

Economics for Business Environment

Unit 8

Nikolaos Tzivanakis

`nikos.tzivanakis@coventry.ac.uk`

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Lecture Outline

- ① Introduction
- ② Macroeconomic Models of the Economy

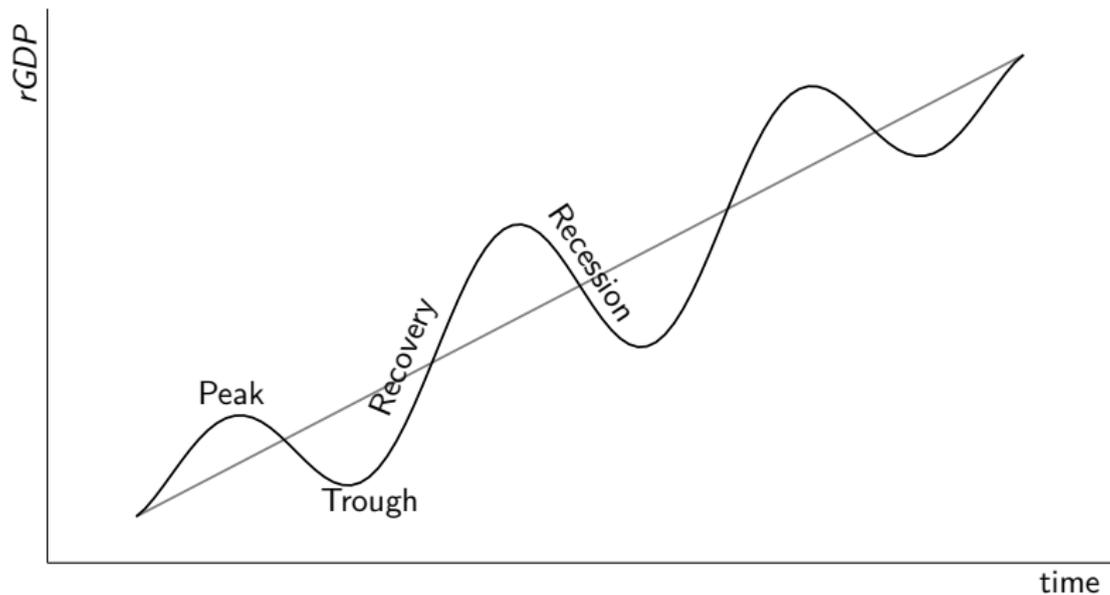
Introduction

- Economies fluctuate
- Over time they go into periods of stability, growth and low unemployment
- These periods are followed by periods of growth declines and high unemployment.
- This is what we call in Economics a ***Business Cycle***
- A business cycle has different stages: Recession, trough, recovery, peak

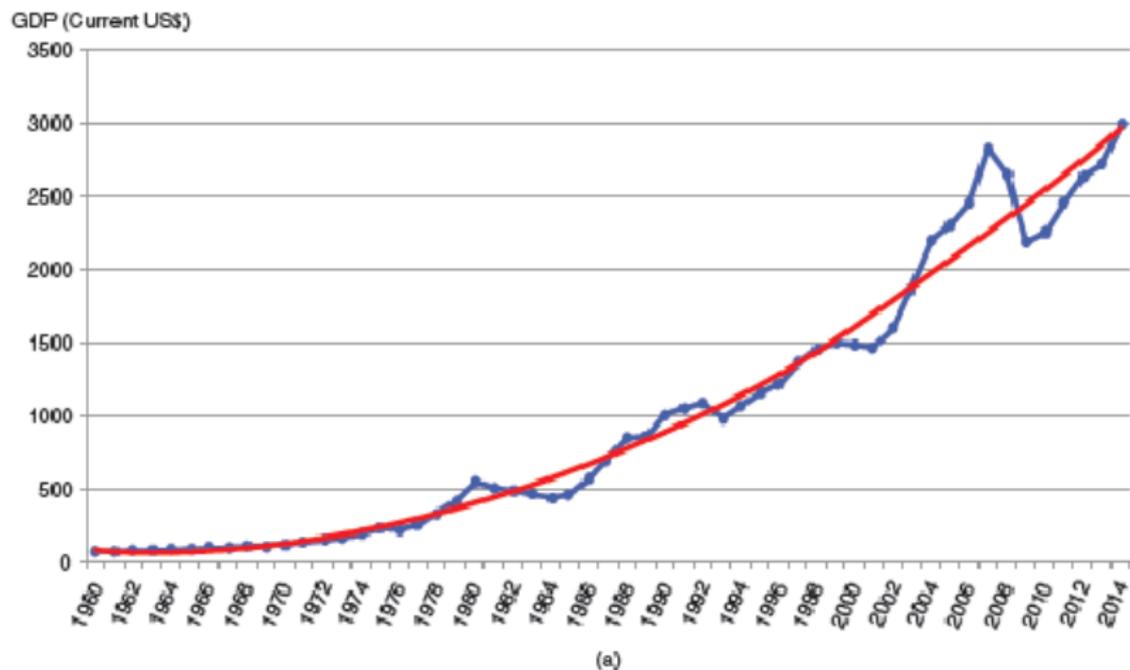
Business Cycle

- *Recession* is a period of declining real incomes and rising unemployment. If the recession becomes severe is called a ***depression***
- *Recovery* is the period after a recession when economic variables start to stabilize.
- *Trough* is the period when most variables perform better
- *Peak* is the point where most economic variables reach their maximum and start to fall.

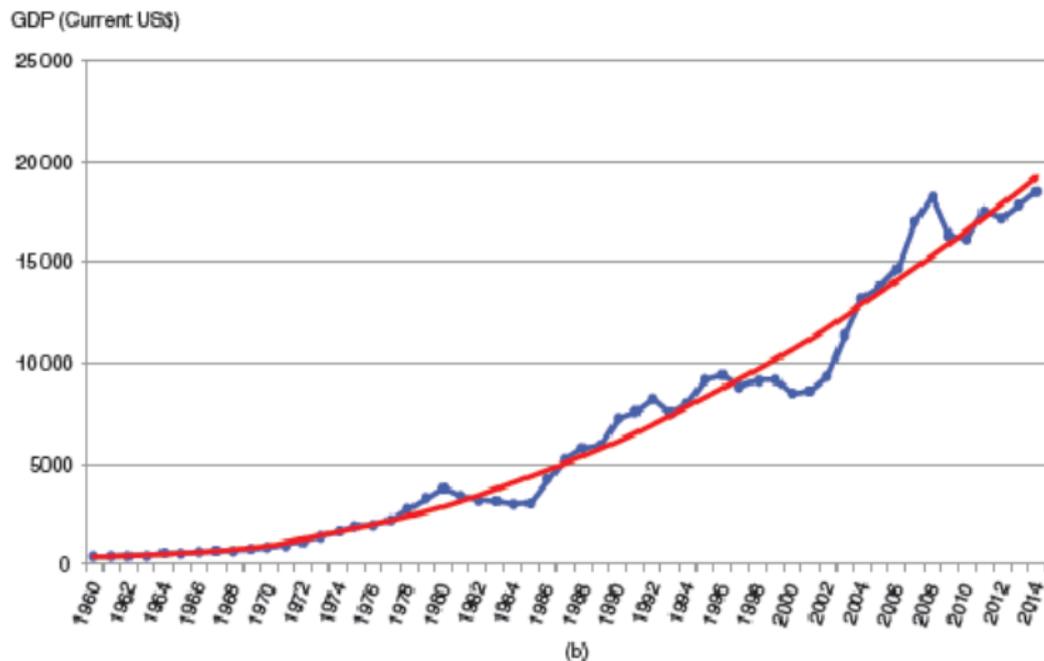
The Business Cycle



Business Cycle in UK

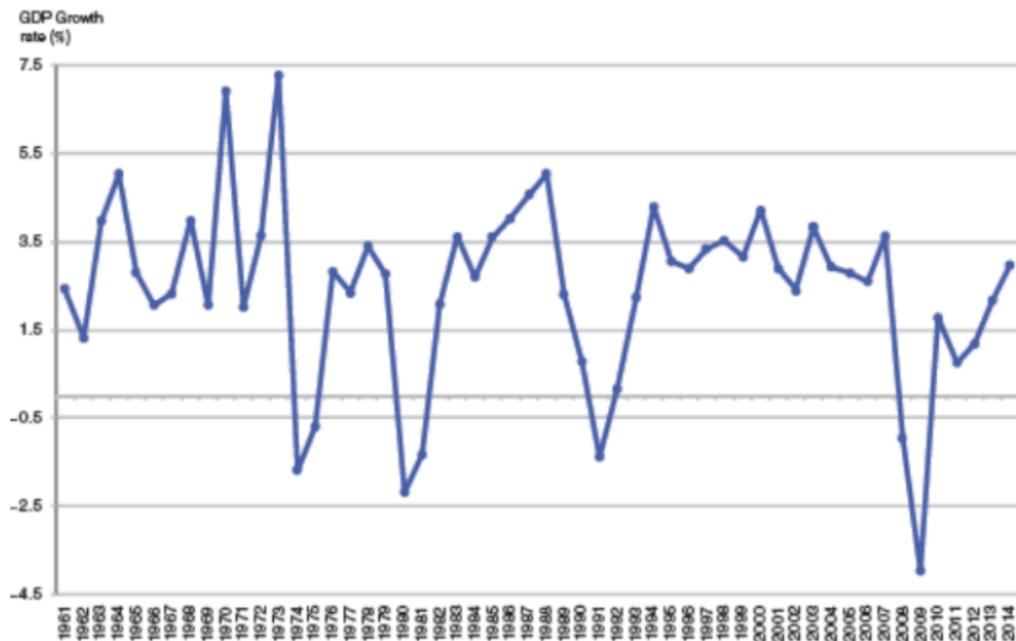


Business Cycle in EU



Source: World Bank

Business Cycle in UK



Source: World Bank

Aggregate Demand & Aggregate Supply

- There are a few models used to explain economic fluctuations
- We will use the AD/AS model
- *Aggregate Demand (AD)* shows the quantity of goods and services that households, firms and the government want to buy at each price level.
- *Aggregate Supply (AS)* shows the quantity of goods and services that firms choose to produce and sell at each price level.

AD/AS

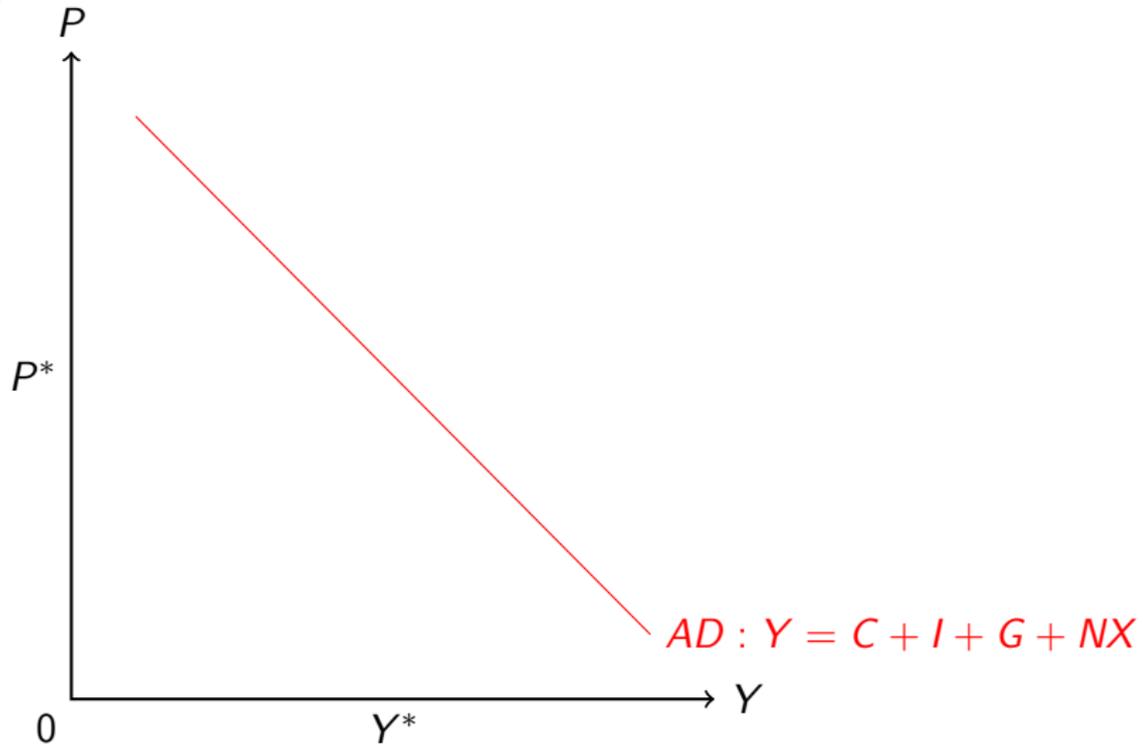
- The two curves may sound familiar
- They are!
- They both describe similar concepts as the demand and supply curves that we covered in the first part of the module
- But for the WHOLE economy.

Aggregate Demand

$$GDP(Y) = C + I + G + NX$$

- **Consumption:** Spending on goods and services by consumers
- **Investment:** Spending on Capital (new equipment, structures, inventories, new housing)
- **Government Spending:** Spending on goods and services by the government
- **Net Exports:** Export minus imports

AD/AS



Why is the AD downward sloping

- AD is determined by $C + I + G + NX$
- Let's assume for a moment that G is another form of consumption
- We need to examine how *Consumption*, *Investment* and *Net Exports* are affected by the price level.

Why is the AD downward sloping

- **Wealth Effect:** When the price of a good drops then you can afford more, in the case of the AD when the price level drops and the amount of money in your pocket is fixed, then your purchasing power increases.

$$C \uparrow \Rightarrow AD \uparrow$$

Why is the AD downward sloping

- **Interest Rate Effect:** The lower the prices are the less cash you need for transactions. This means you will deposit more money. As a result, interest rate will drop. The lower the interest rates, the lower the cost of borrowing and the higher the investment.

$$I \uparrow \Rightarrow AD \uparrow$$

Why is the AD downward sloping

- **Exchange Rate Effect:** Following from the above we have that as the price level falls the interest rates fall as well. This means that the return on domestic assets falls (e.g. return on UK bonds falls as the interest rate falls). Investment funds will seek other assets with higher returns, e.g. US bonds. For this, you will need to convert your £ to \$ and the GBP will depreciate. Imports become more expensive and exports become cheaper for foreigners, as a result, NX increase.

$$NX \uparrow \Rightarrow AD \uparrow$$

Shifts in Aggregate Demand

- **Consumption:** Increase in Consumption (C) will shift the AD curve up.
- **Investment:** Increase in Investment (I) will shift the AD curve up.
- **Government Spending:** Increase in Government Spending (G) will shift the AD curve up.
- **Net Exports:** Increase in Net Exports (NX) will shift the AD curve up.

Aggregate Supply

The AS curve describes the production capacity of the economy.

- We distinguish between the short-run (SR) and the long-run (LR) AS curves.
- The SRAS curve is the usual upward slope curve.
- The LRAS curve is vertical.

Natural Rate of Output: The output level when all existing factors of production are fully utilised and unemployment is at the natural level.

Why is the SRAS upward sloping

- **Sticky Wage Theory:** Nominal wages are sticky in the SR. It takes time for nominal wages to adjust. Assume that a company agrees to pay you a wage W at the current price level P_0 . So your real wage (i.e. purchasing power) is $\frac{W}{P_0}$. If prices fall and the W remains the same, the real wage that the firm has to pay is higher than expected, increasing real costs for the firm. The firm will then hire less people to decrease costs and will produce and supply less.

$$P \downarrow \Rightarrow \frac{W}{P_0} \uparrow \Rightarrow \text{Cost} \uparrow \Rightarrow Y \downarrow$$

Why is the SRAS upward sloping

- **Sticky Price Theory:** Prices adjust slowly as well due to "menu costs". In the short-run the cost associated with changing the prices may be high, or it could take time for them to adjust. Assume a firm that produces some good and they decide the price of the good based on their expectations of the economic conditions. For some reason the price level falls, some of the firms might adjust their prices immediately but others facing "menu costs" will lag behind. Their high prices will cause decline in sales and as revenue decreases firms will need to cut costs and production to maintain profits.

price level \uparrow menu costs $\Rightarrow P \downarrow \Rightarrow Q_d \downarrow \Rightarrow TR \downarrow \Rightarrow Y \downarrow$

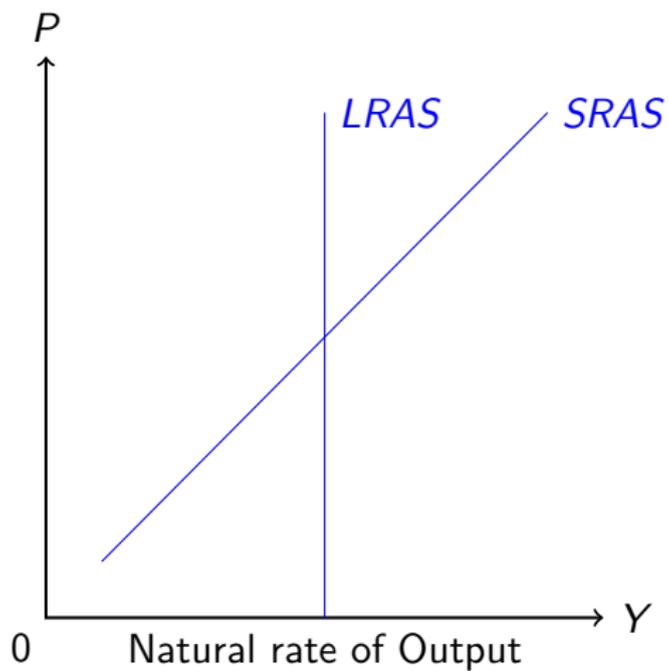
Why is the SRAS upward sloping

- ***Misperceptions Theory***: Price level changes are misperceived by suppliers. It is 100% sure that you will notice a fall in the price of your good than others. For example, assume that the price level falls; a wheat farmer will immediately notice the decrease in the price of wheat and might not realise that the price of other goods also decreased. As a result, they will decrease the supply of wheat as they believe prices are low.

Why is the LRAS vertical

Consider an economy of a small isolated island with no communication with other economies. Their long-run production (think of centuries or millenia) will depend only on the factors of production they will have available (labour, capital, natural resources and technology). No matter what the price level is, the production will depend on the availability of these factors. In other words, it determines the potential output of the economy.

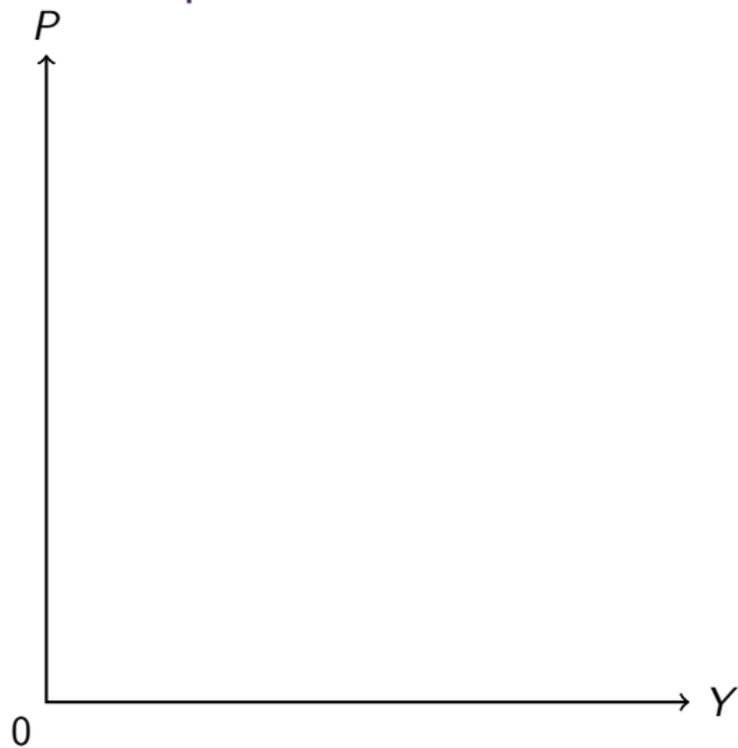
SRAS & LRAS



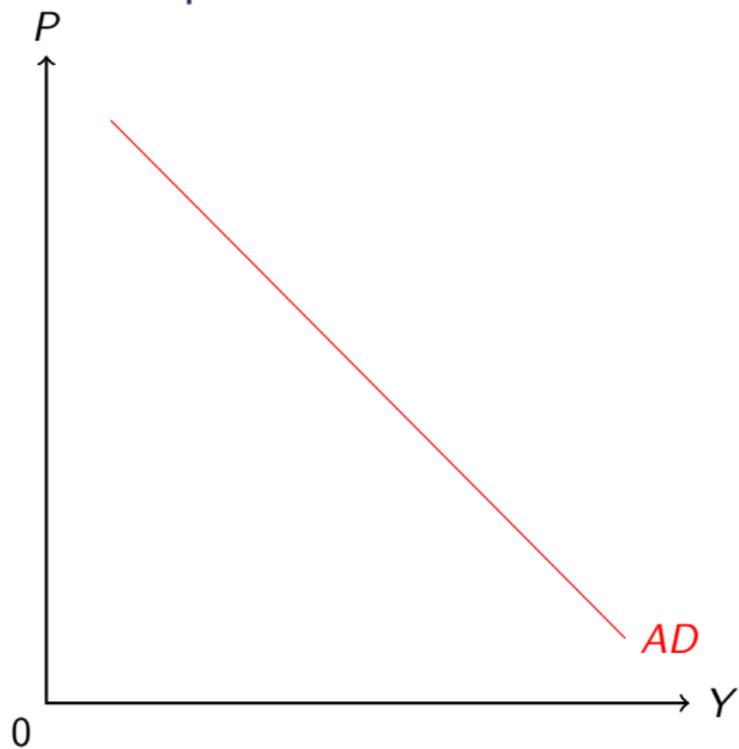
Shifts in Aggregate Supply

- *Labour*: It is an input in production, more labour means higher production. AS curve shifts right
- *Capital*: More capital means more productivity. As a result, the AS shifts to the right.
- *Natural Resources*: Production depends on the amount of natural resources. More would shift the AS to the right.
- *Technology*: A new technology would increase the efficiency or productivity of the economy shifting the AS to the right.

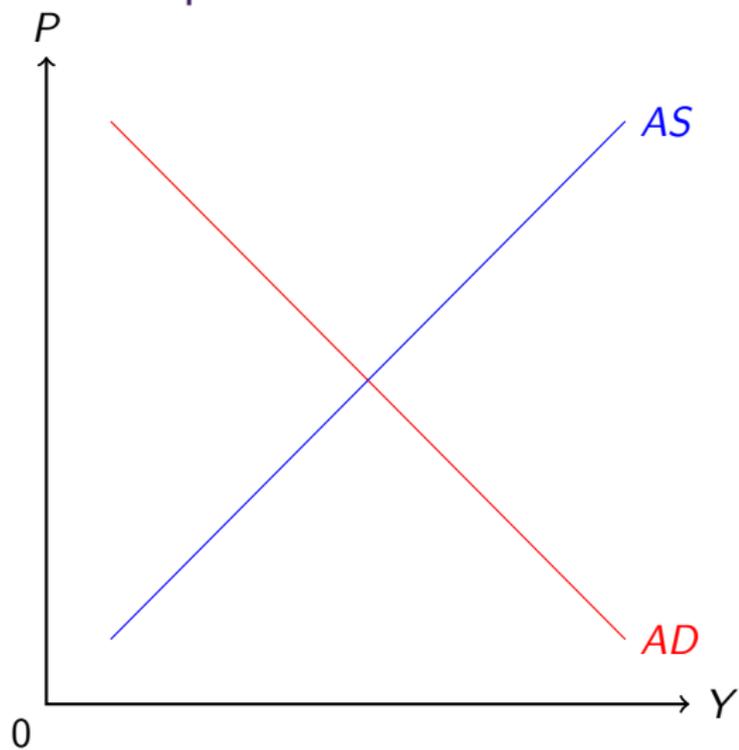
Short Run Equilibrium



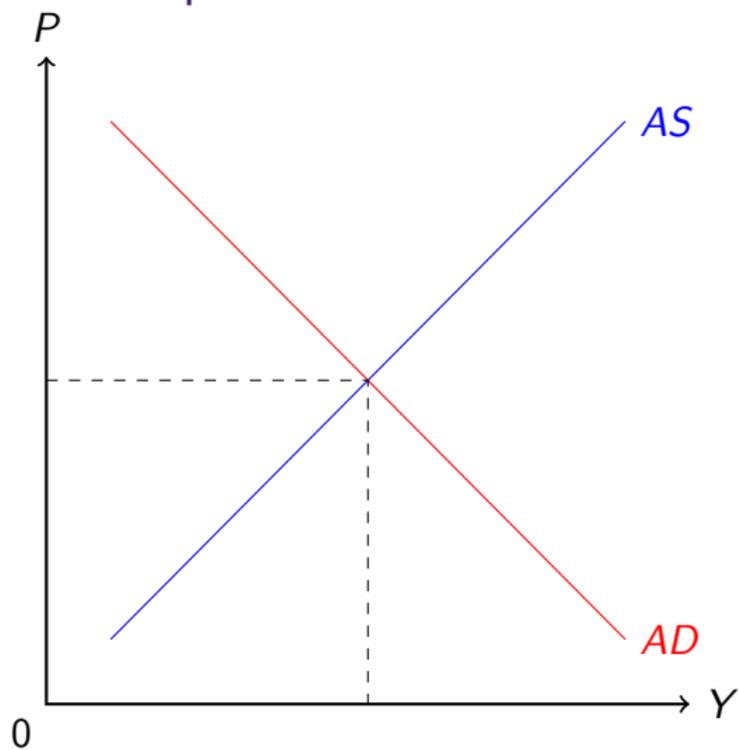
Short Run Equilibrium



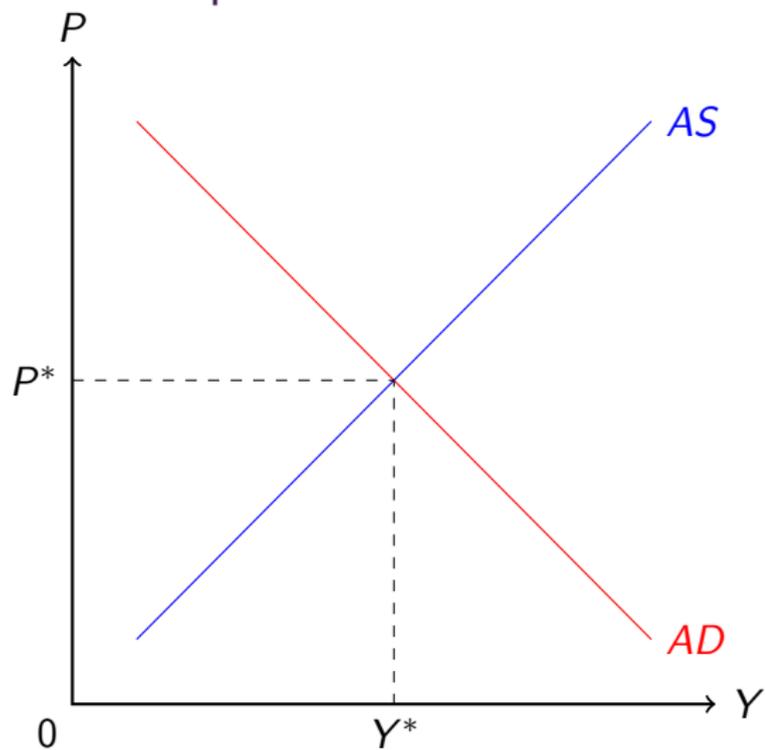
Short Run Equilibrium



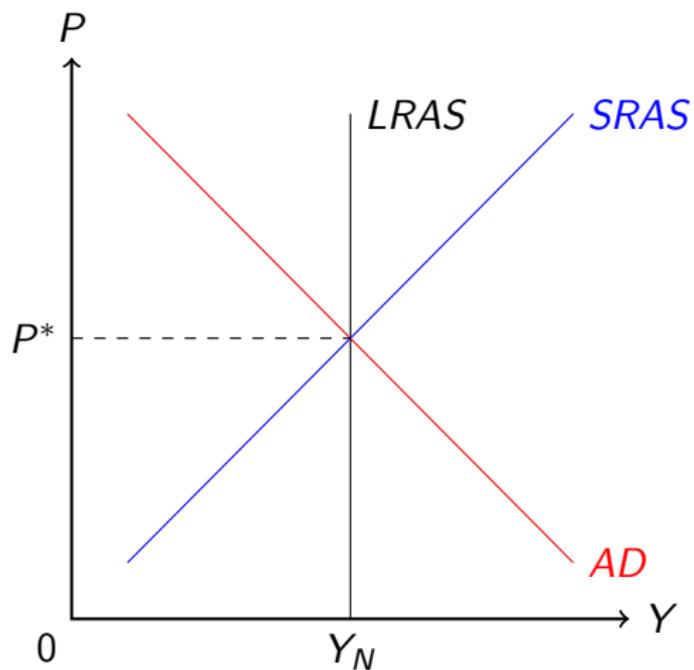
Short Run Equilibrium



Short Run Equilibrium



Long-Run Equilibrium



Macro Policies

- The economy can self-correct (in theory) but this will take time.
- In many cases, people try to intervene to correct economies faster.
- We have two main tools to correct an economy: ***fiscal*** and ***monetary policies***.

Macro Policies

- Fiscal policy refers to the use of fiscal tools to stabilise the economy.
- The main authority of fiscal policy is the government
- The main two tools are government spending (G) and taxes (T).

Macro Policies

- Monetary policy refers to the use of monetary tools to stabilise the economy.
- The main authority of fiscal policy is the central bank (ECB, Bank of England etc)
- The main two tools are money supply (M^s) and the interest rate (r).