

## R13 International Trade and Capital Flows

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## 1. Introduction & International Trade-Basic Terminology

This reading will cover:

- Basic terminology used in international trade and capital flows.
- Benefits and costs of international trade.
- Trade restrictions, and the advantages of trade agreements.
- Balance of payments.
- The objectives of international trade organizations such as the World Bank and IMF that facilitate trade.

### 1.1 International Trade

#### Basic Terminology

Terminology used in international trade	
Term	What it means
GDP	The market value of all new goods and services produced within a country/economy during a given period of time, usually a year or a quarter, by domestic factors of production (labor, land, and capital). So long as it is produced within the country, it does not matter <i>who</i> produced the good and service, i.e., it includes foreigners within the country. Resold products within that period are not included.
GNP	The market value of all new goods and services produced during a given period of time, usually a year or a quarter, by factors of production (labor, land, and capital) supplied by the residents of the country, irrespective of <i>where</i> they are located. It excludes goods and services produced by foreigners within the country, but includes those produced by citizens residing out of the country. For countries, such as Pakistan, with large differences between GDP and GNP, it is implied that a large number of its citizens are working abroad.
Imports	Goods and services that a domestic country (i.e., households, firms, and government) purchases from other countries. Any good/service that crosses the border into a country for commercial purposes (for consumption by the domestic country). Ex: The U.S. imports cloth from India. India imports several processed foods from the U.S., olive oil from Italy, and motorcycles from Europe.
Exports	Goods and services that a domestic country sells to other countries (crosses the border). Ex: China exports clothing to the European Union, South Korea exports cell phones to other countries.

Terms of trade	Ratio of the price of exports to the price of imports. For instance, if the terms of trade increase from 1.1 to 1.3, it means the terms of trade have improved because the country will be able to purchase more imports for the same amount of exports.
Net exports	$\text{Net Exports} = \text{Value of a country's Exports} - \text{Value of its Imports}$ <p>Trade balanced if value of Exports = Value of Imports.          Trade surplus if value of Exports &gt; Value of Imports.          Trade deficit if value of Exports &lt; Value of Imports.</p>
Autarky	<p>A country that is self-sufficient and does not engage in international trade. All goods and services are produced and consumed domestically; it does not import from or export to other countries.</p> <p>For example, North Korea. Before India opened up to international trade in 1991, it was close to an autarkic state. Price of a good or service in such an economy is called autarkic price.</p>
Closed economy	An autarkic economy is also known as a closed economy as it does not trade with other economies.
Open economy	In contrast, an economy that trades with other countries with no restrictions on trade is called an open economy.
World price	The price of goods and services in the world market; the prevailing price outside the domestic country.
Free trade	No government restrictions on a country's ability to trade. The country freely exports to and imports from the rest of the world. For a similar product, free trade assumes domestic price and world price must be equal. Global demand and supply determine the equilibrium price for exports and imports.
Trade protection	Government imposes certain trade restrictions such as tariffs and quotas that prevent market forces from determining the equilibrium price and quantity of imports and exports. Ex: India imposes custom duties of 100% on import of completely built unit luxury cars such as Porsche and BMW. To restrict the amount of iron ore exported, it imposes an export duty on iron ore pellets.

FDI/MNC/FPI	<p>FDI stands for foreign direct investment. In FDI, a firm in any country (source country) invests in a foreign country (host country). Unlike financial investments, these are investments in productive assets of the host country (that involves a certain amount of infrastructure). For example, Ikea/Walmart setting up stores in China and India is an example of FDI. Volvo setting up a bus plant in India is an example of FDI. Typically, a multinational corporation makes an FDI. There can be FDI in real estate where the foreign country is developing a residential project in the domestic country. There are rules governing what percentage of FDI is allowed based on the sector. For example, it may be 49% in banking, but less than 10% in retail.</p> <p>FPI stands for foreign portfolio investment. If an investment management company in the U.S. invests in financial assets of another country such as the Indian stock market, then it would be an example of FPI.</p>
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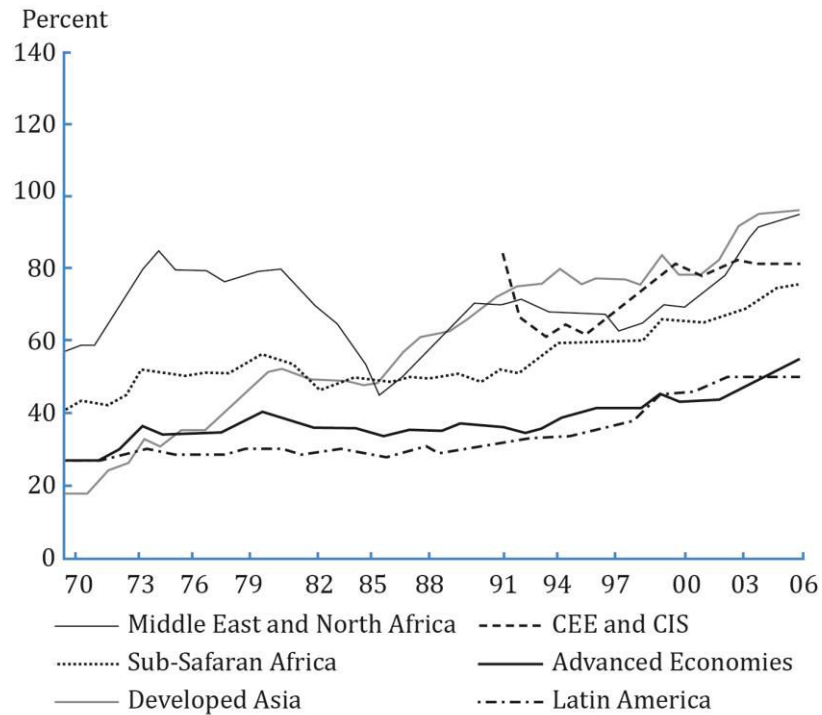
## 2. Patterns and Trends in International Trade and Capital Flows

*Note: There is a lot of data covered in this section in the curriculum. But, only certain testable points are highlighted here.*

The following exhibits are reproduced from the curriculum. The main points are summarized below:

- Trade as a percentage of regional GDP has increased substantially all over the world in the last few decades. The developing countries in Asia experienced the fastest growth.

The exhibit below shows trade and FDI as a percentage of GDP for select countries from 1980-2007. Trade increased from 37.2% to 50.7% from 1980 to 2006.



### Trade Openness and GDP Growth

Trade as Percent of GDP (averaged over the period)				Average GDP growth (%)		
Country Group	1980-1989	1990-1999	2000-2006	1980-1989	1990-1999	2000-2006
World	37.2	41.0	50.7	3.1	2.7	3.2
<b>High income:</b>						
All	38.1	40.3	49.5	3.1	2.6	2.5
OECD	35.3	37.2	44.7	3.1	2.5	2.4
Non-OECD	120.0	128.1	172.5	3.9	4.5	5.0
<b>Low and Middle Income:</b>						
All	32.4	44.4	56.9	3.4	3.5	5.8
Middle	32.4	44.5	57.1	3.4	3.5	5.8
Upper middle	33.4	44.3	53.5	2.1	1.7	4.1
Lower middle	31.4	44.8	61.4	6.0	6.1	7.7
Low	32.5	39.9	51.7	2.6	2.7	4.8

*Note: Averages indicate the average of the annual data for the period covered*

*Source: World Bank*

### 3. Benefits and Costs of International Trade

#### Benefits of international trade:

- Countries gain from the exchange and specialization. For example, if one country is good at producing cloth, while another is good at manufacturing machinery, then the two countries can exchange the goods. A country benefits from exchange trade if either of the following two conditions occur in an exchange, (as there is efficient allocation of resources):
  - Higher price for exports relative to selling internally.
  - Lower price for imports relative to producing internally.
- Households and firms have greater product variety. For example, after South Korean electronics manufacturers such as LG and Samsung entered the South Asian markets, consumers benefited because they have access to a wide range of products. This argument can be extended to almost any industry from automobiles to food products.
- Competition increases and resources are allocated more efficiently.
  - In an open economy, the monopoly of domestic firms reduces as competition from foreign firms increase, and forces them to be efficient. For example, automobile and steel industries exhibit increasing returns to scale.
- Industries experience greater economies of scale.
  - In an open economy, companies are forced to compete with global players and that forces them to become more efficient or go out of business. Extending the LG and Samsung example from above, economies of scale allows these firms to benefit from the larger market size in India/Middle East and experience lower average cost of production.
- Greater employment in exporting countries.
  - The garment factories in India export cotton clothing to the rest of the world for various labels. The work in this industry is labor-intensive and hence generates a lot of employment opportunities.

*Note: The term “gains from trade” implies that the overall benefits of trade outweigh the losses from trade. It does not mean that all stakeholders (producers, consumers, government) benefit (or benefit equally) from trade.*

#### Costs of international trade:

- Potential income inequality.
  - It depends on whether the industry is expanding or contracting. For example, the IT industry in the late 90's and early 2000's created high-paying jobs. This led to an income disparity between the IT industry and other traditional industries such as automobiles.
- Loss of jobs because less inefficient firms will be forced to exit.
  - For example, the U.S. textile industry has faced tough competition because of cheaper imports from other countries forcing many companies to exit.

#### 4. Comparative Advantage and the Gains from Trade: Absolute and Comparative Advantage

**Absolute advantage:** The ability of a country to produce a good at a lower cost or use fewer resources is called absolute advantage. Suppose there are only two countries, India and the United Kingdom. India exports clothes to the United Kingdom and the latter exports machinery. The output per worker per day is given in the table.

	<b>Machinery</b>	<b>Cloth</b>
UK	4	8
India	2	16

Looking at the table, the UK produces 4 machines per worker per day as compared to India, which produces 2. So clearly, the UK has an absolute advantage over India for producing machinery. Whereas, India has an absolute advantage in the production of clothes.

**Comparative advantage:** The ability to produce a good at a lower opportunity cost compared to another country is called comparative advantage. For example, country A has a comparative advantage over country B (trading partner) in producing machinery if country A can produce machinery at a lower opportunity cost. It is best illustrated with the help of an example. Consider the UK and India again. Looking at the table above, we can calculate the opportunity costs.

India:

- The opportunity cost for machines:  $\frac{16}{2} = 8$
- The opportunity cost for clothes:  $\frac{2}{16} = \frac{1}{8}$

The UK:

- The opportunity cost for machines:  $\frac{8}{4} = 2$
- The opportunity cost for clothes:  $\frac{4}{8} = \frac{1}{2}$

Hence, we can conclude that the UK has a comparative advantage in the production of machinery as it has a lower opportunity cost as compared to India. Whereas, India has a comparative advantage in the production of clothes because of the lower opportunity cost as compared to the UK.

### Gains from trade

The table below collates exhibits 8 and 9 from the curriculum. It illustrates the effect on production and consumption under autarkic (no-trade) and post-trade conditions.

	<b>Autarkic production</b>	<b>Autarkic consumption</b>	<b>Post-trade production</b>	<b>Post-trade consumption</b>	<b>Change in consumption</b>
UK machine	200	200	400	240	+40
UK cloth	400	400	0	640	+240
India machine	100	100	0	160	+60
India cloth	800	800	1600	960	+160
World machine	300	300	400	400	+100
World cloth	1200	1200	1600	1600	+400

### Interpretation of the table:

Autarky: Production = Consumption

- The UK produces 200 machines and 400 yards of cloth, and consumes it.  $1m = 2c$  i.e. for every machine produced, it produces 2 yards of cloth.
- India produces 100 machines and 800 yards of cloth, and consumes all of it.  $1m = 8c$  i.e. for every machine produced, it produces 8 yards of cloth.
- If the world consists of only these two countries, then the total production equals consumption = 1200.

Open economy: The UK and India trade with each other

- The UK is more efficient in producing machines, while India is more efficient in producing cloth. So the UK must import cloth and export machines.



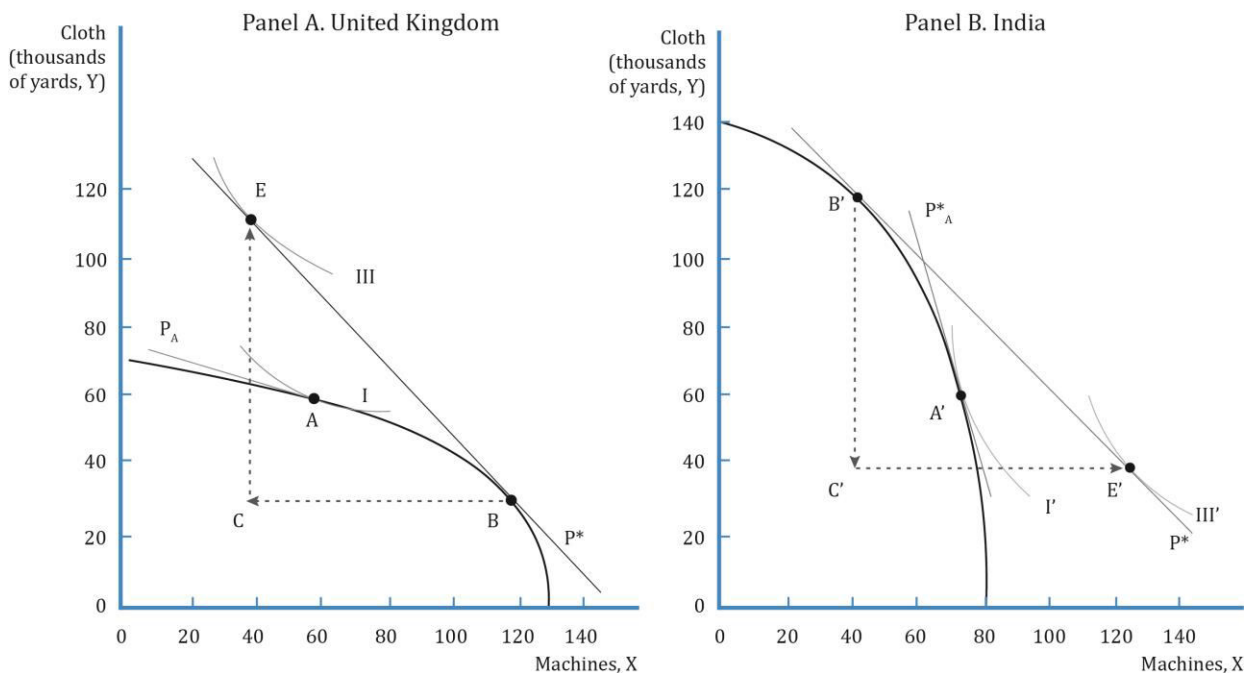
- The UK produces 400 machines. (200 machines + 400 yards / 2 ) and no cloth.
- India makes 1600 yards of cloth (100 machines \* 8 + 800) and no machines.
- Post-trade consumption and production: cloth consumption in the UK increases substantially from 400 to 640 because it is now cheaper to import cloth from India. Similarly, India's machine consumption increases from 100 to 160 as it is cheaper to import from the UK. Along with this, the domestic consumption of the products each country specializes in also increases.

A country's gains from trade are more if the terms of trade are closer to the partner's autarkic prices than to its own autarkic prices. Terms of trade = price of exports/price of imports. In this example, India exports clothes to UK. Assume one yard of cloth in India is INR 5 while it is £5 in the UK, which is much higher. If India exports at a price much higher than the domestic price and closer to the UK price, then its gains from trade are more.

Production possibility frontier (PPF) is a graph that shows the maximum output possible of one good (cloth) for various outputs of another good (machines). PPF (the dark line) is plotted in the graphs below to show gains of trade with increasing costs for UK and India. Take the PPF for UK, for instance. As we move along the dark line from left to right, the production of cloth goes down and that of the machines goes up. Similarly, India gains more by producing cloth than machines. Under autarkic conditions, the consumption for both the countries must be on the PPF.

If the countries trade with each other, then the consumption is outside PPF as shown at points E, and the utility is more.

$P_A$  is the autarkic price line.



## 5. Ricardian and Heckscher-Ohlin Models of Comparative Advantage

Different countries specialize in different goods while importing other goods. For example, China specializes in apparel, South Korea and Taiwan in electronics, the United States exports aircrafts but imports clothing etc.

<b>Ricardian and Heckscher-Ohlin Models</b>	
<b>Ricardian model</b>	<b>Heckscher-Ohlin (HO)</b>
Adam Smith: A country may gain from trade if it has an absolute advantage.	Also known as factor-proportions theory.
Ricardo: A country may gain from trade if it has a comparative advantage, even if it does not have an absolute advantage.	Goods are produced with varying combinations of labor and capital.
The model assumes that labor is the only variable factor of production required to produce goods and services.	Unlike the Ricardian model, the HO model assumes a second factor of production: capital. So, there are two factors: labor and capital required to produce goods.
Labor productivity varies among countries due to differences in technology, which is the key source of comparative advantage.	Differences in the relative endowment of these factors are the sources of comparative advantage. The model assumes that technology in each industry is the same among countries, but it varies between industries.
Though differences in technology may be the key driver for comparative advantage, this gap may close with time. For example, shift in IT from developed countries to India over the past two decades.	The HO models uses a capital/labor ratio. If this ratio for a country A is greater than country B, then A is capital abundant while B is labor abundant. Similarly, good Y is capital intensive over good Z if the capital/labor ratio used in producing Y is greater than Z. Z in this case is labor intensive.  For example: steel is a capital-intensive industry; clothing is a labor-intensive industry. The U.S. is a capital abundant country while India is a labor abundant country.

	Allows for income redistribution through trade. Income level for labor working in an abundant industry goes up, but has a negative impact on the scarce factor. The demand for an input is called derived demand.
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**Example**

1. What determines the comparative advantage in the Ricardian model?
2. What is the relationship between gains from trade, the terms of trade, and autarkic prices in the Ricardian model?
3. According to the Heckscher-Ohlin model, which factor benefits more from free trade, the abundant factor or the scarce factor?

**Solution 1:** Labor productivity.

**Solution 2:** Gains from trade are higher if the terms of trade are similar or closer to the autarkic prices of the trading partner.

**Solution 3:** Abundant factor.

## 6. Trade and Capital Flows: Restrictions & Agreements – Tariffs, Quotas and Export Subsidies

### 6.1 Tariffs

Tariffs are taxes imposed by a government on imported goods. Tariffs are common in countries where the government finds it difficult to collect taxes from its citizens.

#### Why governments levy tariffs:

- To protect domestic industries.
- To reduce trade deficit. Tariffs reduce the demand for imports by increasing their price above the free trade price.

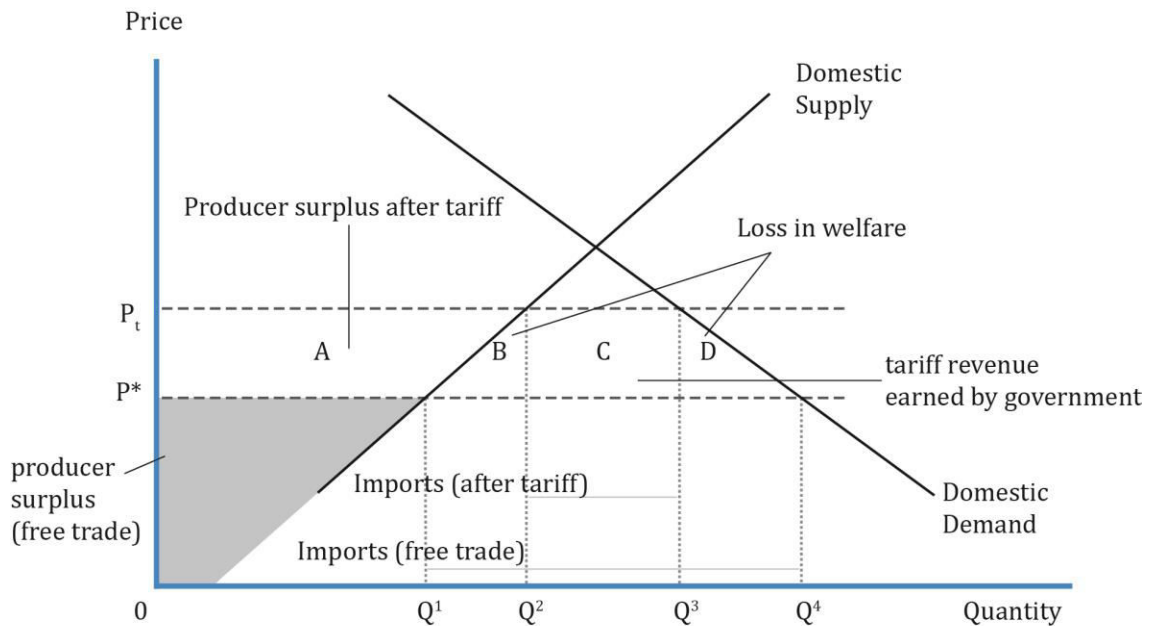
**“Small” country:** A country is a price taker in the world market for a product, and is too small to affect the world market price. Small country does not mean it is small in size, population, or GDP. For example, India is a large country, but it is a price taker for luxury bikes like Ducati, Harley Davidson, and Triumph.

**“Large” country:** A country is a large importer of the product and can influence the world market price. For example, the United States is a large country for the automobile market. If it were to impose tariffs on imported cars, then exporters would reduce the price of the cars to retain market share.

Generally, tariffs result in loss in global welfare. The exhibit below illustrates the wealth

effects of tariffs and quota.

### Welfare effects of Tariff and Import Quota



Key points of the exhibit are summarized below:

- Under free trade:  $Q^1$  is domestic supply,  $Q^4$  is domestic consumption. Import demand = demand – supply = the distance between  $Q^1$  and  $Q^4$ . Assume the country is Portugal; a small country from a trade perspective, and it imports cars. It is a price taker and the price per car ( $P^*$ ) is 100.
- After tariff is imposed:  $Q^2$  is domestic supply,  $Q^3$  is domestic consumption. Import demand = the distance between  $Q^2$  and  $Q^3$ . Domestic producers supply more and consumers demand less. The price is represented by  $P^t$ . Assume Portugal imposes a 50% tariff, so the price of the car is now 150.

Interpretation of what happens after the tariff:

- Tariff results in a deadweight loss, known as welfare loss here, denoted by  $B + D$ .
- Producer surplus increases to  $A$  because of a higher price for their output.
- Government revenue increases because of the tariff collected, as denoted by  $C$ .
- Consumer surplus decreases because of the increase in price.

The welfare effects are tabulated below:

	Importing country
Consumer surplus	- ( $A + B + C + D$ )
Producer surplus	+ $A$
Tariff revenue or quota rents	+ $C$
National welfare	- $B - D$

This example was for a small country. Now, let us look at it from a large country's perspective. The terms of trade change. Assume the large country is the United States that

imports cars from Japan. If the U.S. imposes a tariff, then Japan will reduce the price of cars. Terms of trade for the U.S. will improve as the price of imports has gone down.

The outcome is:

- For the importing country (U.S.): producers gain, but consumers lose.
- Creates tariff revenue for the government.
- For the exporting country (Japan): producers lose but consumers gain.

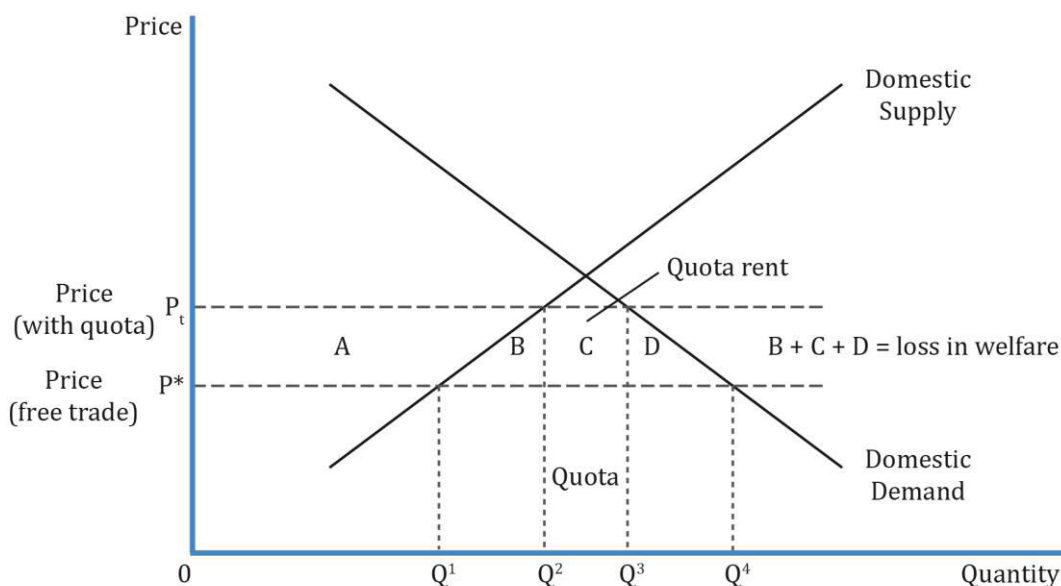
Example 5 from the curriculum will provide better understanding of the concept.

## 6.2 Quotas

**Quota** is a restriction on the absolute amount (quantity) of imports allowed over some period, typically a year. An **import license** specifies the maximum quantity that can be imported during a given period; it is used to implement a quota.

- Quota rents: The extra profit earned by foreign producers. Exporters earn greater profits with quotas because they often raise the price of their goods.
- To understand the difference between tariffs and quotas, let us consider the same example.

### Welfare effects of Tariff and Import Quota



#### Interpretation:

- At first glance, tariff and quota look similar. But, there is a subtle difference between the two in government revenue and loss of welfare. With tariffs, it was clear that region C was the revenue earned by the government. But, in the case of quota, these are profits earned by the exporters as they raise the prices of their goods. If there was no quota, the prices of these goods would not have increased.
- With tariffs, the loss in welfare was equal to the deadweight loss of  $B + D$ . But, with

quotas, it is equal to  $B+C+D$ . The amount lost in  $C$  can be eliminated if the government sells the import licenses to the exporters for a fee, and this amount must be equal to  $C$ .

**Voluntary export restraint:** Export quota administered by the exporting country; exporting country agrees to limit exports of a particular good usually at the request of the importing country to avoid tariffs or quotas. A VER allows importing countries to protect domestic industries from a surge of imports. The difference between an import quota and a VER is that the former is imposed by the importing country, while the latter is imposed by the exporter. One example of a VER is between Japan and U.S. from 1981 to 1994. The U.S. recognized the rising popularity of Japan's cars in the early 1980s and wanted to protect its domestic automobile industry. In 1981, the Japanese government responded by entering into a VER agreement with the U.S. limiting the number of cars exported to the United States to 1.68 million a year.

### 6.3 Export Subsidies

Export subsidies are payments by the government to a firm for each unit exported:

- The objective is to stimulate exports, increase production in certain industries, and create domestic employment.
- The exporter has an incentive to focus on the export market because the firm receives the international price plus the per-unit subsidy for each unit of the good exported.
- The most export-subsidized industry in the world is agriculture.
- Countervailing duties are duties levied by the importing country against subsidized exports entering the country. This tariff is imposed to offset the effect of subsidy.
- If a small country imposes export subsidies, domestic price rises.
- If a large country imposes export subsidies, world prices decline as quantity increases.
- For example, the European Union subsidizes sugar and is the second largest exporter in the world.
- Net welfare is down in the large and small country.

The exhibits below are reproduced from the curriculum.

*Note: these are important and testable. They summarize the effects of all the alternative trade policies we have seen so far.*

Effects of Alternative Trade Policies				
	Tariff	Import quota	Export subsidy	VER
Impact on	Importing country	Importing country	Exporting country	Importing country
Producer surplus	Increases	Increases	Increases	Increases

<b>Consumer surplus</b>	Decreases	Decreases	Decreases	Decreases
<b>Government revenue</b>	Increases	Mixed (depends on whether the quota rents are captured by the importing country through the sale of licenses, or by the exporters)	Falls (government spending rises)	No change (rent to foreigners)
<b>National welfare</b>	Decreases in small country (could increase in large country).	Decreases in small country (could increase in large country).	Decreases	Decreases

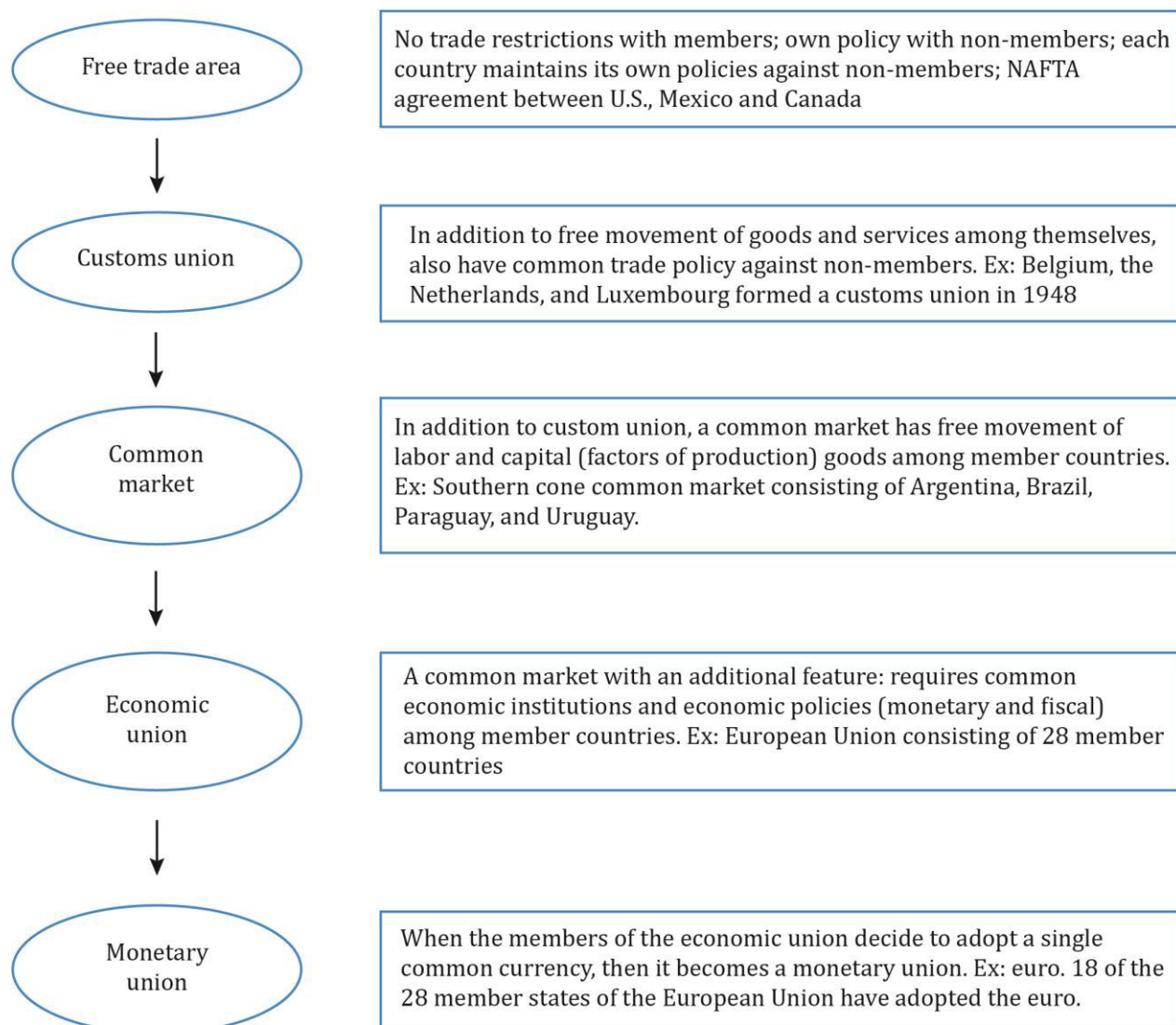
<b>Effects of alternative trade policies on price, production, consumption, and trade</b>				
	<b>Tariff</b>	<b>Import quota</b>	<b>Export subsidy</b>	<b>VER</b>
<b>Impact on</b>	Importing country	Importing country	Exporting country	Importing country
<b>Price</b>	Increases	Increases	Increases	Increases
<b>Domestic consumption</b>	Decreases	Decreases	Decreases	Decreases
<b>Domestic production</b>	Increases	Increases	Increases	Increases
<b>Trade</b>	Imports decrease	Imports decrease	Exports increase	Imports decrease

## 7. Trading Blocs, Common Markets, and Economic Unions

A **regional trading bloc**, is an agreement between a group of countries, that are geographically close to each other, to reduce and eliminate barriers to trade and movement of factors of production among the members of the bloc. They have zero or very low tariffs on imports from members.

The diagram below shows the various types of regional trading blocs in an increasing order of integration.





## 8. Capital Restrictions

Key points related to capital restrictions are given below:

- Some governments restrict the inward and/or outward flow of capital.
- Restrictions on inflows might be due to strategic or defense-related reasons.
- During an economic crisis, capital might flow out of the country.
- Countries with scarce foreign exchange might restrict outflows and might also want to boost local investment.
- Over the long term, capital restrictions reduce welfare.

## 9. The Balance of Payments – Accounts and Components

The balance of payments (BOP) is a double-entry bookkeeping system that summarizes a country's economic transactions with the rest of the world for a particular period of time. In

simple terms, it is a record of all the country's international transactions.

Analyzing the BOP is an important element in assessing a country's macroeconomic environment, its monetary and fiscal policies, and its long-term growth potential. Investors use data on trade and capital flows to evaluate a country's overall level of capital investment, profitability, and risk.

### 9.1 Balance of Payment Accounts

International receipts are credit items, while international payments are debit items.

Balance of payment accounts	
Debits	Credits
(Increase in assets, Decrease in liabilities)	(Decrease in assets, Increase in liabilities)
Value of imported goods and services.	Payments for imports of goods and services.
Purchases of foreign financial assets.	Payments for foreign financial assets.
Receipt of payments from foreigners.	Value of exported goods and services.
Increase in debt owed by foreigners.	Payment of debt by foreigners.
Payment of debt owed to foreigners.	Increase in debt owed to foreigners.

**Credit (+):** This represents funds flowing *into* the country, and demand for domestic currency in the forex market.

**Debit (-):** This represents funds flowing *out of* the country, and supply of domestic currency in the forex market.

Assume the U.S. imports cars from Germany, but makes the payment later. The value of imported goods and services goes up for the United States on the debit side and there is an increase in debt owed to foreigners on the credit side.

### 9.2 Balance of Payment Components

BOP is composed of the following three components:

- Current account (CA): measures the flow of goods and services.
- Capital account (KA): measures transfer of capital.
- Financial account (FA): records investment flows.

The basic rule of BOP is that the sum of all its components must equal to zero.

**Current account** consists of the following four accounts:

- Merchandise trade: All commodities and manufactured goods bought, sold, or given away. Net export of goods = export – import of goods
- Services include tourism, transportation, engineering, and business services such as legal services, management consulting, and accounting. Fees related to patents on new technology, software, books, and movies are also considered as a current account.

- Net export of services = export - import of services.
- Income receipts: Income derived from ownership of assets, such as dividend and interest payments, and income from foreign investments.
- Net income receipts = Investment income on foreign assets owned by nationals – Payments on domestic assets owned by foreign nationals.
- Unilateral transfers of assets: One-way transfer of assets such as remittances from nationals working abroad (private transfers), gifts from foreign countries, foreign aid, etc.

### Capital account

- Capital transfers: Debt forgiveness, migrants' transfers (goods and service belonging to migrants as they leave the country), gift and inheritance taxes, etc.
- Sales and purchases of non-produced, non-financial assets: Rights to natural resources, and the sale and purchase of intangible assets such as patents, copyrights, etc.

*Note: Patents related to the services sector go in the current account, the rest is accounted in the capital account. For example, selling the rights to exploration is a capital account.*

### Financial account

- Financial assets abroad that include official reserve assets, government assets, and private assets. These include gold, foreign currencies, foreign securities, the country's reserve in the IMF, and direct foreign investment.
- Foreign-owned financial assets in the domestic country that include official assets and other foreign assets.

The exhibit below is from example 10 in the curriculum. You may look at the various items under current account, capital account, and financial account and relate it to the ones we saw above.

	(USD millions)					
(Credits +, Debits -)	1970	1980	1985	1990	2000	2009
Current Account						
Exports of goods and services and income receipts	68,387	344,440	387,612	706,975	1,421,515	2,159,000
Exports of goods and services	56,640	271,834	289,070	535,233	1,070,597	1,570,797
Income receipts	11,748	72,606	98,542	171,742	350,918	588,203
Imports of goods and services and income payments	-59,901	-333,774	-483,769	-759,290	-1,779,241	-2,412,489

Imports of goods and services	-54,386	-291,241	-410,950	-616,097	- 1,449,377	- 1,945,705
Income payments	-5,515	-42,532	-72,819	-143,192	-329,864	-466,783
Unilateral current transfers, net	-6,156	-8,349	-21,998	-26,654	-58,645	-124,943
<b>Capital Account</b>						
Capital account transactions, net	...	...	...	-7,220	-1	-140
<b>Financial Account</b>						
U.S. owned assets abroad, ex derivatives (increase/financial outflow (-))	-9,337	-86,967	-44,752	-81,234	-560,523	-140,465
Foreign-owned assets in the United States, ex derivatives (increase/financial inflow (+))	7,226	62,037	144,231	139,357	1,038,224	305,736
Financial derivatives, net	N/A	N/A	N/A	N/A	N/A	N/A
Statistical discrepancy (sum of above items with sign reversed)	-219	22,613	18,677	28,066	-61,329	162,497

## 10. Paired Transactions in the BOP Bookkeeping System

*Note: This section is not highly testable. It cites various examples to illustrate how BOP bookkeeping entries are done.*

**Commercial exports:** A company in Germany sells technology equipment to a South Korean auto manufacturer for a total price of EUR 50 million, including freight charges of EUR 1 million, to be paid within 90 days. The merchandise will be shipped via a German cargo ship.

Let us look at how the transaction is recorded from Germany's perspective.

Current account (under exports) credit entries:

Technology equipment: + €49 million

Freight services: + €1 million

Financial account (debit entry):

Money owed by foreigners to Germany: €50 million

**Commercial imports:** A German utility company imports gas from Russia valued at EUR 45 million, and agrees to pay the Russian company within three months.

Current account (under imports) debit entry:

Gas imported: €45 million

Financial account credit entry:

Money owed by Germany to Russia: €45 million

**Loans to borrowers abroad:** A German commercial bank purchases EUR 100 million in intermediate-term bonds issued by a Ukrainian steel company. The bonds are denominated in euros, so payment is made in euros.

Financial account – debit and credit entry:

German holdings of Ukrainian bonds (German investment in a foreign country; private long-term claims): €100 million

Deposits issued by the Ukrainian steel company (foreign private short-term claim): €100 million

### Example

1. What are the three BOP components?

**Solution:** Current account, Capital account, and Financial account.

2. Consider Turkey's balance of payments. Where will each of the following be recorded?

a. Sell gas exploration rights to a Russian company.

**Solution:** Capital account

b. Sell software-related patents and services to a Canadian company.

**Solution:** Current account

c. Borrow \$100 million euro from a German bank.

**Solution:** Financial account

d. Receive a \$5 million dividend from an equity investment in the U.S.

**Solution:** Current account, as it is income received on an investment

## 11. National and Economic Accounts and the Balance of Payments

*Note: The curriculum describes this section in great detail. Most of the questions in this section are based on this equation.*

The derivation of this relationship is shown in the curriculum. We will look at it briefly here.

In a closed economy, all goods and services are produced and consumed within the country i.e. nothing is traded.

$$\text{GDP} = \text{National income of the country } Y = C + I + G$$

where:

C = Consumption

I = Investment

G = Government Expenditure

In an open economy, some of the produce is exported (X), while some money is spent on importing goods and services (M). For such an economy, which is often the case, the GDP consists of four components: consumption, domestic investment, government spending, and net exports.

$$\text{Now, } Y = C + I + G + (X - M)$$

where:  $X - M = \text{Net Exports} = \text{Current Account}$

Rearranging the above equation, we get current account  $CA = X - M = Y - (C + I + G)$

If  $(C + I + G)$  represents expenditure, then the current account CA is the difference between what a country produces (Y) and what it spends  $(C + I + G)$ .

CA Surplus → The country exports more than it imports; produces more than it spends, or net lending to other economies;  $CA > 0$ .

CA Deficit → The country imports more than it exports, or net borrowing from other economies;  $CA < 0$ .

Current account surplus results from:

- High private savings
- Low private investment
- Government surplus

Conversely, current account deficit results from:

- Low private savings
- High private investment
- Government deficit

What is the impact on the current account for each of the following?

- Higher consumption

**Solution:** Higher consumption means savings are low, low savings imply current account is low (deficit).

- Higher government spending

**Solution:** Higher government spending implies low current account (deficit)

- Higher investments

**Solution:** Higher investments imply low current account.

## 12. Trade Organizations

### 12.1 International Monetary Fund

**Primary responsibilities of the IMF:** To ensure the stability of the international monetary system, the system of exchange rates, and international payments that enables countries to buy goods and services from each other.

- Provides a forum for cooperation on international monetary problems.
- Facilitates the growth of international trade and promotes employment, economic growth, and poverty reduction.
- Supports exchange rate stability and an open system of international payments.
- Lends foreign exchange to members when needed, on a temporary basis and under adequate safeguards, to help them address balance of payments problems.

How does the IMF ensure global economic stability?

- **Financial assistance:** The IMF stands ready to lend foreign currencies to member countries to assist them during periods of significant external deficits. A pool of gold and currencies contributed by members provides the IMF with the resources required for these lending operations. Following the 2007-09 crisis, the IMF has enhanced its lending facilities and member countries' access to fund resources.
- **Surveillance:** In the wake of several financial crises in the recent past (downgrading of Greek sovereign debt to non-investment grade and its cascading effects on other EMU countries such as Italy, Spain, etc.), the IMF has improved its monitoring of global, regional, and country economies on macroeconomic policies.
- Helping resolve global economic imbalances.
- **Technical assistance:** Offers training to country officials on how to design and implement effective macroeconomic policies, and how to manage their financial systems and capital markets.

### 12.2 World Bank Group

The World Bank's main objective is to help developing countries fight poverty and enhance environmentally sound economic growth. One of the current goals of the World Bank to achieve by 2030 is to end extreme poverty by decreasing the percentage of people living on less than \$1.25 a day to less than 3%. (Source: [worldbank.org](http://worldbank.org))

The World Bank funds projects in developing countries and provides financial and technical expertise with an objective to reduce poverty. It finances these projects through its two affiliated entities, IBRD and IDA. Both these organizations provide low or no interest loans to countries that have unfavorable or no access to international credit markets.

- **The International Bank for Reconstruction and Development (IBRD):** The primary source of funding for the bank is by selling AAA- rated bonds in the world's financial markets. It has enjoyed this high rating since 1959. IBRD's reserves have been built up over the years with the capital contributed by the bank's 188 member

countries. It generates income from lending out its own capital. IBRD's income pays for the World Bank's operating expenses.

**The International Development Association (IDA):** The world's largest source of interest-free loans and grant assistance to the poorest countries.

### 12.3 World Trade Organization

The WTO is the only organization that deals with the rules of trade between nations. The most important functions of the WTO include:

- Implementation, administration, and operation of individual agreements. All the major decisions are taken by the representatives of the governments who meet regularly in Geneva.
- Acting as a platform for negotiations such as lowering customs tariffs, removing trade barriers, etc.
- Settling disputes: If the countries feel there has been an infringement of an agreement, or any other dispute, then the issue is settled by the WTO.
- Building trade capacity: The WTO helps developing countries to build the skills and infrastructure needed to boost their trade.
- WTO agreements have been signed by a large majority of the world's trading nations and ratified in their respective parliaments.
- The WTO has the mandate to review and propagate its members' trade policies and ensure the coherence and transparency of trade policies through surveillance in a global policy setting.



## Summary

### **LO.a: Compare gross domestic product and gross national product.**

Gross domestic product refers to all goods and services produced within a country's geographical bounds.

Gross national product refers to all goods and services produced by a country's citizens – this does not include foreign citizen products within the country, instead includes products of a country's citizens all across the globe.

### **LO.b: Describe benefits and costs of international trade.**

- Benefits: Lower cost to consumers of imports due to more efficient allocation of scarce resources; higher employment, wages, and profits in export industries; economies of scale.
- Costs: Workers may be displaced and profits may be lost in industries competing with imported goods.
- Net balance: Most economists believe that the benefits outweigh the costs.

### **LO.c: Contrast comparative advantage and absolute advantage.**

Absolute advantage refers to an absolute cost advantage in the production of a good when compared to another country.

Comparative advantage refers to a comparative cost advantage (lower opportunity cost in terms of other goods that could be produced instead) for the production of a good when compared to another country.

If a country does not have an absolute advantage in the production of good X but does have a comparative advantage, it will still benefit from trade.

### **LO.d: Compare the Ricardian and Heckscher–Ohlin models of trade and the source(s) of comparative advantage in each model.**

In the Ricardian model of trade, there is only one factor of production – labor. Differences in labor productivity is the key source of comparative advantage.

In the Heckscher-Ohlin model of trade, both capital and labor are variable. Goods are produced with varying combinations of labor and capital.

Differences in the relative endowment of these factors are the source of comparative advantage. Countries with relatively high labor will focus on labor-intensive industries. Technology in each industry is the same across countries, but varies between industries. It allows for income redistribution through trade.

### **LO.e: Compare types of trade and capital restrictions and their economic implications.**

Trade Restrictions:

- Tariffs: Taxes on imported goods collected by the government.

- Quotas: Limits on the absolute amount of imports allowed over some period, typically a year.
- Export subsidies: Government payments to firms that export goods which artificially reduce the cost of production.
- Voluntary Export Restraint: Agreements by exporting countries to voluntarily restrict the amount of a good that can be exported, often in the hope of avoiding tariffs or quotas imposed by trading partners.

#### Capital Restrictions:

- Outright prohibition of investment in domestic country by foreigners.
- Prohibition of or tax on income from foreign investments by domestic citizens.
- Prohibition of foreign investment in certain domestic industries.
- Restrictions on repatriation of earnings of foreign entities operating in a country.

#### **LO.f: Explain motivations for and advantages of trading blocs, common markets, and economic unions.**

- Free Trade Area: All barriers to import and export of goods and services among member countries are removed.
- Customs Union: In addition, all member countries adopt a common set of trade restrictions with non-members.
- Common Market: In addition, all barriers to the movement of labor and capital goods among member countries are removed.
- Economic Union: In addition, member countries establish common institutions and economic policy.
- Monetary Union: In addition, member countries adopt a single currency.

#### **LO.g: Describe common objectives of capital restrictions imposed by governments.**

##### Capital restrictions

- Some governments restrict the inward and/or outward flow of capital.
- Restrictions on inflows might be due to strategic or defense-related reasons.
- During an economic crisis, capital might flow out of the country.
- Countries with scarce foreign exchange might restrict outflows and might also want to boost local investment.
- Over the long term, capital restrictions reduce welfare.

#### **LO.h: Describe the balance of payments accounts including their components.**

##### Current account includes:

- Merchandise and services.
- Income receipts (foreign income from dividends and interest earned on investments).
- Unilateral transfers of assets.

##### Capital account includes:

- Capital transfers – physical assets, natural resources, intangible assets, debt forgiveness, death duties, and taxes.
- Sales & purchases of non-financial assets.

Financial account includes:

- Government-owned assets abroad.
- Foreign-owned assets in the domestic country.

Influences on the BOP position:  $(X - M) = (S - I) - (G - T)$

**LO.i: Explain how decisions by consumers, firms, and governments affect the balance of payments.**

Current account surplus results from:

- High private savings.
- Low private investment.
- Government surplus.

Conversely, current account deficit results from:

- Low private savings.
- High private investment.
- Government deficit.

**LO.j: Describe functions and objectives of the international organizations that facilitate trade, including the World Bank, the International Monetary Fund, and the World Trade Organization.**

International Monetary Fund:

- International monetary cooperation and exchange rate stability.
- Assists in setting up international payments systems; makes resources available to member countries with balance of payments problems.

World Bank:

- Low-interest loans, interest-free credits, and grants to developing countries for many specific purposes.
- Provides resources and knowledge and helps form private/public partnerships with the overall aim of fighting poverty.

World Trade Organization:

- Ensures that trade flows freely and works smoothly.
- Main focus: Institute, interpret, and enforce a number of multilateral trade agreements which detail global trade policies for a large majority of the world's trading nations.