

11. International economic issues

11.1 Policies to correct disequilibrium in the balance of payments

Syllabus 11.1

- Components of BOP: current, financial, and capital account.
- Effects of government policies on BOP.
- Different between expenditure-switching and expenditure-reducing.

Balance of payments

- The **Balance of Payments** is a record of **all economic transactions** between **residents of a country** and the **rest of the world** over a specific time period.
- It consists of **three main components**:
 - **Current account.**
 - **Capital account.**
 - **Financial account.**

Current account

- Records **flows of goods, services, income, and transfers**:
 1. **Trade in goods (visible balance).**
 - Exports and imports of physical goods (e.g. machinery, food)
 2. **Trade in services (invisible balance).**
 - Tourism, banking, insurance, education, etc.
 3. **Primary income.**
 - Earnings from investment abroad (e.g. dividends, interest, wages).
 4. **Secondary income (transfers).**
 - Foreign aid, remittances, and grants that **do not involve a return**.
- A **surplus** indicates net inflow of money; a **deficit** shows net outflow.

Capital account

- Records **capital transfers** and **non-produced, non-financial assets**.
 1. **Capital transfers** (refers to the *capital account* in accounting).
 - The **transfer of ownership of assets or liabilities**, without anything being received in return.
 - Debt forgiveness, migrants' transfers, inheritance taxes between countries.
 2. **Non-produced assets.**
 - **Intangible assets** that are **not the result of production**, but can still be **owned, bought, or sold across borders**.
 - Patents, land, and natural resources sales across borders.

Financial account

- Records **flows of investment** in assets and liabilities between countries.

1. Direct investment.

- Involves a **long-term interest** and **significant control** (usually $\geq 10\%$ ownership) in a foreign business.
- Long-term investment in foreign businesses (e.g., FDI).

2. Portfolio investment.

- Involves **passive ownership** (typically $< 10\%$) with **no control** over operations.
 - The intent is to **generate financial return**.
- Buying stocks, bonds, and other financial assets (without control).

3. Other investments.

- **Short-term** commitments to foreign financial assets.
 - The intent is to **facilitate business operations** (e.g., liquidity).
- Such as loans, deposits, trade credits, and bank flows.

4. Reserve assets.

- Transactions involving central bank reserves (e.g., gold, foreign currency).
 - These reserves are kept to **settle international debts** and to **influence the value of the foreign exchange rate**.
- A **deficit** means that money is flowing out from domestic financial assets.
 - If the deficit is short-term, it shouldn't be worried if (i) the country's investment abroad can generate primary income and (ii) there are hot money flying away seeking for higher returns.
 - If the deficit is long-term, it signify a lack of confidence on the country's economic prospects. It may also cause a **depreciation** in the exchange rate.
- A **surplus** may mean that, in the long run, many **primary income** will flow out.

Effects of government policies on BOP

- Below lists a series of behaviors that may impact a country's BOP:
 - **Attracting MNCs** → less primary income, more direct investment & other investments, and probably more portfolio investment (if the MNC's foreign residents start to buy the country's stock).
 - This can be done by more government spending on infrastructure, lower exchange rate, less income tax, lower interest rate...
 - **Selling shares to foreigners to provide funds** → more portfolio investment, probably more trade in goods (competitiveness from the economy of scale).
 - **Borrowing from abroad** → less other investment, but more trade in goods and etc if the funds help grow or subsidize the companies.
- **Supply-side policies** help with **macroeconomic stability**, which attracts a net inflow of direct investment, portfolio investment, and bank loans.
 - Education and training may create a cheaper skilled labor force.
 - Trade union reform may attract more MNCs with less industrial actions.
 - Privatization and deregulation may increase the opportunity for FDI.
 - It's about **expectation** → investors think that they obtain capital returns!

Expenditure-switching and expenditure-reducing policies

- All the policies to correct an imbalance in the BOP are classified into either **expenditure-switching** or **expenditure-reducing**.

Expenditure-switching policy

- Policies designed to **encourage consumers and firms, residents or non-residents, to buy domestically produced goods instead of imports**.
 - **Intended goal:** reduce import demand and increase **export competitiveness**.
 - **Intended impact:** a fall in import expenditure and a rise in export earnings.
- These are typically *supply-side, protectionist, and exchange-rate policies*.
 - E.g., increasing productivity from education and training.

Exchange-reducing policy

- Policies that **decrease aggregate demand**, reducing spending on all goods—including imports.
 - **Intended goal:** lowers **overall consumption and investment**, and **motivate domestic sellers to sell more exports**.
 - **Intended impact:** a fall in import expenditure and a rise in export earnings.
- These are typically *contractionary fiscal and monetary policies*.

11.2 Exchange rates

Syllabus 11.2 >

- Measurement of exchange rates: nominal, real, and trade-weighted.
- Determination of exchange rates under fixed and managed systems.
- Revaluation and devaluation of a fixed exchange rate.
- Changes in the exchange rate under different exchange rate systems.
- Marshall-Lerner and J curve analysis.

Measurement of exchange rates

- The **nominal exchange rate** is calculated as:

$$\text{Nominal Exchange Rate} = \frac{\text{Foreign Currency}}{\text{Domestic Currency}}$$

- The **real exchange rate** is the above equation adjusted with inflation:

$$\text{Real Exchange Rate} = \frac{\text{Nominal Exchange Rate} \times \text{Domestic Price Index}}{\text{Foreign Price Index}}$$

- The real exchange rate measures the **relative prices of domestic goods comparing to foreign goods**.
 - It may rise if:
 1. The country's currency **appreciates**.
 2. The country's **relative inflation rate increases**.

Intuition into the real exchange rate

- The **real exchange rate (RER)** measures the **relative price of domestic goods in terms of foreign goods**.
- Basically, it answers the question: *how many foreign goods can I buy with one unit of domestic good?*
- This is because its formula can be rewritten as:

$$\text{Real Exchange Rate} = \frac{\frac{\text{Foreign Currency}}{\text{Foreign Price Index}}}{\frac{\text{Domestic Currency}}{\text{Domestic Price Index}}}$$

- **Inflation** will decrease the **domestic currency's purchasing power**, and hence more foreign goods can be purchased with one unit of domestic.

Trade-weighted exchange rate

- The **trade-weighted exchange rate** measures, in **index form**, the price of a currency **against a basket of currencies**.
- It is rated according to the **relative importance of the foreign countries** in the country's trade.
 - E.g., if India trades 3x more goods with China than with the US, it'll weight China 3x more than the US in the calculation.

Determination of exchange rates

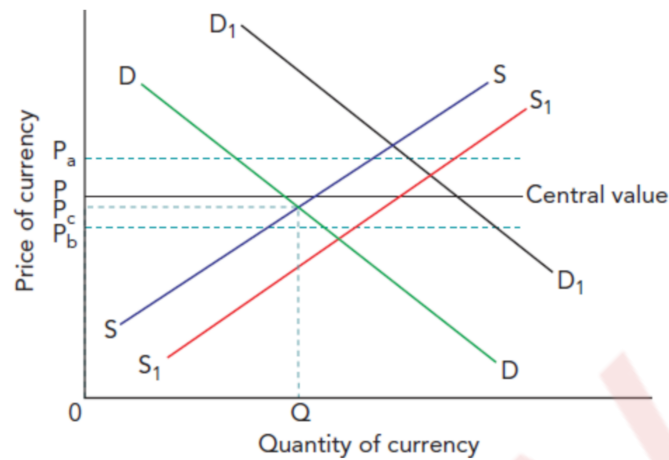
- Exchange rates can be determined by a government, by the free market forces, or by a combination of two.
- Most governments and their **central banks** allow **market forces** to play a big role in determination while intervene if there are large fluctuations.

Fixed exchange rate system

- Under a **fixed exchange rate**, the **central bank sets and maintains** a constant nominal rate between its currency and another asset or currency (e.g. gold, the US dollar, or a basket of currencies).
- The central bank can maintain the fixed rate through:
 1. **Direct intervention**: Buying and selling in the foreign exchange markets.
 2. **Indirect influence**: Manipulating the **interest rate** and etc to influence the demand and supply of the domestic currency's foreign exchange market.
- The central bank can either **devalue** (decreases the fixed rate) or **revalue** (increases the fixed rate) the currency, due to:
 1. **Not enough reserves** to impact the market of currency exchange.
 2. **Economic concerns** like decreasing imported inflation.
- A fixed exchange rate has several benefits:
 - It creates **certainty**, which can promote international trade and investment.
 - It imposes **discipline** on government to **keep inflation low** → otherwise, there will be a huge downward pressure on the exchange rate.

Managed exchange rate system

- A **managed exchange rate** system combines both a **floating exchange rate** system and a **fixed exchange rate** system.
- The currency is determined by **market forces within a given band** (between an upper and lower limit), and the central bank steps in if the rate approaches or exceeds these boundaries.



- In the graph above, P_a and P_b are the upper and lower limits:
 - No actions will be taken by the central bank at P_c .
 - If D shifts to D_1 , the central bank will step in and shifts S to S_1 so that the exchange rate is within the band.

Exchange rate and the external economy

- The effect of a change in exchange rate on the current account of balance of payments is determined by the **elasticity of demand**.

Marshall-Lerner Condition

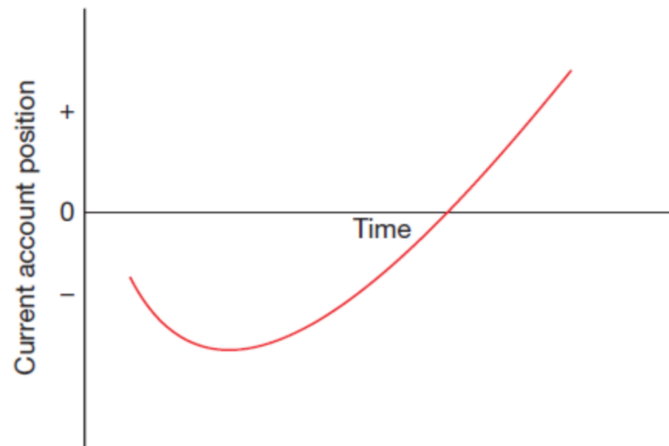
- A **currency depreciation** will improve a country's trade balance **in the long run if the sum of price elasticities of demand for exports and imports is greater than 1**.

$$|\epsilon_x| + |\epsilon_m| > 1$$

- The greater the combined PED for exports and imports, the smaller will be the fall in the exchange rate to improve the current account position.

The J-curve effect

- In some cases (e.g., when both $|\epsilon_x|$ and $|\epsilon_m|$ are inelastic), a fall in exchange rate will worsen the current account position before it starts to improve it.
- However, in the long run, **demand becomes elastic** to price changes since consumers have more time to search for alternative products.
- This is depicted by the J curve below:



- The Marshall-Lerner condition and the J-curve can also work **in reverse** to correct a **current account surplus**.

11.3 Economic development

Syllabus 11.3

- Classification of economies in terms of their level of development and national income.
- Indicators of living standards and economic development:
 - GDP, GNI, NNI, and Purchasing Power Parity (PPP).
 - Issues of comparison using monetary indicators.
 - Non-monetary indicators.
 - Composite indicators (HDI, MEW, MPI).
 - The Kuznets curve.
- Comparison of economic growth rates and living standards:
 - Over time and between countries.

Monetary indicators of economic development

- Monetary indicators consider income/spending-related statistics.

1. Gross Domestic Product (GDP)

- Total value of a **final goods & services** produced **within a country** in a year.
- **Per Capita:** $\text{GDP} \div \text{population} \rightarrow$ average output per person.
- **Use:** Broad measure of economic “size” and average material welfare.

2. Gross National Income (GNI)

- $\text{GDP} + \text{net income from abroad}$ (wages, dividends received - paid).
- **Per Capita:** $\text{GNI} \div \text{population} \rightarrow$ average national income per person.
 - The World Bank uses **GNI per capital** to classify an economy's level of development (e.g., developed, emerging, lower-middle income, etc).
- **Use:** Captures income earned by residents (including remittances).

3. Net National Income (NNI)

- GNI – **depreciation of fixed capital**.
- **Use:** Reflects **net** addition to national wealth; a truer measure of sustainable income.

4. Purchasing Power Parity (PPP)

- Exchange rate adjustment so that a **basket of goods** costs the same in each country (e.g. \$1,000 of U.S. goods = local-currency basket).
- **PPP-adjusted GDP or GNI per capita:** Controls for price-level differences → better cross-country welfare comparisons.

| Country | Price of Basket | Currency | Implied PPP Rate (foreign/domestic) |
|---------------|-----------------|----------|----------------------------------------|
| United States | \$10 | USD | — |
| Japan | ¥1,200 | JPY | 1200 JPY / 10 USD = 120 JPY/USD |

Drawbacks of monetary indicators

- **Exchange-rate volatility:** Market rates can **over- or under-value** a currency.
 - **PPP** smooths this out but is based on **periodic surveys** (time lags).
- **Omitted informal market:** Informal sectors are omitted from GDP calculation.
- **Neglect of non-monetary factors:** E.g., pollution, distribution of income, etc.
- **Neglect of types of good:** An increase in GDP may be the result of an increase in capital goods produced, not the consumer goods that are really enjoyed by the consumers.

Composite indicators of economic development

- Composite indicators consider **monetary** and **non-monetary** indicators together.

1. Human Development Index (HDI)

- **Components (each normalized 0–1):**
 1. **Health:** Life expectancy at birth
 2. **Education:**
 - Mean years of schooling (adults)
 - Expected years of schooling (children)
 3. **Standard of Living:** GNI per capita (PPP US\$)
- **Drawbacks:**
 - Ignores **inequality, gender disparities, pollution**, etc.

2. Measure of Economic Welfare (MEW)

- A modified version of national income that aims to address the gap between **economic activity** and **true welfare**.
- It **adds to GDP:**
 - Value of **leisure time**.
 - Value of **non-market activities** (e.g., household work).
- It **subtracts from GDP:**
 - **Environmental degradation**.

- **Defensive expenditures** (e.g., security costs due to rising crime).
- **Drawbacks:**
 - Difficult to **quantify subjective variables** like leisure.
 - No universal standard for **how to value non-market goods**.

3. Multidimensional Poverty Index (MPI)

- A non-monetary indicator that aims to understand **why people are poor** and **why some stay poor even when incomes rise**.

| Dimension | Indicators |
|------------------|-----------------------------------------------------------------------------------|
| Health | Child mortality, nutrition |
| Education | Years of schooling, school attendance |
| Living Standards | Access to electricity, clean water, sanitation, housing, cooking fuel, and assets |

- **Calculation:**
 - Each dimension is given a weighting of 33%, which each indicator evenly shares the weighting of its dimension
 - A household is considered poor if it is deprived of 33% of the weighted indicators.
- **Drawbacks:**
 - **Data-heavy**; not all countries have regular household surveys.
 - Does not capture **transient** poverty (temporary shocks).

Kuznets curve

- The **Kuznets curve** suggests that
 - **as an economy develops**, income becomes **more unevenly distributed**.
 - **after a certain level is reached**, income becomes **more evenly distributed**.



- However, this trend is not true in many developing countries.
 - E.g., it doesn't explain the income disparity in high-income nations like USA.