

## 10. Government macroeconomic intervention

### 10.1 Government microeconomic policy objectives

#### Syllabus 10.1 >

- Objectives in terms of inflation, balance of payments, unemployment, growth, development, sustainability, and redistribution of income.

#### Inflation

- Governments aim for **low and stable** inflation.
  - Many governments now set their central banks a **target inflation rate**.
- Inflation is also impacted by **foreign factors**:
  - Inflation rate of **other countries** → affects **imported inflation**.
  - Policy of **other countries and other central banks**, for example:
    - More income tax causes skilled worker outflow and discourages MNCs.
    - A rise in interest rate may attract an inflow of money → a high exchange rate → less imported inflation, but less export competitiveness.

#### Balance of payments stability

- Governments aim for **credit = debit** in the **current account of balance of payments** in the **long run**.
  - Current account deficit → reduces AD & causes external debt.
  - Current account surplus → inflation & opportunity cost of forgone imports.
- Governments aim to **avoid large fluctuations** in the current account balance.
  - Fluctuations → changing exchange rate → uncertainty → less investment.

#### Unemployment

- Governments aim to keep unemployment **low** and **of short duration**.
  - The quicker the unemployed return to work, the less output will be lost.
  - And they are won't lose their skills and be discarded by tech advancements.

#### Economic growth

- Governments aim for **economic growth**.
  - Or an increase in **economic growth rate** if the economy has been experiencing a **negative output gap**.
- **Actual economic growth** leads to:
  - Demand pull inflation (if there isn't enough spare capacity).
  - The effect on the current account of BOP is **uncertain**:
    - Rise in exported goods, but more imported raw materials, and more income to buy imported goods.
- **Potential economic growth** leads to:
  - Reduce the chances of demand-pull inflation.

- The effect on the unemployment is **uncertain**:
  - There may be structural unemployment, and unemployment is dependent on derived demand, not spare capacity.
- Growth is not **sustainable** if it causes **depletion of non-renewable resources**.
  - E.g., Chemical insecticides damage the soil.

## Economic development

- Governments aim for **economic development**.
  - This occurs when there is a **sustained improvement in living standards**, including better health, education, income, and overall well-being.

## Sustainability

- Governments are now becoming concerned about **sustainable development**.
  - This occurs when output increases in a way that **does not harm the needs of future generations**.
- Useful measures to promote sustainability include:
  - Use recycled materials (e.g., aluminum).
  - Use more renewable resources (e.g., wind power instead of coal).
  - Improve technology (which both increases output and reduces pollution).
  - Cutting CO<sub>2</sub>, reducing landfill, dumping less waste water, etc.

## Redistribution of income and wealth

- **Redistribution** occurs when the government shifts resources from higher-income groups to support lower-income individuals...
  - through **public goods and services** (e.g., subsidized healthcare, housing) or **direct cash transfers**.
- The extent to which governments redistribute income **varies**.
  - It depends on the social structure and the political atmosphere.
- Policies to achieve redistribution of income includes.
  - Progressive taxation (may harm enterprises and reduce work incentive).
  - Unemployment benefits.
  - Minimum wage laws.
  - Negative income tax, universal basic income, etc.

## 10.2 Links between macroeconomic problems and their interrelatedness

### Syllabus 10.2 >

- Relationship between
  - the internal value and external value of money.
  - the balance of payments and inflation.
  - growth and inflation.
  - growth and the balance of payments.
  - inflation and unemployment (traditional and expectations-augmented Phillips curve, both short- and long-run).

## Internal and external value of money

- **Internal value:** the **purchasing power** of money **within the domestic economy**.
- **External value:** refers to the **exchange rate** → how much **foreign currency** one unit of domestic currency can buy.
- The internal and external value are **directly related** → an increase in one causes an increase in the other.

### Internal → External

- **Inflation** (less internal value)
- ↓ demand for the country's **product**
- ↓ demand for the country's **currency** & ↑ supply of the country's **currency**
- **Depreciation** (less external value).

### External → Internal

- **Depreciation** (less external value).
- ↑ **import price** & ↓ **export price**.
- ↑ demand for the country's **product** & ↑ cost of imported raw materials.
- **Inflation**.

#### ↳ Imported inflation

- Always remember that an increase in the price of import **isn't necessarily a good thing** → there's **imported inflation**.
- Always remember that **raw materials may be imported**.

## Balance of payments and inflation

- The current account of balance of payments significantly influence the **external value of money**; hence, BOP and inflation work like the internal and external value of money.
- However, the inflation/deflation caused by BOP is **short-lived** due to the **exchange rate's** adjusting mechanism.

### Current account balance → Inflation

- **Current account surplus**.
- ↑ demand for the country's **product**.
- **Inflation**.
- ↑ demand for the country's **currency**.
- **Appreciation** (more external value).
- **Deflation** (more internal value).

## Growth and inflation

- Growth and inflation are closely related.

### Inflation → Growth

- **Inflation**.

- ↓ **exports** and ↑ **imports**.
- ↓ **aggregate demand**.
- ↓ **aggregate output**.
- **Slower economic growth rate**.

### Growth → Inflation

- A rise in **actual economic growth** (especially near full capacity) can cause:
  - **Demand-pull inflation**: excess AD
  - **Cost-push inflation**: rising input costs (e.g. wages from derived demand)
- A rise in **potential growth** (e.g. via supply-side policies) can ease inflationary pressure by increasing productive capacity, thus reducing **demand-pull inflation**.

### Growth and balance of payments

- The current account of balance of payments signify the  $X - M$  part in AD.

### Current account balance → Growth

- Economic growth can be **export-led**.
- **Current account surplus** → net export → actual economic growth.

### Growth → Current account balance

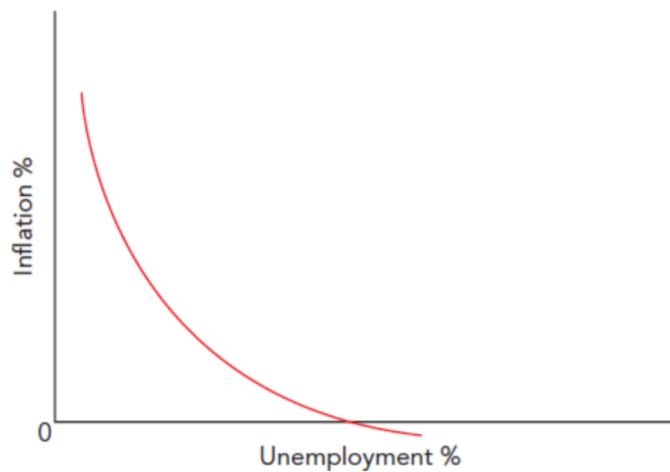
- **Potential economic growth** → higher productivity & product quality → surplus.
- **Actual economic growth** → more imported raw materials → deficit (if the products aren't exported to offset the imports).

### Inflation and unemployment

- Inflation and unemployment, too, are closely related.

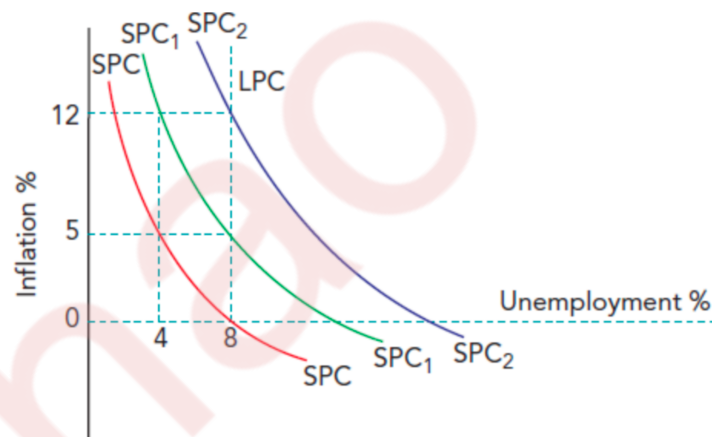
### Traditional Phillips curve

- There is an **inverse relationship** between inflation and unemployment.
  - Fall in unemployment → more AD & upward pressure on wages → inflation.
- The curve is **convex to the origin**.
  - At **high unemployment**, reducing unemployment causes **little inflation**.
  - At **low unemployment**, reducing it further causes **a lot of inflation**.
- Also, **deflation** may happen when the unemployment is too high.



### Expectations-augmented Phillips curve

- **Keynesians** support the **traditional Phillips Curve**, which shows a **short-run inverse relationship** between unemployment and inflation.
- **Monetarists** argue that:
  - There may be a **short-run trade-off** between inflation and unemployment.
  - However, in the **long run**, attempts to reduce unemployment below the **natural rate** (or NRU) by increasing AD will lead only to **higher inflation**.
  - **Unemployment returns** to its natural rate as people **adjust their expectations** (i.e. workers demand higher wages to keep up with prices).



- LPC denotes the **long run Phillips curve** that is vertical at the **natural rate of unemployment**. SPC denotes the **short run Phillips curve**.
- The graph works as follows:
  - Initially, the economy is on **SPC**, with unemployment at its natural rate (8%).
  - An **increase in AD** reduces unemployment to 4%, but inflation rises to 5%.
  - In the long run:
    - Firms realize that **costs have risen** but **real profits haven't** → so they **cut back output**.
    - Workers recognize that **real wages haven't increased** and may leave the labor force.
    - As a result, **unemployment returns to 8%**, but **inflation remains at 5%**
  - This causes **SPC to shift right to SPC<sub>1</sub>**, as expectations of inflation adjust.

- If policymakers again try to reduce unemployment to 4%, it only leads to **further inflation**, shifting the curve again to  $SPC_2$ .

## 10.3 Effectiveness of policy options to meet all macroeconomic objectives

### Syllabus 10.3 >

- Effectiveness of difference policies in different macroeconomic objectives:
  - Fiscal policy including Laffer curve analysis.
  - Monetary policy.
  - Supply-side policy including market-based and interventionist policies.
  - Exchange rate policy.
  - International trade policy.
- Problems and conflicts arising from the outcome of these policies.
- Existence of government failure in macroeconomic policies.

### Fiscal policy

- Fiscal policy can't achieve all macroeconomic objectives simultaneously.

### Growth & Unemployment v.s. BOP & Inflation

- There is a trade-off between which pair of objectives to focus:
  - Growth → Less cyclical unemployment.
  - Growth → Current account deficit & Inflation.

### Crowding out v.s. Crowding in

- New classical economics believe in **crowding out**:
  - Borrowing-financed government spending **reduces funds available to the private sector & drives up the rate of interest**.
  - The risen rate of interest **attracts foreign investment** & causes **appreciation**.
- Keynesians believe in **crowding in**:
  - ↑ Government spending → ↑ Income → ↑ Saving → ↑ Funds to lend.
  - ↑ Government spending → ↑ Income → ↑ Private sector investment.

### Unexpected responses

- There is **no certainty** as to how households and firms will respond to change in fiscal policy.
  - Its all about **expectation** → People won't increase consumption after a tax cut if they anticipate that there will be a future tax rise again.

### Time lags

- There are time lags in:
  - Government recognizing the problem.
  - Government deciding on the policy.
  - Government implementing the policy.
  - Households and firms reacting to the changes.

- Thus, there is risk that the policy may act to **reinforce the business cycle** rather than counter it.

### Difficulties of reversing an increase in government spending

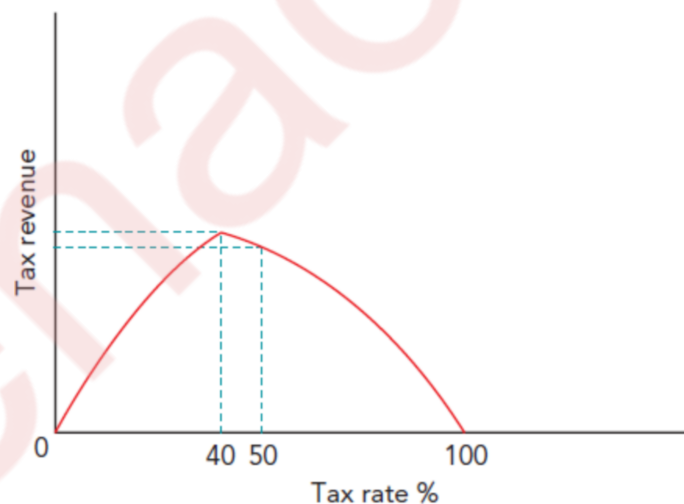
- Government spending can involve **long-term commitment** to higher spending.
  - E.g., state-run hospitals that require decades to construct.

### Redistribution & Development v.s. Incentive to work

- Redistribution of income helps promote development.
- However, transfer payments and progressive taxes may reduce the incentive to work.

### Laffer curve

- The **Laffer curve** shows the relationship between tax rate and tax revenue.
- There are some important points about the curve:
  - At a **0% tax rate**, the government collects **no revenue**.
  - At a **100% tax rate**, there is **no incentive to work or earn income**, so revenue again falls to **zero**.
  - There exists a **turning point** where **tax revenue is maximized** (often referred to as the **revenue-maximizing rate**).
    - Beyond this point, increasing tax rates leads to **lower revenue** due to **disincentives to work** and **higher tax evasion and avoidance**.
  - The **decline in revenue beyond the peak** is typically **slower** than the initial rise, reflecting behavioral and structural frictions.



- However, disadvantages of the Laffer curve include:
  - The **exact shape** of the curve and the **location of the turning point** can vary:
    - Across different countries.
    - Over time.
    - Depending on economic conditions and cultural attitudes toward tax.
- **Government failure** may occur:
  - If policymakers **misjudge** the turning point, a **tax cut intended to raise revenue** may actually **reduce it**.

- This can lead to **misguided fiscal policy decisions**.

## Monetary policy

- Same as **fiscal policy**, monetary policy also suffers from **growth & unemployment v.s. BOP & inflation**, and **time lags**.
- There are also other drawbacks.

## Response of commercial banks

- The central bank may increase the **policy interest rate**, but commercial banks may operate at the lower rate if they think **more lending will led to higher profit**.
- There is **no guarantee that QE will be successful**.
  - If commercial banks are pessimistic about the future, they may be reluctant to lend more (as borrowers may not be able to repay the loans).

## Liquidity trap

- A **reduction** in the interest rate may have little impact **when it is already low**.

## Influence of rival countries

- **Foreign interest rate** affects where the speculative funds (hot money) flow to.
- Firms may borrow from foreign banks if their interest rates are lower (so the contractionary policy may be ineffective).

## Unexpected responses

- Again, it's **all about expectation**.
  - E.g., the deflationary spiral.

## Demand and supply shocks

- If **unexpected supply shocks** happen, e.g., Covid, and the government is using an expansionary fiscal policy, there may be severe inflation.
- If **unexpected demand shocks** happen, e.g., financial crisis, and the government is using an contractionary fiscal policy, there may be a severe recession.

## Co-ordination

- It is important that **monetary and fiscal policies are co-ordinated**.
  - E.g., a government's attempt to boost economic growth may fail if the central bank increases the interest rate.
- Because **central banks often operate independently** of the government.
  - See the U.S. Federal Reserve as an example!

## Supply-side policies

- There are **market-based** and **interventionist** supply-side policies.

## Market-based SSP



- **Market-based SSP** includes tools that **increase the role of market forces**.
  - E.g., cuts in direct tax, cuts in unemployment benefits, privatisation, deregulation (e.g., remove minimum wages), and labor market reforms (e.g., reduce the power of trade unions).
- These policies are likely to **widen the wealth gap**.
  - E.g., privatisation and deregulation may result in monopolies and less economic development (e.g., more pollution); reducing the power of trade unions may result in worker exploits.
- Also, **cuts in income tax** may discourage working.

### Interventionist SSP

- **Interventionist SSP** includes tools that **involve the government more**.
  - E.g., education and training, infrastructure, support for tech developments.
  - Also, government subsidies → which may cause reliance.
- Government policies tend to have more **sustainable influence** on the economy.
- However, there are government failures, uncertainties, structural unemployment (from tech development), and a long time before becoming effective.

### Exchange-rate policies

- Exchange rate policies are highly impacted by the situations of foreign countries.

### BOP, Growth & Unemployment v.s. Inflation

- Low exchange rate → current account surplus → growth → less unemployment → demand-pull inflation.
- Low exchange rate → imported inflation → cost-push inflation.

### Price elasticity of demand

- Whether a higher or lower exchange rate is preferred depends on the **price elasticity of demand of exports and imports**.

### Speculation

- Under a **floating exchange rate system**, a government may instruct a central bank to sell the country's currency to bring about an inflation.
- However, if there's strong speculation that the currency will rise, private sector purchases may be greater than the central bank sales of currency.
  - Again, it's about **expectation** → Financial market prices are purely based on the anticipation of further price changes.

### Situations of foreign countries

- Under the floating exchange rate system, even if the government changes its exchange rate, the other countries/central banks can reverse the change.

### Availability of foreign currency

- If a central bank doesn't have enough foreign currency, it'll be difficult for them to control the exchange rate.

## International trade policy

- A **free trade policy** → it depends the country's comparative advantage, and how the other countries respond (e.g., whether they raise tariffs).
- A **protectionist policy** → it may cause over-dependency & trade wars.

## Conflicts between policy objectives

### 📖 Insights into Economics

- Always remember that economics is about **causation chains**.
  - Just reason, sometimes based on common sense, on the effects of different policies, the effects of these effects, and so on.
- **Low unemployment & Economic growth v.s. Price stability.**
- **Low inflation v.s. Current account deficit.**
- **Redistribution of income v.s. Economic growth.**
  - Income taxes may discourage working and foreign direct investment (FDI).
  - However, subsidizing the underprivileged may actually result in a **generally more skilled and healthier workforce**, which may attract FDI.
  - Here, it's all about the rate at which the tax will be set, and the culture and different local situations of the economy.
- **Number of policy tools.**
  - In practice, governments use a combination of fiscal, monetary, and supply-side policy tools.

## Government failure in macroeconomy

- **Government failure** occurs when its macroeconomic policy causes a **deterioration**, rather than an improvement, in economic performance.

## Multiplier miscalculation

- If a government understates the size of the multiplier, it may **increase its spending by too much**.

## Time lags

- There are **recognition lags**, **implementation lags**, and **behavioral lags**.
- By the time there are behavioral impacts, the policy may be **counter-cyclically**.
  - That is, the government policy may reinforce the business cycle.

## Political purposes

- Some elected governments may introduce popular policy tools before elections.
  - These policies may harm the economy.

- Also, government policies may be influenced by **powerful pressure groups**, and there's the possibility of **government corruption**.