OCR Economics A-level

Macroeconomics

Topic 1: Aggregate Demand and Aggregate Supply

1.5 The Multiplier and the Accelerator

Notes

The multiplier ratio

This is the ratio of the rise national income to the initial rise in AD. In other words, it is the number of times a rise in national income is larger than the rise in the initial injection of AD, which led to the rise in national income.

The multiplier process

The multiplier effect occurs when there is new demand in an economy. This leads to an injection of more income into the circular flow of income, which leads to economic growth. This leads to more jobs being created, higher average incomes, more spending, and eventually, more income is created.

The multiplier effect refers to how an initial increase in AD leads to an even bigger increase in national income.

It occurs since 'one person's spending is another person's income'.

Factors which determine the size of the national income multiplier:

- **Marginal propensity to consume (MPC)**
  A consumer's **marginal propensity to save** is the proportion of each additional pound of household income that is used for saving. It is calculated by dividing the change in consumption by the change in income.
  The higher the MPC, the bigger the size of the multiplier.
  The government could influence the MPC by changing the rate of direct tax. If consumers have more disposable income due to lower income tax rates, their propensity to consume might increase.

- The **average propensity to consume** is the percentage of income spent rather than saved. It is calculated by total consumption divided by total income.

- **Marginal propensity to save (MPS)**
  A consumer's marginal propensity to save plus the marginal propensity to consume is equal to 1.

If consumers save more than they spend, the size of the multiplier will be small.

- The **average propensity to save** is the income that is not spent. This is also known as the savings ratio. This is calculated by dividing the change in savings by the change in income.

- **Marginal propensity to tax (MPT)**
  This is defined as the proportion of each pound taxed by the government. The higher the rate of tax, the less disposable income each consumer has, and the smaller the size of the multiplier.

- **Marginal propensity to import (MPM)**
  If consumers spend income on imports rather than domestic goods and services, income is withdrawn from the circular flow of income. This reduces the size of the multiplier.

- **Spare capacity in the economy**

  If there is a negative output gap/ spare capacity the impact of the multiplier on national income will be greater than if the economy is operating on an inelastic short run aggregate supply curve.

Calculating size of national income multiplier

- One formula that can be used to calculate the multiplier is **1/(1-MPC).**

  - **Example:**
    If consumers spend 0.6 of every £1 they earn, they save 0/4. Therefore, the multiplier will be:
    1/(1-0.6) = 1/0.4 = 2.5.

    This means that every £1 of income generates £2.50 of new income.

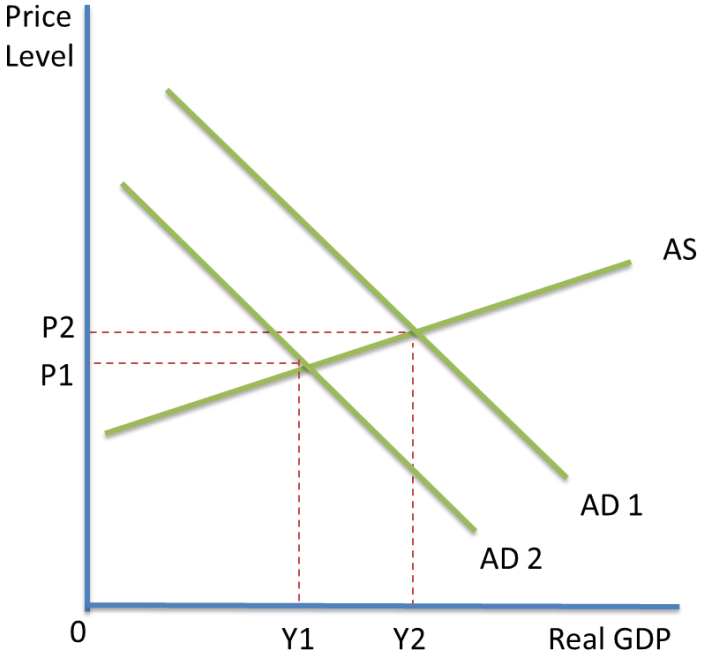
  - An open economy has three areas of withdrawals: taxes, imports and savings.
  - The marginal propensity to withdraw is calculated by MPW = MPS + MPT + MPM

- This gives another formula for calculating the multiplier:

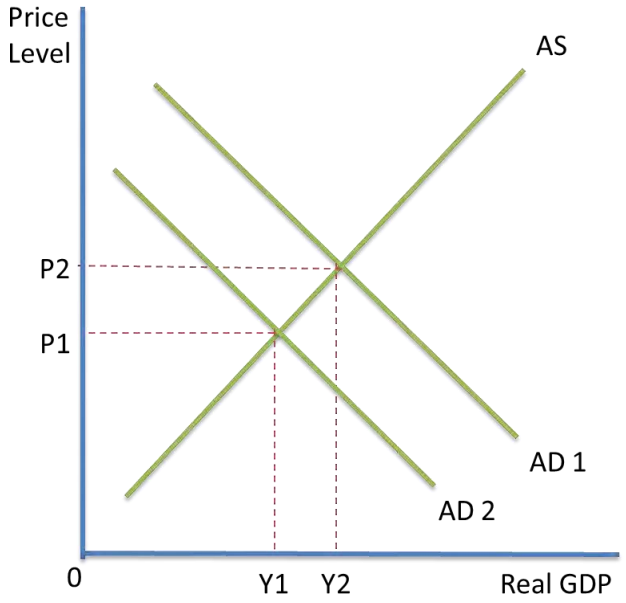
  1/MPW

The significance of the multiplier to shifts in AD

If an economy has a lot of spare capacity, extra output can be produced quickly and at little extra cost. This makes SRAS elastic and it means the size of the multiplier will be larger. A small increase in AD will lead to a large increase in national income.



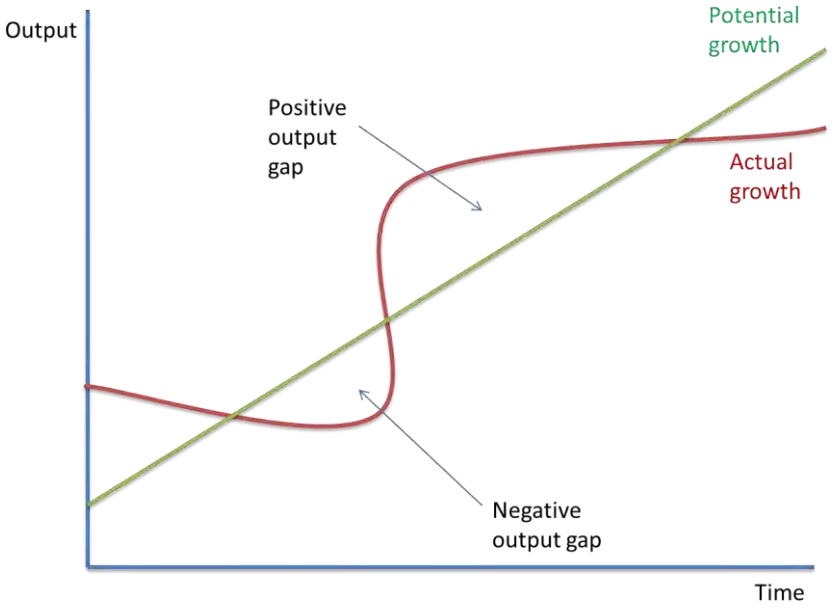
If SRAS is inelastic, the multiplier effect is likely to be smaller than its potential. This is because if AD increases, prices will increase rather than a full increase in national income. This higher rate of inflation will lead to higher interest rates. This will discourage spending and borrowing, and it will encourage saving, since the reward for saving is higher.



- It is also possible to have a 'reverse' multiplier. This means that a withdrawal of income from the circular flow of income could lead to an even larger decrease in income for the economy. This could decrease economic growth and potentially lead to a decline in the economy.

Output gaps

Positive and negative output gaps:



- An output gap occurs when there is a difference between the actual level of output and the potential level of output. It is measured as a percentage of national output.

- A **negative output gap** occurs when the actual level of output is less than the potential level of output.

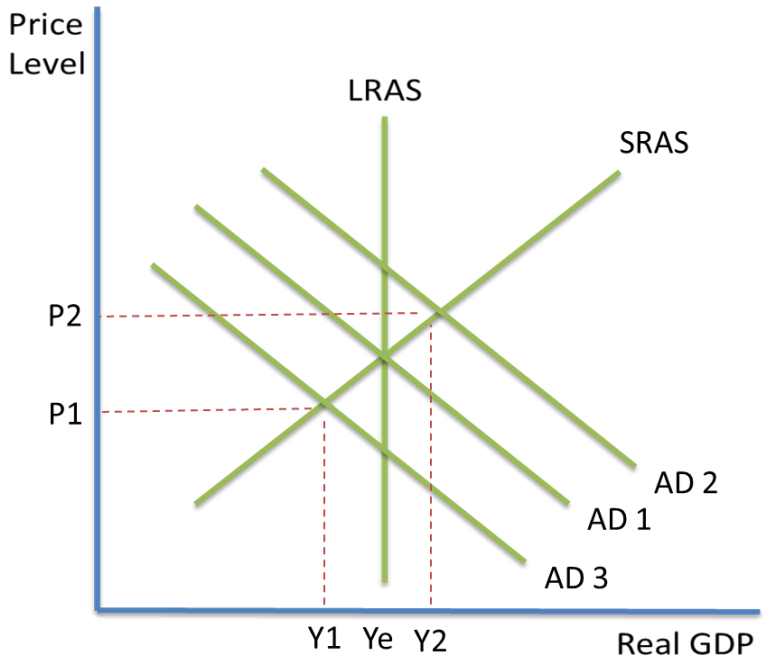
  This puts downward pressure on inflation. It usually means there is the unemployment of resources in an economy, so labour and capital are not used to their full productive potential. This means there is a lot of spare capacity in the economy.

- A **positive output gap** occurs when the actual level of output is greater than the potential level of output.

  It could be due to resources being used beyond the normal capacity, such as if labour works overtime. If productivity is growing, the output gap becomes positive. It puts upwards pressure on inflation.

  Countries, such as China and India, which have high rates of inflation due to fast and increasing demand, are associated with positive output gaps.

Illustrating an output gap:

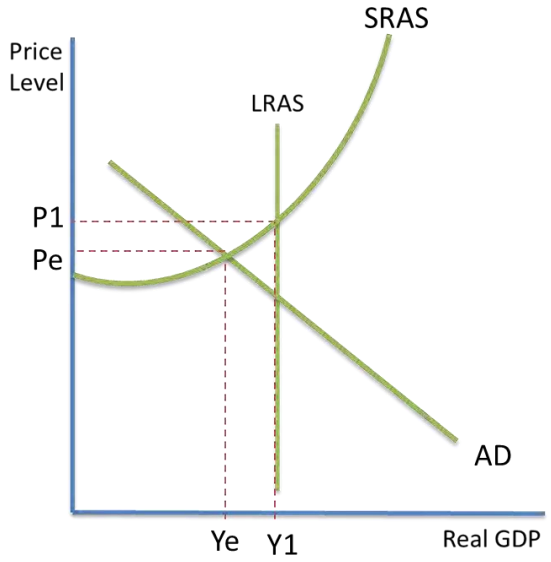


Classical economists believe markets clear in the long run, so there is full employment. They believe there are output gaps in the short run. A negative output gap is between Ye and Y1, and a positive output gap is between Ye and Y2.

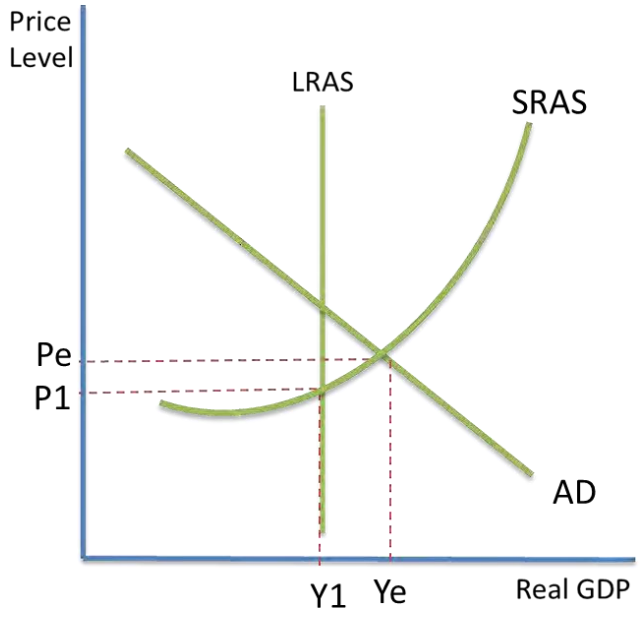
- In the short run, equilibrium might be less than the level needed to reach the level of GDP

at full employment. This occurs when there is **insufficient AD** in the economy, and a negative output gap is created (Ye to Y1 below). This means there is unemployment in the economy. Anything that could cause insufficient/excess AD could therefore cause an output gap e.g consumption, investment, gov spending and (exports - imports)

- When there is a negative output gap the economy is operating **within** its production possibility curve.



- In the short run, the equilibrium position might be above the level needed to reach the level of GDP at full employment. This occurs when there is **excess AD** in the economy, and a positive output gap is created (Ye to Y1).
- Where there is a positive output gap the economy is operating **outside** (to the right of) of its production possibility curve.



Consequences of an output gap:

- Changes in employment levels
- Changes in the general price level (risk of inflationary pressures where there is a positive output gap)
- Implications for business and consumer confidence/ expectations. This in turn could impact investment decisions.
- Changes to levels of national output