 1 CAD : 0.79 USD

Demand and Supply of Foreign Exchange

- **Who demands a country's currency?**
  - **Foreign households, firms, and investors** to buy goods and services, capital, and assets from that country.
  - As currency becomes less expensive, so to do the products made by that country so people will want to buy more of its goods and services. Therefore foreigners demand larger quantities of the currency as it depreciates.
- **Who supplies a country's currency?**
  - **Domestic households, firms, and investors** supply their currency on the Forex market to exchange for foreign currencies so they can buy goods and services, capital, and assets in foreign countries.
  - As prices rise, holders of that currency can obtain other currencies more cheaply and will want to buy more imported goods and will therefore give up more of their currency to obtain other currencies.

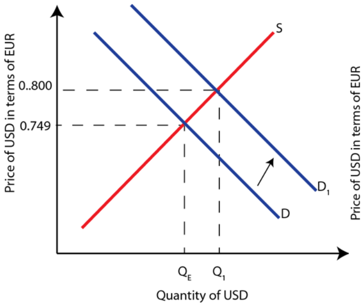
Demand and Supply of Foreign Exchange

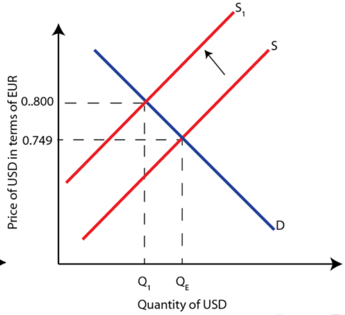
- The demand for foreign currencies generates a supply of domestic currency.
- The demand for the domestic currency generates a supply of foreign currencies.



Floating Exchange Rate System

- **Floating exchange rate** an exchange rate determined entirely by market forces, or the forces of supply and demand.
  - There is no government intervention in the foreign exchange market to influence the value of the exchange rate.
  - **Appreciation** an increase in the value of a currency in the context of a floating exchange rate system or managed exchange rate system.

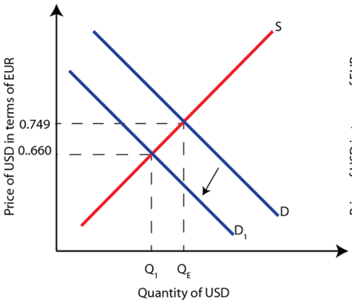




Floating Exchange Rate System

- When one currency appreciates it does so against all others in a floating exchange rate system, meaning that all others depreciate relative to it.

- **Depreciation** a decrease in the value of a currency in the context of a floating exchange rate system or managed exchange rate system.
  - When a currency depreciates, all other currencies appreciate relate to it.



Causes of Changes in Exchange Rates

T **Tastes and Preferences**
- As demand for a country's exports increases, its currency appreciates
- As a country's imports increase, its currency depreciates

I **Relative Income Changes**
- A country's level of income relative to other countries and the value of its currency change in opposite directions

P **Relative Price Levels**
- Higher inflation in a country relative to other countries leads to currency depreciation

S **Speculation**
- Expectation that a currency will appreciate leads to currency buying that contributes to bringing about the appreciation

I **Relative Interest Rates**
- A country's interest rates and the value of its currency change in the same direction

Other Determinants

Investment from Abroad
- An increase in foreign investment from abroad results in currency appreciation

Central Bank Intervention
- If the central bank buys foreign currency the domestic currency will depreciate and vice versa

Fixed Exchange Rates

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Assessment Objectives

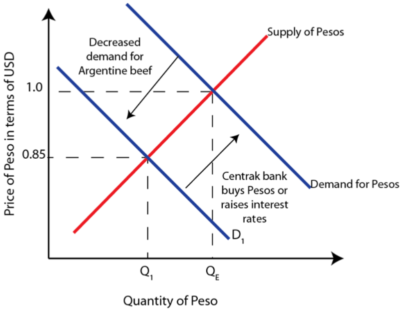
Specific Expectations	
AO3	Evaluate the consequences of changes in exchange rates on economic variables such as inflation, unemployment, economic growth, the current account balance, and standard of living
AO4	Draw AS–AD diagrams to show consequences of exchange rate changes of important macroeconomic variables.
AO2	Explain exchange rate determination in a fixed exchange rate system, including currency devaluation and revaluation
AO4	Diagram to show how fixed exchange rates are maintained
AO2	Explain exchange rate determination in a managed exchange rate system
AO2	Explain overvalued and undervalued currencies
AO4	Draw a diagram to show how equilibrium exchange rates are determined and change in a managed exchange rate system
AO3	Evaluate fixed versus floating exchange rate systems

Fixed Exchange Rates

- **Fixed exchange rate system** an exchange rate system where exchange rates are fixed by the central bank of each country.
  - The exchange rate is not permitted to change freely in response to changes in currency supply and demand
  - The exchange rate is still determined by demand and supply, but these are manipulated by the central bank or government in order to arrive at the equilibrium that will give rise to the desired exchange rate.
    - Exchange rates are always determined by demand and supply in both floating and fixed exchange rate systems
    - In a floating exchange rate system the "price" of a currency adjusts freely to changes in supply and demand.
    - In a fixed exchange rate system the currency supply and demand are forced to adjust to the predetermined "price", or fixed exchange rate, through central bank and government intervention that manipulates them.

Fixed Exchange Rates

- Maintaining the value of a currency at its fixed exchange rate requires constant intervention by the central bank or government.



- **Revaluation** refers to an increase in the value of a currency in the context of a fixed or pegged exchange rate system
  - Revaluation leads to more expensive exports to foreigners and cheaper imports for domestic residents, and therefore fewer exports and more imports.

Fixed Exchange Rates

- An **overvalued currency** has a value that is too high relative to its equilibrium free market value. Its exchange rate has been set at a higher level than the equilibrium market exchange value.
- The main reason to overvalue a currency is to access cheap imports from foreign countries.

- **Devaluation** refers to a decrease in the value o a currency in the context of a fixed or pegged exchange rate system.
  - Devaluation results in cheaper exports to foreigners and more expensive imports for domestic residents, given rise to more exports and fewer imports.
  - Undervaluation is used as a method to expand export industries, expand the economy and therefore increase employment levels.
  - Achieving these objectives by means of an undervalued currency is considered to involve the creation of an unfair competitive advantage.

Intervention to maintain fixed exchange rates

- Intervention takes the form of buying and selling reserve currencies by the central bank, as well as making other adjustments in the domestic economy.

1. **Using official reserves to maintain the exchange rate**
   - Where there is upward pressure in the currency due to excess demand, the central bank can keep on selling the domestic currency and buying foreign exchange, thus maintaining the exchange rate.
   - Where there is downward pressure in the currency due to excess supply, the central bank can keep on buying the domestic currency and selling some of its foreign currency reserves.
2. **Changing interest rates**
   - The central bank can increase or decrease interest rates, influencing the level of financial investments from other countries
   - Increases in interest rates involve contractionary monetary poicy and may lead to a recession in the domestic economy.

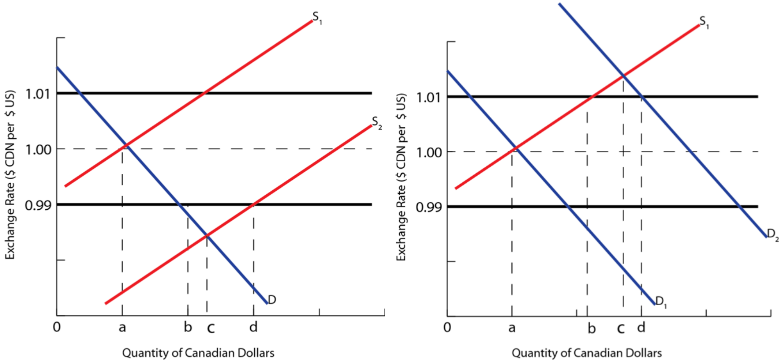
Intervention to maintain fixed exchange rates

3. **Borrowing from abroad**
    - If the country borrows from, its loans will come in the form of foreign exchange, which when converted to the domestic currency will increase the demand.
    - Excessive borrowing from abroad comes with a number of costs.
4. **Efforts to limit imports**
    - The government could use policies to limit imports because this reduces the supply of the domestic currency, causing a leftward shift of the currency supply curve.
    - To limit imports, government can may use contractionary fiscal and monetary policies (**expenditure-reducing**), which lower aggregate demand demand, lower incomes, and therefore result in fewer imports.
    - Alternatively, they may use trade protection policies (**expenditure-switching**) which work to directly lower the quantity of imports that can enter a country.
    - Contractionary policies may lead to a recession, while trade protection comes with the possibility of retaliation by trading partners.

Managed Exchange Rate

- **Managed exchange rate (Managed float)** exchange rates that are for the most part free to float to their market levels over long periods of time; however, central banks periodically intervene in order to stabilize them over the short-run.
  - The objective of central bank intervention is to prevent large and abrupt fluctuations in exchange rates that could arise if currencies were left entirely to market forces.
  - Large and abrupt exchange rate changes disrupt international trade flows and economic activity.
  - A number of countries peg (fix) their currencies to the US dollar, and float together with it, while a few other economies peg their currencies to the euro, and float in relation to all other currencies.
  - The pegged currency is allowed to fluctuate only within a narrow range above and below the target exchange rate, so that if the actual exchange ate hits the upper or lower limit of the range, the central bank intervenes to keep it within the limits.

Managed Exchange Rate



- A pegged currency combines fixed and floating exchange rates.
- Pegging a currency stabilizes its exchange rate in relation to currency in which it is pegged, preventing abrupt or strong fluctuations.

Consequences of changes in exchange rates

1. **Effects on the balance of trade**
   - Currency appreciation can be expected to result in a decrease in net exports (X – M).
   - Currency depreciation can be expected to lead to an increase in net exports (X – M).
2. **Demand-pull inflation**
   - A currency depreciation, by making exports cheaper and imports more expensive, works to increase the quantity of exports and lower the quantity of imports, thus increasing net exports (X – M), causing AD to increase.
   - A currency appreciation will work to reduce demand-pull inflationary pressures in an economy due to a decrease in net exports (X – M), causing AD to fall.

Consequences of changes in exchange rates

3. **Cost-push inflation**
   - A currency depreciation, makes imports more expensive. If domestic producers are heavily dependent on imported factors of production, their costs of production increase, resulting in a leftward shift of the SRAS curve resulting in cost-push inflation.
   - A currency appreciation, by making imports less expensive, results in a rightward shift of the SRAS curve, lowering inflationary pressures in the economy.
4. **Effects of Economic Growth**
   - A currency depreciation increases net exports, increasing aggregate demand, thus causing an increase in real GDP produced.
   - If the growth of export industries leads to increased investment spending in the domestic economy, there may be effects on aggregate supply, causing increases in potential output.

Consequences of changes in exchange rates

- To the extent that there is cost-push inflation there may be downward pressure on real GDP which may fall due to the decrease in short-run aggregate supply.
- What will happen to GDP depends on which of the effects is stronger: the upward effect due to the increase in aggregate demand or the downward effect due to the decrease in short run aggregate supply.

5. **Effect on unemployment**

- Currency depreciation increases net exports and therefore aggregate demand.
- This causes a fall in cyclical unemployment if the economy is in a recessionary gap or a temporary decrease in the natural unemployment.
- Employment in export industries is likely to increase since exports are likely to rise.
- In addition employment in industries producing goods that compete with imports is also likely to increase since imports are expected to fall with depreciation.

Consequences of changes in exchange rates

6. **Effects on the current account balance**

   - Depreciation is likely to cause imports to decrease and exports to increase.
   - If a country has an excess of imports over exports (**"trade deficit"**), its deficit is likely to become smaller after a period of time.
   - If it has excess exports over imports (**"trade surplus"**), its trade surplus is likely to become larger.
   - An appreciation, by contrast, will cause imports to increase and exports to fall, thus having the opposite effects on the current account balance.

7. **Effects of foreign debt**

   - A depreciation, by lowering the value of the domestic currency, causes the value of foreign debt to increase.
   - This is a problem faced by many developing countries, which find themselves having a larger debt burden if their currency depreciates.

Consequences of changes in exchange rates

- On the other hand, a currency appreciation causes the value of foreign debt to fall.

8. **Effects on living standards**

   - When currency depreciates, it causes imported goods to become more expensive in the domestic economy, therefore residents become worse off as all imported goods become more expensive with real income decreasing.

   - If, a currency appreciates, the effects on living standards of the residents are likely to be positive due to real income increasing.

Balance of Payments

Assessment Objectives

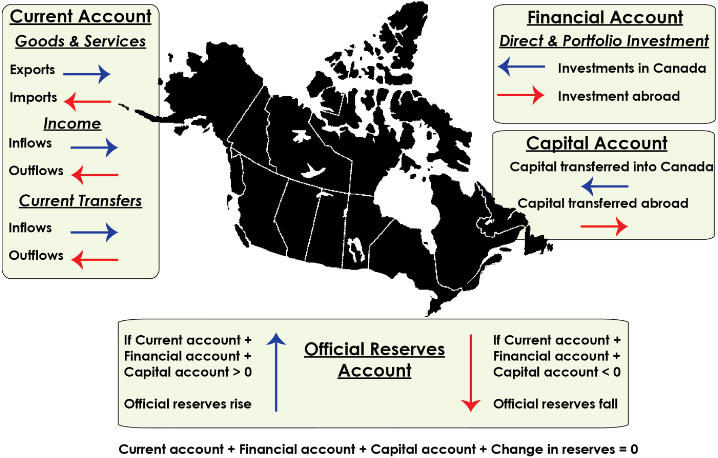
Specific Expectations	
AO2	Explain the balance of payments in terms of the current account, the capital account, and the financial account, and the items that compose each of the three accounts.
AO2	Explain the interdependence between the three accounts in terms of zero balance, the balance between credits and debits, and the balance between deficits and surpluses.
AO4	Calculate items of the balance of payments given a set of data.
AO4	Draw a diagram showing the relationship between the current account balance and the exchange rate.
AO2	Explain the relationship between the exchange rate and financial account.

Role of the Balance of Payments

- **Balance of payments** of a country is a record (usually for a year) of all transactions between the residents of the country and the residents of all other countries.
  - Its role is to show all payments received from other countries, called **credits**, and all payments made to other countries, called **debits**.
  - In the course of a year, all inflows of payments (credits) must exactly equal to the outflow of payments (debits).
  - The sum of all credits is equal to the sum of all debits.
  - All credits (inflows of money into the country) create a foreign demand for the country's currency.
  - All debits (outflows of money from the country) create a supply of the domestic currency.

Role of the Balance of Payments

- Every unit of a country's currency spent on foreign goods and services, ultimately ends up being spent again on something from the country.



Structure of the balance of payments

- The balance of payments consists of three accounts:

    1. **Current account** – consists of the balance of trade in goods and services, net change income and the net change in current transfers

    2. **Capital account** – records the transactions involving ownership of capital, forgiveness of debt, or the acquisition and disposal of intangible assets between a nation and all other nations

    3. **Financial account** – measures the exchanges between a nation and the rest of the world involving ownership of financial and real assets

    - **Surplus** in an account occurs whenever a balance has a positive value, meaning that credits are larger than debits (there is an excess of credits).

    - **Deficit** in an account occurs whenever a balance has negative value, meaning that debits are larger than credits (there is an excess of debits).

Current Account

- **Current account** measures the flow of funds between a nation and the rest of the world for the purchase of goods and services and income transfers.

  $$\text{Current Account} = \text{Balance of trade} + \Delta\text{Income} + \Delta\text{Current transfers}$$

  1. **Balance of trade in goods –** part of the balance of payments, it is the value of exports of goods minus the value of imports of goods over a specific period of time.
  2. **Balance of trade in services –** part of the balance of payments, it is the value of exports of services minus the value of imports of services over a specific period of time.
  3. **Income –** refers to inflows of wages, rent, interest and profits from abroad minus outflows to foreign countries.

     $$\Delta\text{Income} = \text{Inflows} - \text{Outflows}$$

Current Account

4. **Current transfers** – an item in the current account of the balance of payments, refers to inflows and outflows of funds for items including gifts, foreign aid and pensions.

   ΔCurrent transfers $=$ Inflows $-$ Outflows

- **Current account balance** – the sum of credits plus debits in the current account.

- **Current account surplus** – occurs when the current account balance has a positive value, meaning that credits are larger than debits.

  - The surplus on an account indicates there is an excess demand of the currency in the foreign exchange market.

  - A current account surplus, means a country consumes less than it produces, and part of the income generated from the sale of extra output produced corresponds to a financial account deficit.

- **Current account deficit** – occurs when the current account balance has a negative value, meaning that debits are larger than credits.

Current Account

- The deficit on this account means there is an excess supply of the currency in the foreign exchange market.
- A current account deficit means a country consumes more than it produces; and it pays for extra output consumed through a financial account surplus.

Current Account	
(1) Exports of goods	+40
(2) Imports of goods	−65
Balance of trade in goods (1) + (2)	**−25**
(3) Exports of services	+25
(4) Imports of services	−15
Balance of trade in services (3) + (4)	**+10**
Balance of trade in goods and services	−15
Income (Inflows minus outflows)	−6
Current transfers (inflows minus outflows)	+1
Balance on Current Account	**−20**

Capital Account

- **Capital account** of the balance of payments of a country is composed of inflows minus outflows of funds for capital transfers and transaction in non-produced, non-financial assets.

  $$\text{Capital Account} = \Delta\text{Capital Transfers} + \Delta\text{Intangible Assets}$$

  - The capital account is relatively small compared to the current account and financial account.
  - The capital account does not measure the purchase or sale of capital goods between nations, rather the actual transfer of fixed assets from one nation to another.

  1. **Capital transfers –** when a nation's government or private sector gives money to another nation for the purchase of fixed assets or directly donates capital goods to the residents of another country

     $$\Delta\text{Capital Transfers} = \text{Inflows} - \text{Outflows}$$

Capital Account

2. **Debt forgiveness** – the capital account measures the forgiveness of debt from lenders in one country to debtors in another.

3. **Exchange of intangible assets** – flow of non-produced, non-financial assets such as patents, copyrights, franchises and the acquisition or disposable of land by government or international organizations.

Capital Account	
(7) Capital transfers (inflows minus outflows)	$+0.7$
(8) Transaction in-produced, non-financial assets	$+0.3$
Balance of trade in goods (7) + (8)	$\mathbf{+1}$

Financial Account

- **Financial account** measures the exchanges between a nation and the rest of the world involving ownership of financial and real assets.

  Financial Account $= \Delta$FDI $+ \Delta$Portfolio Investment $+ \Delta$Reserves

  1. **Foreign direct investment** – refers to investment by firms based in one country (the home country) in productive activities in another country (the host country) with control of at least 10 percent of the firm in the host country.
     - Firms that undertake FDI are called multinational corporations (MNCs).
  2. **Portfolio investment** – financial investment, including investment in stocks and bonds. Appears as an item in the financial account of the balance of payments.
  3. **Official borrowing** – refers to government borrowing from abroad.

Financial Account

4. **Reserve assets (Official reserves)** – refers to foreign currency reserves that the central bank maintains and can buy or sell to influence the value of a country's currency exchange rate.

Financial Account	
(9) Foreign direct investment (inflows minus outflows)	+23
(10) Portfolio investment (inflows minus outflows)	−4
(11) Reserve assets (official reserves)	+1
(12) Official borrowing	−1
Balance on Financial Account	**+19**

Current Account Balance

- The current account balance is matched by the sum of the capital account balance and the financial account balance.

  $$\text{Current Account} + \text{Financial Account} + \text{Capital Account} = 0$$

  $$\text{Current Account} = -(\text{Capital Account} + \text{Financial Account})$$

  - If there is a current account deficit, there must be a financial account surplus, which provides it with foreign exchange it needs to pay for the excess of imports over exports.
  - When there is a surplus on the current account, the country is accumulating foreign exchange, which it can use to buy assets abroad.

Balance of Payments	
Balance on Current Account	-20
Balance on Capital Account	$+1$
Balance on Financial Account	$+19$
Balance of Payments	**0**

Current Account and Exchange Rates

Assessment Objectives

Specific Expectations	
AO2	Explain the relationship between the exchange rate and the current account
AO4	Draw a diagram showing the relationship between the current account balance and the exchange rate
AO2	Explain the relationship between the exchange rate and the financial account

Current Account and Exchange Rates

- Under a floating exchange rates, when there is a deficit in the current account, market forces create a downward pressure on the currency exchange rate.
- When there is a surplus in the current account, market forces create upward pressure on the currency exchange rate.
- As a result, exchange rate changes automatically eliminate current account deficits and surplus, and create a balance in the balance of payments.
- In a fixed exchange rate system, the balance of payments are made to keep the exchange rate fixed.

Advantages of Fixed Exchange Rates

- Some of the advantages of fixed exchange rates include:

  1. **Stability**
     - Businesses and investors prefer certainty and stability in prices.
     - They do not have to take into account possible changes in exchange rate when calculating costs and sales
     - This simplifies business plans and reduces the costs for MNCs
  2. **Inflation**
     - Changes in import prices will not occur due to exchange rate fluctuations, therefore they cannot threaten internal inflation.
     - Exports are vulnerable to domestic inflation, which could raise export prices and reduce the demand for those exports.
     - The government is compelled to manage inflation to keep export prices competitive.

Advantages of Fixed Exchange Rates

3. **Speculation**
   - There is no place for speculation to de-stabilize the exchange rate because the exchange rate is fixed.
   - Free-floating exchange rates are at the mercy of the market, where speculators can heavily influence the buying and selling of currency.
4. **Increased Trade**
   - Businesses are more willing to trade due to increased certainty of a fixed exchange rate.

Disadvantages of Fixed Exchange Rates

- There are significant disadvantages of fixed exchange rates:
  1. **Domestic policy dictated by world economy**
     - A fixed-rate system is managed largely by manipulation of interest rates. The ability to use those interest rates for domestic policy is significantly restricted.
     - Inflation is dictated by world inflation rates since domestic monetary policy is neutralized.
     - If the exchange rate is kept too low, it is possible that continued buying of high-priced imports would cause imported inflation.
     - When the currency is fixed too high, it can cause a trade deficit because exports are priced uncompetitively.
  2. **Limited options with external shocks**
     - Fixed exchange rate can limit the range of options available to respond to crisis.
     - Supply side shocks become a major issue and balances of payment disequilibrium requires government intervention.

Disadvantages of Fixed Exchange Rates

3. **Reserves**
   - To operate a fixed exchange rate system large stocks of gold and foreign reserves have to be held to be able to intervene in the market to support the currency.
   - These resources are used to protect against speculators and instill confidence that the government can properly defend the currency.
   - These reserves could be better used to buy and sell needed resources
4. **Difficulty setting the rate**
   - The ultimate fixed rate is a complex decision, and includes a number of unknown factors.
   - A high rate can hurt exporters and domestic industry, while a low rate may help exports but cause imported inflation.
5. **Vulnerability to charges of unfair competition**
   - Sustaining an undervalued currency that increases exports, may encounter resentment from competitor nations. This can result in poor trade relations, trade sanctions or protectionist policies being levied against them.

Advantages of Floating Exchange Rates

- There are several key advantages of a floating exchange rate system:

  1. **Domestic policy freedom**
     - Government is free to manipulate monetary policy, specifically interest rates, to manage the balance between domestic growth rates and inflation
  2. **Auto-correction**
     - The balance of payments is self-correcting, it requires no government intervention.
  3. **No surplus currency reserves**
     - There is no central bank intervention, and therefore no foreign reserves are required.
     - Financial resources are allocated more efficiently.
     - Foreign exchange can be used for productive ends, such as purchasing capital goods or imported resources.

Advantages of Floating Exchange Rates

4. **Flexible responses to external shocks**
   - Sudden disruption to the economy can be managed without the need to devote resources to fixing the exchange rate.

Disadvantages of Floating Exchange Rates

- Although flexible exchange rates automatically work to eliminate payment imbalances, they may cause several significant problems including:

  1. **Increase uncertainty**
     - The risks and uncertainties associated with flexible exchange rates may discourage the flow of trade.
     - Businesses prefer to know the exchange rate when they make trading decisions.
  2. **Influence of random events**
     - Not all external shock can be resolved by exchange rate self-adjustment.
     - Severe international political tension, domestic turmoil, and other random events can depress markets.

Disadvantages of Floating Exchange Rates

3. **Risk of imported inflation**
   - Countries that have constant need of foreign resources may develop a persistently low exchange rate, which puts inflationary pressure on the entire economy.
   - The resulting cost- push inflation can slow economic growth on the supply-side.
4. **Destabilization**
   - Flexible exchange rates may destabilize the domestic economy and make doing business more difficult.
   - Wide fluctuations stimulate and then depress industries producing exported goods.
   - Developing countries often seek to peg their currency to a large trading partner.
5. **Increased speculation**
   - Speculation can lead to violent currency fluctuations in exchange rates

Evaluating monetary Union

- **Monetary Union** a high form of economic integration involving the adoption by a group of countries of a single currency.
    - Monetary union in addition involves the adoption of a common monetary policy carried out by a single central bank, which is necessitated by the use of a single currency.
- Advantages of a monetary union include:
    1. **Eliminates exchange rate risk and uncertainty**
        - Exchange rate fluctuates create risks and uncertainties for traders and investors, who do not know what the future exchange rate will be.
    2. **Encourages price transparency**
        - Price transparency refers to the ability of consumers and firms to compare prices in all countries that have adopted a common currency without having to make exchange rate calculations and conversions.

Evaluating monetary Union

3. **Eliminates transaction costs**
   - A single currency eliminates the transaction costs of the conversion, resulting in significant savings that have the effect of encouraging trade, investment and financial flows of all kinds.
4. **Promotes a higher level of inward investment**
   - Inward investment refers to investments from outsiders towards the member countries with a common currency, and these can be expected to rise because of the absence of currency risk within an expanded market, resulting in greater economic growth.
5. **Low interest rates, more investment and increased output**
   - If a member country has a high rate of inflation, its exports become less competitive, possibly a current account deficit.
   - There is no possibility of currency depreciation to regain competitiveness since there is no domestic currency.
   - Therefore member countries become committed to maintaining a low rate of inflation.

Evaluating monetary Union

- Disadvantages of a monetary union include:

    1. **Loss of domestic monetary policy**
        - Countries are unable to carry out their own monetary policy to influence the rate of interest and hence the level of economic activity within its boundaries.
    2. **Undifferentiated monetary policy**
        - The single monetary policy pursued by the single central bank is likely to have different impacts on each of the member countries.
    3. **Loss of exchanges as a mechanism for adjustment**
        - If a member country has a trade deficit with another member country, it no longer has its own national currency, that could depreciate or devalue in order to correct the imbalance.
        - Instead it must use contractionary fiscal policy to correct the imbalance which leads to recession

Evaluating monetary Union

4. **Fiscal policy is constrained by convergence requirements**
   - Whereas each member country retains the ability to carry out its own fiscal policy, there are certain restrictions imposed by convergence requirements.
   - **Example:** In the case of European Monetary Union, total public debt cannot be greater than 60% of GDP and the budget cannot be greater than 3% of GDP.
5. **Loss of domestic sovereignty**
   - It is no longer national government and national central banks that are responsible for economic policy, but rather the central bank that oversees the monetary system of all the member countries of the monetary union.

Current account deficits and surpluses

Assessment Objectives

Specific Expectations	
AO3	Evaluate the implications of a persistent current account deficit with regard to exchange rates, interest rates, sale of domestic assets to foreigners, debt, credit ratings, demand management, and economic growth.
AO2	Explain and evaluate methods to correct a persistent current account deficit: expenditure switching, expenditure reducing and supply-side policies.
AO2	Apply the Marshall-Lerner condition and the J-curve effect
AO4	Draw a diagram illustrating the J-ciurve referring to the Marshall-Lerner condition.
AO3	Evaluate the implications of a persistent current account surpluses with regard to exchange rates, domestic consumption and investment, inflation, employment, and export competitiveness.

Consequences of Current Account Deficits

- Most balance of payment problems usually arise in connection with current account deficits, mainly due to an excess of imports over exports over long periods of time.
- This allows countries to enjoy increased levels of consumption over what they produced.
- Current account deficits are paid for by financial account surpluses.
- As the central bank does not have endless amounts of foreign currency to pay for a current account deficit, it must do so either through loans (borrowing from abroad) or by selling some of its physical or financial assets.
  - All of these methods result in inflows of foreign exchange
- Borrowing and sale of assets may pose problems if pursued for a long time.

Consequences of Current Account Deficits

1. **Depreciating exchange rate**
   - A current account deficit puts a downward pressure on the exchange rate.
   - Large depreciations can lead to imported inflation.
2. **Higher interest rates**
   - The possible need for higher interest rates to attract foreign financial investments
   - Higher interest rates discourage domestic investment and consumption spending, possibly leading to a recession in the economy.
3. **Foreign ownership of domestic assets**
   - The need for inflows of funds, in the financial account may lead countries to sell domestic assets to foreigners, such as stocks in the stock market, real estate or factories, all of which eventually may lead to loss of control over its assets.

Consequences of Current Account Deficits

4. **Increasing levels of debt**
   - If a country borrows over long periods of time, it runs the risk of accumulating so much debt that it may be unable to pay it back; this is called default risk.
5. **Cost of paying interest on loands**
   - The interest payment that must be made on loans use up national income of the country that could have been spent elsewhere in the domestic economy.
6. **Fewer imports on needed capital goods**
   - Interest on payments on loans also use up scarce foreign exchange earnings (from exports that could have been used on imports of capital goods or other inputs for production.
7. **Poor international credit ratings**
   - Countries with large and persistent current account deficits have low credit ratings, making it more difficult to get more loans in the future.

Consequences of Current Account Deficits

8. **Painful demand management policies**
   - Countries with serious current account deficits must often pursue contractionary policies.
   - Contractionary monetary and fiscal policies have the effect of lowering incomes, which in turn lead to lower imports that that may help to reduce the current account deficit.
9. **Lower economic growth**
   - If loans accumulate over long periods of time, the cumulative impacts of the above may mean lower economic growth, as resources are used up on interest payments and loan repayments
10. **Lower standard of living in the future**
    - In order to be able to pay back loans or regain possession of domestic assets in the future, the local population will at some point have to consume less than they produce, giving a rise to a decline in the standard of living.

Consequences of Current Account Deficits

- Borrowing can lead to economic growth, and if per capita output and income increase, it becomes possible to have increased consumption of goods and services even as loans are being paid back.
- Important requirements for this to happen are:
  - The current account deficit remains relatively small and does not get out of hand by excessive borrowing
  - Borrowed funds are used to finance imports of capital goods and other inputs needed in production (instead of consumer goods imports)
  - Some production is geared towards export industries so that exports increase, making increased export earnings possible (to help pay back loans and interest, and finance more capital goods imports).

Policies to Correct Current Account Deficits

1. **Expenditure reducing policies** – policies that involve reducing expenditures in the domestic economy so as to bring about a decrease in imports in order to correct a current account deficit; they include contractionary fiscal and monetary policies.
   - May create a recession in the domestic economy
   - Risk that higher interest rates (contractionary monetary policy) lead to currency appreciation, which may discourage exports and encourage imports, partly cancelling out the beneficial effects.
2. **Expenditure switching policies** – policies that involve switching consumption away from imported goods and towards domestically produced goods, in order to correct a current account deficit; include trade protection policies and depreciation.
3. **Trade protection** – reduce current account deficit by restricting imports.
   - They have a number of negative effects, such as higher domestic prices of protected goods, lower domestic consumption, inefficiency, and a global resource misallocation.

Policies to Correct Current Account Deficits

4. **Depreciation** – the central bank may allow the currency to depreciate, in which case it encourages exports (which become cheaper to foreigners) and discourages imports (which become more expensive to domestic buyers).
   - Type of expenditure-switching policy that switches consumption away from imports and towards domestically produced goods.
   - Higher import prices due to the lower value of the currency often result in higher domestic inflation.
5. **Supply-side policies to increase competitiveness** – market-oriented supply-side policies are intended to lower costs of production for firm, and by shifting SRAS and LRAS curves to the right can result in lower rates of inflation
   - Several policies, such as increasing competition, reducing the lower of labour unions, cutting business taxes, deregulation, and others, could have the effect of making firms more competitive in global markets.
   - Lower rates of inflation may increase exports, thereby addressing the current account deficit.

Marshall-Lerner Condition

- When a nations runs a persistent deficit in its current account it should put downward pressure on the country's exchange rate.
  - When a country's currency devalues or depreciates, its imports become more expensive domestically and exports become less expensive to foreigners.
  - The quantity of imports decreases and the quantity of exports increases.
  - Depreciation of a country's currency will likely make things worse before it makes things better.
  - Firms (both domestic and foreign) need time to adjust to the changes in prices brought on by the depreciation.
  - The effect on the current account deficit depends on the price elasticity of demand of exports and imports.
  - In general, depreciation will improve the current account if the elasticity of demand for imports and exports are high (elastic) and worsen it if they are low (inelastic).

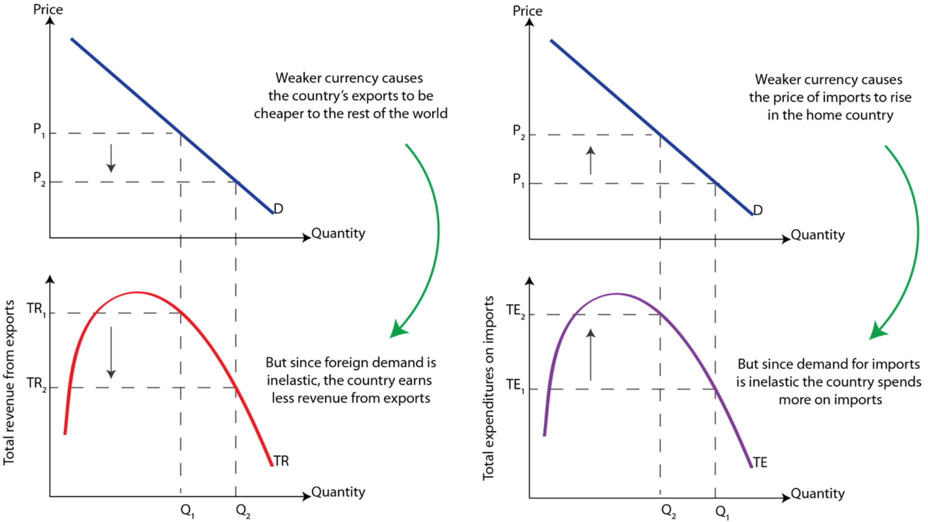
Marshall-Lerner Condition

- **Marshall-Lerner Condition (MLC)** is a condition stating when depreciation or devaluation of a country's currency will lead to an improvement in that country's balance of trade.

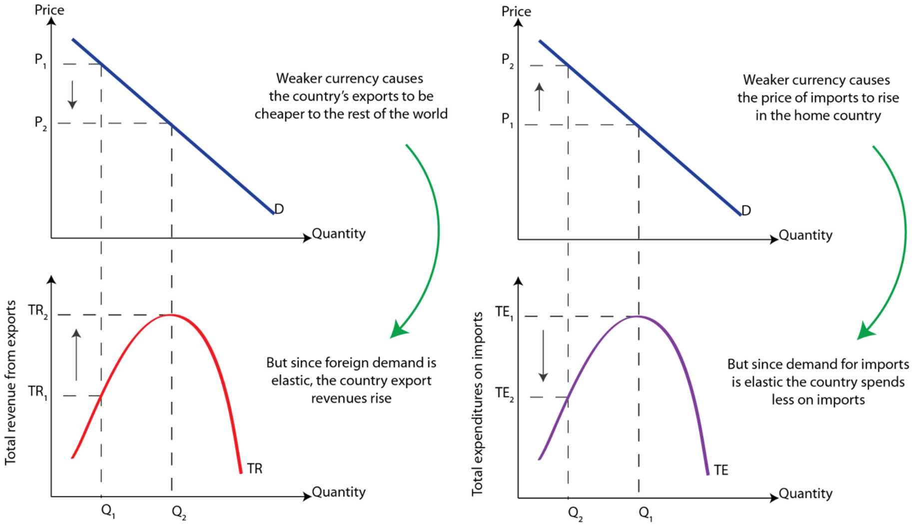
Condition	Balance of Trade
$\text{PED}_{\text{Exports}} + \text{PED}_{\text{Imports}} > 1$	Improves
$\text{PED}_{\text{Exports}} + \text{PED}_{\text{Imports}} = 1$	Unchanged
$\text{PED}_{\text{Exports}} + \text{PED}_{\text{Imports}} < 1$	Deteriorates

  - For a country a trade deficit, a depreciation of the currency will be more effective the higher (more elastic) the combined elasticities of demand for exports and imports.
  - If a country has combined elasticities of less than one, balance of payments worsens with depreciation and intervention to appreciate the currency would be the best way to improve the trade deficit.

$PED_{\text{Exports}} + PED_{\text{Imports}} < 1$ (MLC not met)



$PED_{Exports} + PED_{Imports} \geq 1$ (MLC met)



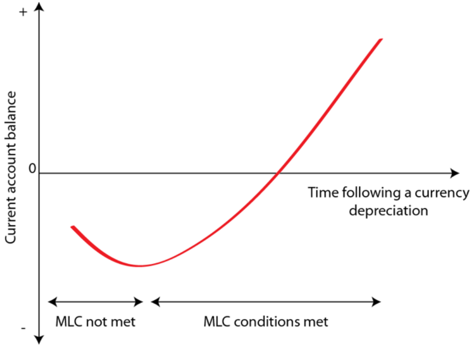
J-Curve Effect

- The Marshall-Lerner Condition (MLC) analysis suggests that a country with an inelastic import and export combination would never want to devalue its currency, as it would worsen the current account.
  - However, price elasticity of demand (PED) or exports and imports becomes more elastic over time.

- **J-Curve Effect** shows how depreciation of the nation's currency is likely to affect the current account balance over time.
  - A country with a devaluing/depreciating currency may see worsening in its trade balance (an increase in a trade deficit) in the period immediately following the devaluation or depreciation.
    - The demand for imports and exports will be relatively inelastic in the short-run.
    - The Marshall-Lerner Condition (MLC) will not be met and the weaker currency moves the country towards a trade deficit.

J-Curve Effect

- As consumers have time to adjust to changes in the price of particular goods, they are able to change their behaviour to consume either more or less of the good depending on how the price changed.
    - In a later period the trade deficit will begin to shrink provided the Marshall-Lerner Condition (MLC) holds.



Consequences of Current Account Surpluses

- Countries with a current account surplus most likely have a trade surplus, with exports greater than imports.
  - They are net purchasers of assets abroad or net lenders to other countries (having financial account deficits).

1. **Low domestic consumption**
   - Lower consumption and levels and lower standards of living for the population since overall production is greater than consumption.
   - Countries with a trade surplus consumer inside their PPF.
2. **Insufficient domestic investment**
   - The financial account deficit (corresponding to the current account surplus) means that funds are leaving the country.
   - Results in a risk of insufficient domestic investment, limiting economic growth prospects.

Consequences of Current Account Surpluses

3. **Appreciation of the domestic currency**
   - A current account surplus puts an upward pressure on the value of a currency, which can lead to lower exports and higher imports (reduced net exports).
   - This could lower the rate of economic growth of the domestic economy as a result of lower aggregate demand.
4. **Inflation**
   - Lower aggregate demand may lead to higher unemployment as workers begin to lose their jobs.
   - However, unemployment may decrease in firms that enjoy lower import costs due to appreciation.
5. **Employment**
   - As the domestic currency appreciates, exports become more expensive to foreigners, and this makes it more difficult for domestic firms to compete with firms abroad.

Consequences of Current Account Surpluses

6. **Retaliation by trading partners**
   - Current account surpluses in some countries correspond to current account deficit in other countries.
   - Current account surpluses persisting over long periods may prompt the deficit countries to impose trade restrictions to reduce their imports from surplus countries.