Edexcel Economics (A) A-level

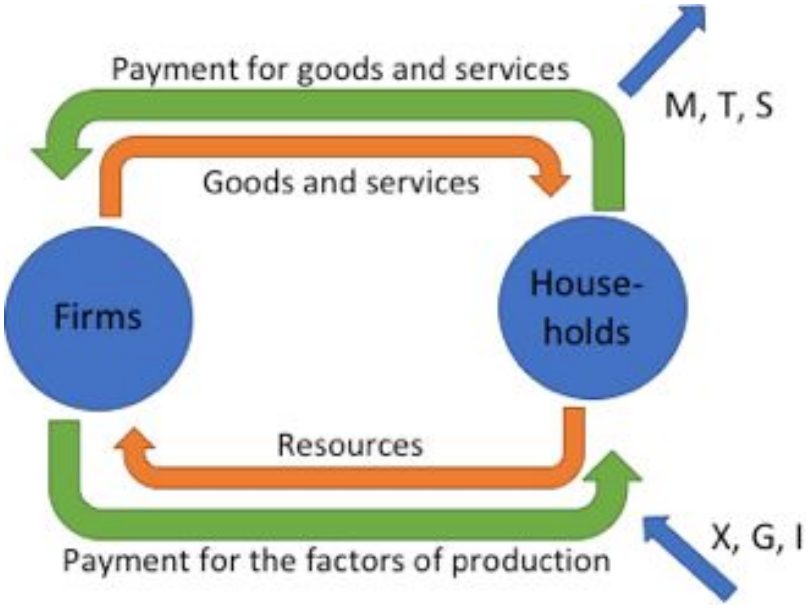
Theme 2: The UK Economy - Performance and Policies

2.4 National Income

Detailed Notes

2.4.1 National income

The circular flow of income:



- The most basic form of the model shows a **two-sector economy**: with just the households and the sellers.
    - Households **own all the wealth and resources** so provide the firms with land, labour and capital in return for rent, wages, interest and profits.
    - They use this money to buy goods and services produced by the firms.
    - **Money** (represented by the green arrows) flows in one direction and goods, services and **factors of production** (orange arrows) flow in another.
    - In this model there are three ways of measuring the level of economic activity: the national output, the value of the flow of goods and services from firms to households; the national expenditure, the value of spending by households on goods and services; and the national income; of income paid by firms to households in return for land, labour, capital and enterprise.
    - In this simple model, the **national output=national expenditure=national income**.

- However, the two-sector model is **too simplified** to represent the actual economy:
    - Firstly, the **government** needs to be added: they take money out of the economy through **taxation** (T) and add money by **spending** (G). If the government spends more than it takes away, it can increase the flow of income.
    - Next, we add to the model by introducing **financial services** who can inject money into the system through **investment** (I) and take money away when consumers or producers **save** (S).

- Finally, **foreign markets** are added as foreigners buy British goods so **exports** (X) add money to the flow but British people want to buy foreign goods so **imports** (M) take money away from the flow. The difference between the level of imports and exports is the balance of trade.

Income and wealth:

Wealth is a **stock** of assets whilst income is a **flow**. Wealth is the things people own e.g. houses, possessions whilst income is the money they receive e.g. money from work, interest from savings. Countries with high levels of wealth tend to have high levels of income and vice versa but there is not a perfect correlation between wealth and income.

2.4.2 Injections and withdrawals

Injections and withdrawals:

- Injections are monetary additions to the economy:
  - government spending (G),
  - investment (I)
  - exports (X).

- Withdrawals or leakages are where money is removed from the economy:
  - taxes (T)
  - savings (S)
  - imports (M).

- If the sum of injections is greater than the sum of leakages/withdrawals, then the economy will be growing whilst if injections are smaller than withdrawals, it will be shrinking.

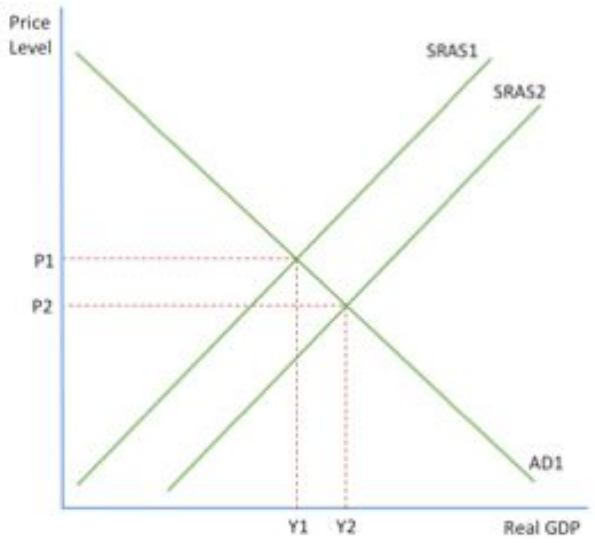
- In an equilibrium, injections must be equal to withdrawals and so the national income remains the same.

2.4.3 Equilibrium levels of real national output

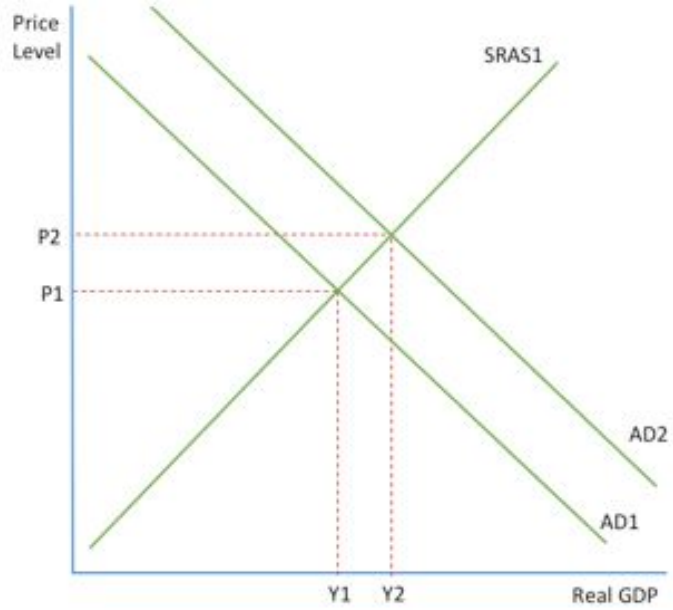
The equilibrium position of national output is where the **AD and AS curves intersect.** If either AS or AD are shifted, then the equilibrium position will change. The size of this change will depend on the size of the shift and the elasticity of the curve which has not moved i.e. the elasticity of AS if AD has moved.

Short term:

- Both Keynesian and Classical economists agree that in the short run **AD will be downward sloping and AS will be upward sloping.**



The initial equilibrium level is P1Y1, where AD1 and SRAS1 intersect. However, the increase in SRAS to SRAS2 has changed the equilibrium position to P2Y2. There has been a fall in the price level and an increase in real GDP. A decrease in SRAS would lead to higher prices and lower real GDP.

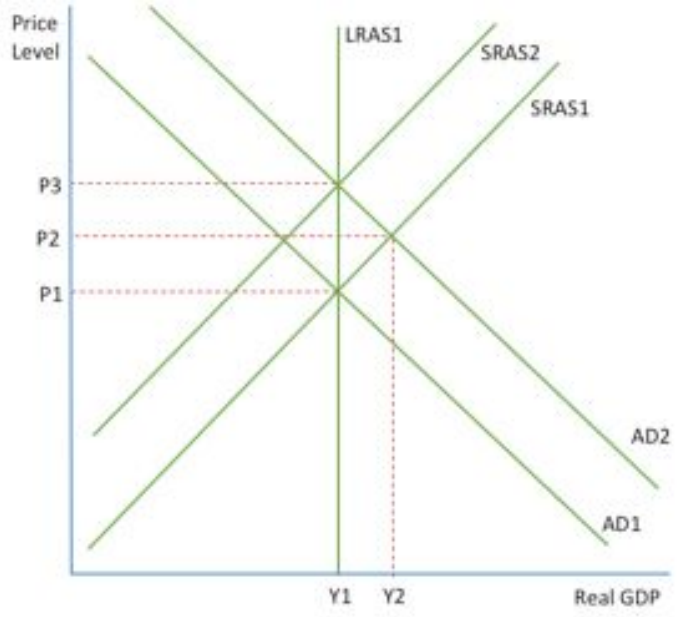


The initial equilibrium level is P1Y1 where AD1=SRAS1. The increase in the AD curve to AD2 has led to a change in equilibrium to P2Y2. Prices and real GDP are higher. A fall in AD would lead to lower prices and lower real GDP.

Long term:

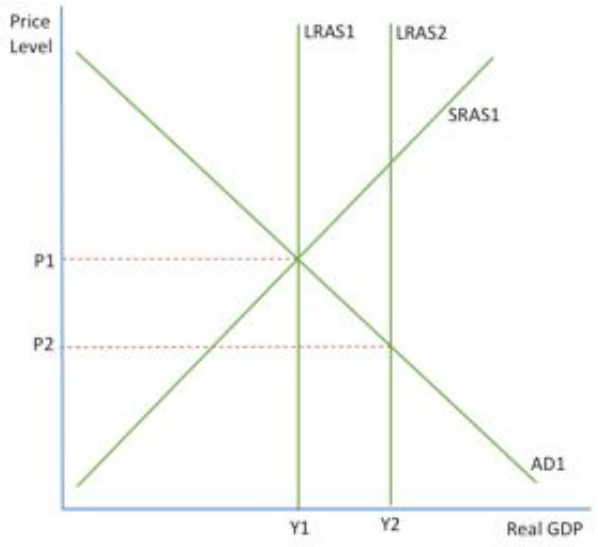
Classical LRAS:

- As the classical LRAS curve is **perfectly inelastic** (i.e. a change in price has no effect on change in output), a **shift of the AD curve would not affect long run national output** and would only affect price levels. Classical economists believe that the economy will always return to full employment level and therefore there will be no unemployment in the long run.



They believe that the increase in AD from AD_1 to AD_2 will lead to a positive output gap. The economy is in long term disequilibrium as $SRAS_1$ and AD_2 do not intersect on the LRAS curve. The short-term equilibrium is P2Y2. This means that there is over-full employment and firms will end up bidding up wages of labour (as each of them offers a higher salary in order to attract the best workers) and the other factor prices. As a result, SRAS shifts to $SRAS_2$ as the cost of production has increased. Eventually, the economy is producing the same amount but now at higher prices: they are producing at Y1P3. The short run equilibrium has shifted and is now the same as the long run equilibrium.

- Classicists conclude that an increase in AD will increase price and output in the short run but over time, prices will continue to rise as the economy moves back to the long-term equilibrium. Therefore, output has not changed and **the only way to increase output is by increasing the LRAS**. Changes in AD without a change in the LRAS are only inflationary.

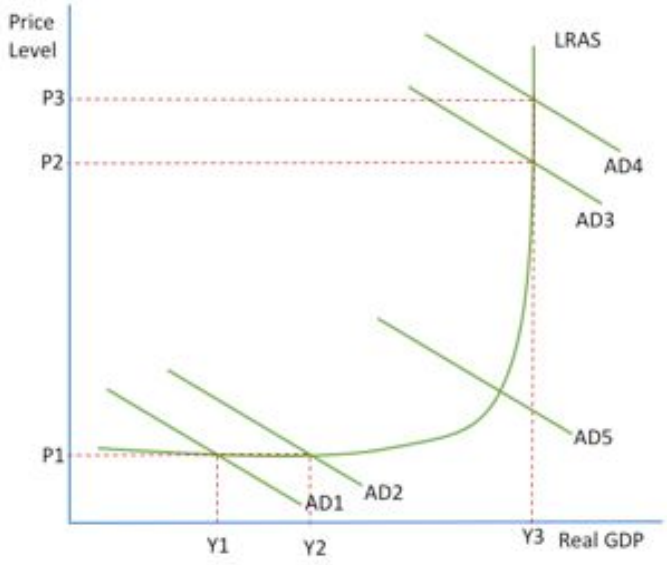


The initial equilibrium is where AD1=LRAS1 at P1Y1. The increase in LRAS from LRAS1 to LRAS2 has caused lower prices and higher output, at P2Y2. Although there is short term disequilibrium, as SRAS1 does not intersect the curve at this point, they believe this will be closed by a shift in SRAS.

- A rise in long run aggregate supply is likely to lead to **lower prices and higher output**. When this is compared to a rise in AD which causes increase prices and no higher output, it is clear to see why classical economists **favour supply-side policies over demand management**.

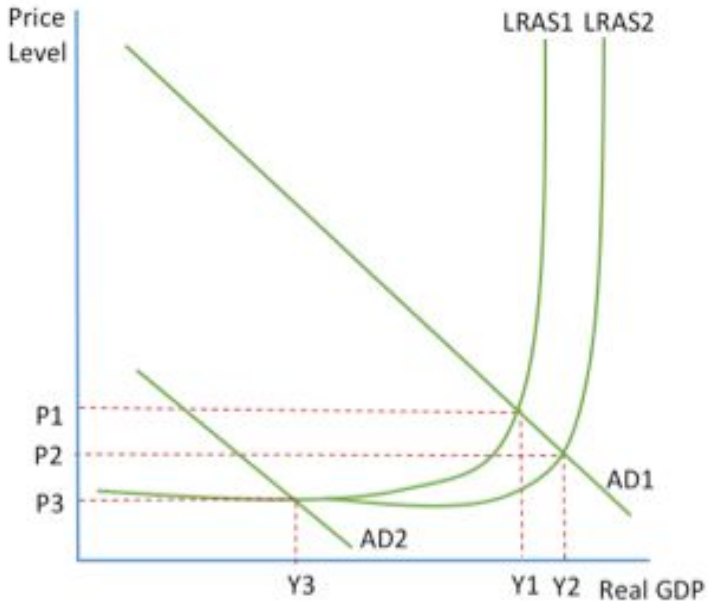
Keynesian LRAS:

- Keynesian economists agree with classicists that there is full employment where the LRAS is vertical. However, they believe **there can be equilibrium at less than full employment**- where the curve is horizontal. This is because they don't believe that a rise in unemployment rapidly leads to a fall in real wages.



Keynesians would agree with classicists that a shift from AD_3 to AD_4 is purely inflationary and would only increase price not output, as equilibrium point changes from P2Y3 to P3Y3. However, they believe if the economy is in a deep recession then an increase from AD_1 to AD_2 is the opposite and only increases output not price. The equilibrium changes from P1Y1 to P1Y2. A shift of any AD curve to or from AD5 would lead to a change both in price and equilibrium.

- With a Keynesian curve, the impact of a shift in AD strongly **depends on the elasticity** of the curve, and hence whether the economy is at or near full employment.



If the economy is producing at or near full employment, for example at AD1, then a rise in LRAS will increase output and decrease the price level. This is seen by the change in equilibrium from P1Y1 to P2Y2 following the shift. However, if the economy is in a deep recession, for example producing at AD2, then an increase in LRAS will have no effect on prices or output. This is shown by the fact the equilibrium is still at P3Y3.

- This is why Keynesians argue that **during recessions the government needs to work to increase AD** rather than using supply side policies.

Increasing aggregate demand and supply:

In microeconomics, any factor which affected demand would not affect supply and vice versa. However, with macroeconomics, **a factor which affects AD can easily affect AS**. One example of this could be investment: investment is a component of AD so an increase in investment will increase AD but it could also increase LRAS as firms are able to produce more if they have more machines etc. This may mean that the long run disequilibrium caused by the shift in AD will be brought back to equilibrium by an increase in LRAS rather

than a fall in AD. However, not all investment results in increased production (e.g. a firm may invest but then go out of business) and so the LRAS will not increase. Therefore, the extent to which investment increases output and lessens inflation depends on its rate of return.

2.4.4 The Multiplier

The multiplier process and ratio:

- The multiplier process is the idea that an increase in AD because of an **increased injection** (exports, government spending or investment) can lead to a **further increase in national income.**

- It is the ratio of **the final change in income to the initial change in injection**; and the figure multiplied by the original injection to find the final change in income.

- The initial injection will represent an increase in spending and will increase income for someone else which will then lead to further consumption spending. For example, if the government spends £100m to create jobs and withdrawals are taken into account, the £100m of government spending could lead to an extra £90m being spent by those who have the jobs, of which another £81m will be spent by those who received the £90m and so on. In this case, the MPC is 0.9 and the multiplier is 10. The extra consumption creates more jobs and increases output.

- The size of the multiplier will be determined by how much of an increase in income people will spend, **the marginal propensity to consume** (MPC). The lower the leakages, the higher the MPC, the bigger the multiplier.

- The multiplier is able to work due to the concept of **circular flow**, since one person's spending is another's income. The IMF have calculated that in developed countries, the multiplier tends to be around 1.5 in the long run and about 1.6 for developing countries.

- A **negative multiplier effect** can also occur i.e. a withdrawal from the economy could lead to an even further fall in income, decreasing economic growth and possibly leading to a decline in the economy. This means that government plans to cut deficits will lead to an even further decrease of the economy.

Effects on the economy:

- The multiplier means that **growth can occur quicker**, as any injections lead to a bigger increase in national income. Injections can be **targeted at those with the biggest MPC** in order to increase the size of the multiplier.

- For example, if the government is trying to stimulate the economy they will want to give the more money to people with the highest MPC: those on low incomes. Governments use changes in spending to influence macroeconomic performance, but it is **impossible for the government to know the exact effect of their spending** as it is difficult to know the size of the multiplier.

- As with many things in macroeconomics, there will also be a **time lag** between the increase in income and the full effect of that increase as not everyone will spend the money straight away.

- The overall effect on the economy will depend on the change in AD and the elasticity of the AS curve.

Effects of the marginal propensities:

Marginal propensity to consume (MPC): The increase in consumption following an increase in income

Marginal propensity to save (MPS): The increase in savings following an increase in income
Marginal propensity to tax (MPT): The increase in taxation following an increase in income
Marginal propensity to import (MPM): The increase in imports following an increase in income

Marginal propensity to withdraw (MPW): The increase in leakages following an increase in income **MPW=MPS+MPT+MPM**

- The multiplier is dependent on MPC and so can change all the time. MPC depends on a range of factors; any factor that affects consumption (as a component of AD) will affect the MPC, for example a change in interest rates will affect the MPC.

- The higher the MPC, the bigger the multiplier as this means more money of income is spent so more money is transferred through the circular flow and less is withdrawn.

- The other marginal propensities show how much of a change is income is withdrawn from the economy i.e. how much is not spent. An increase in any of these will decrease the MPC. A change in tax will affect MPC (ceteris paribus) as it will increase the MPT. Any factor other than income that affects imports, for example the quality of imported goods, will affect MPM and therefore MPC.

Multiplier= $\frac{1}{(1\text{-MPC})} = \frac{1}{MPW}$

e.g. If MPC is 0.9 and the increase in government spending is £50,000, what will the increase in national income be?

Multiplier = $\frac{1}{1\text{-}0.9}$ =10

Increase in national income: 50,000 x 10=£500,000

Effects of a change in AD:

- The multiplier leads to an increase in AD higher than the original increase but for it to have the desired effect, there must be sufficient **spare capacity** in the economy (i.e. it cannot be at full output) for extra output to be produced.

- If the AS is perfectly inelastic, like on the classical LRAS curve, then the only impact of the multiplier will be to increase price; it will not affect output in the long run, although it will in the short run. The more **elastic** the curve, the smaller the effect on price but the bigger the effect on output.

- Therefore, as with any increase in AD, the effect of the multiplier depends on the shape of the AS curve and whether it is short run or long run. The size of the increase in AD will depend on both the size of the initial increase in AD and the size of the multiplier.

In general, the multiplier will have a big effect when there is plenty of spare capacity in the economy and the MPW is low/MPC is higher. It has little effect on output when there is little spare capacity in the economy so the rising demand only creates rising prices.