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Measuring Economic Growth

The total output of an economy is measured by Gross Domestic Product (GDP). Economic growth is measured by the annual % change in real GDP. As we know, this is the change in the country's output.

The circular flow of income shows that a country's output, income and expenditure are all equal. So, GPD can be calculated by adding up either output, income or expenditure. Economic growth can be calculated by changes in any of these.

Nominal GDP is the country's total output. **Real GDP** is the country's total output taking account of changing prices over time. This is more relevant.

Short-run (or actual) economic growth is when an economy increases its output. For the economy to continue to increase their output, its productive capacity needs to increase. If it does not, then the economy will hit a supply constraint and be unable to produce more with its given quantity and quality of factors of production. **Long-run (or potential) economic growth** takes place when the productive capacity of the economy increases, so the potential output has risen.

Short-run growth can also be shown as a movement from a point under the PPC to a point on the PPC. Long-run growth is caused by an outward shift of the PPC.

The government aspires to **steady and sustainable** economic growth. Steady economic growth avoids harmful fluctuations. Sustainable economic growth is growth that can continue over time and does not endanger future generations' ability to expand their productive capacity and grow.

Having sustainable growth means that:

- Increases in AS must match the increases in AD. Actual growth must match trend growth. Trend growth is the expected increase in potential output over time. It is a measure of how fast the economy can grow without causing inflation. Matching trend growth means that the economy should avoid the costs arising from a negative output gap (unemployment) and a positive output gap (inflation)

- The methods used to raise output must not endanger the ability of future generations to grow, for example should not cause pollution or use too many non-renewable resources

Calculating GDP

There are three ways to calculate GDP:

- The **income method**. This adds up the factor incomes to the factors of production
- The **expenditure method**. This adds up all the expenditure on finished goods and services. In other words, it is calculated as C+I+G+(X-M)
- The **output method**. This adds up the values of the sales of goods and services, and subtracts the purchases of intermediate goods like materials used in production.

The figure arrived at should be the same whichever method is used, as total income=total output=total expenditure.

You need to recognise that, when "national income", "national output" or "national expenditure" are referred to, this means GDP!

Remember that **real GDP** is GDP adjusted for inflation. **GDP per capita** is GDP divided by head of population. Economic growth is measured by a **change** in GDP.

What is a recession?

A recession is a fall in GDP over two consecutive quarters. **Income, output and expenditure have fallen. Note – if GDP "growth has slowed", this is NOT a recession, as GDP is STILL RISING!**

The consequences of this are:

- Output falls, meaning that unemployment becomes high
- Tax revenues received are lower, and the government must spend more, e.g. on unemployment benefits. This can lead to a budget deficit

- If the recession is long-lasting, businesses may fail, and hysteresis may occur if people are unemployed for a long time. This may make recovery even slower
- Business confidence and profits will be low, reducing investment
- Consumer confidence will be low, reducing consumption
- Therefore, the recession may last for a long time due to the fall in C and I
- Inflation will be low
- The government may use fiscal or monetary stimulus (e.g. cutting the interest rate) to try to raise AD and solve the problem

The Causes of Economic Growth

In the short run, an economy with spare capacity may experience economic growth as a result of an increase in AD. For example, a fall in the exchange rate may increase net exports and result in export-led growth. There may also be consumption led growth, which could be caused by factors like a cut in income tax or a rise in consumer confidence. Growth can also be caused by an increase in I or G, and this will shift AD to the right too.

However, a rise in I will also have the effect of increasing AS as well as AD. This allows long-run growth, as long-run growth can only occur when productive capacity increases, for example through an increase in the quantity or quality of resources. Long-run economic growth is shown by an increase in AS, and this can be shown below:

Long-run growth can also occur from things like increasing the size of the labour force e.g. encouraging women to return to work, or by investing in education and training to make the workforce more productive.

Evaluating economic growth

It is sometimes assumed that economic growth is always a good thing. While we aspire to steady economic growth, there can be problems if we enter into an uncontrolled boom.

Benefits of economic growth

- There is an increase in goods and services available, and this raises people's material living standards. This will reduce poverty. Of course, the effectiveness of this depends on whether the economic growth is spread equally among different groups. For example, sometimes certain regions can benefit more than others, or the rich can benefit more than the poor. This may make inequalities wider.
- Economic growth means that it is easier to help the poor. If economic growth occurs, then some of the extra tax revenue can be given to the poor, enabling them to enjoy more goods and services. This will help to increase LRAS if the poor are then healthier, better nourished and better educated. The effectiveness of this depends on whether the governments choose to redistribute wealth in this way
- When output increases, unemployment usually falls. You can expand on this point using your sheets from the unemployment section!
- A stable level of growth means that firms and consumers' confidence will be high. This makes planning easier and encourages investment. Encouraging investment (e.g. in new factories) means that output can rise, and economic growth can rise even further, bringing even more employment.

Costs of economic growth

- Economic growth may cause demand-pull inflation if it is too high (if AD rises without AS also rising). Use the information on your inflation sheet to discuss this

point. It is possible for economic growth to occur without causing inflation if the government uses supply side policies to increase supply as well as increasing demand.

- Economic growth may also cause the depletion of resources and damage to the environment. However, it is possible to increase output in a way that doesn't damage the environment, as long as the growth occurs in a sustainable way, for example by investing in technology which means that growth can occur with pollution being reduced at the same time. **Sustainable economic growth** is a very important government objective. This means that growth occurs in a way which doesn't prevent further growth from occurring in the future.

Difficulties in Measuring Real GDP

The output, expenditure and income methods are all used to accurately measure national output and how it changes. However, it is hard to achieve an accurate figure because of the following reasons:

- **There is a black ("informal") economy**. This means that the output of some goods are deliberately not declared, and the economic activity is not recorded. This may be because the worker wants to avoid paying extra tax, or it may be because the activities themselves are illegal, for example drug trading. This problem means that GDP figures will understate the amount of goods produced, but if the size remains constant then economic growth can still be measured. Employment will also be understated.

  We can try to measure the extent of the informal economy by measuring the gap between the expenditure and income method, because people will be spending income that they haven't declared. A recent estimate says that the informal economy in the UK could equal 15-20% of GDP. The size of a country's informal economy will be influenced by factors such as the level of taxation, the risk of being caught and social attitudes. An informal economy is a problem because fewer tax revenues will be received, which means that governments can't spend as much as they need to. There may also be lower productivity, as businesses may avoid growing and having economies of scale because they don't want to be found out.

- **Non-marketed goods and services**. Some foods are produced and are either not traded, or are exchanged without money changing hands, for example DIY activities and voluntary work.
- **Government spending**. In the expenditure method, government spending on goods and services is included. However, some government spending goes on producing public goods like defence, which are not sold. In order to measure these types of goods, key performance indicators are used (e.g. student numbers for education) because these goods are not sold.

- Care must be taken when measuring. For example, if using the output method, it is important to avoid **double counting**. This is when the same output is counted twice, for example counting the raw material production and then including it in the final product value too. If using the income measure, only incomes which have been earned in return for providing goods and services should be included, not, for example, unemployment benefits. If benefits were counted or double counting occurred, GDP would be over-stated. With the expenditure method, it is important to include exports as these are made in the UK and to exclude imports as these are made by other countries.

It can also be incorrect to assume that a rise in real GDP always leads to a rise in living standards. This is because:

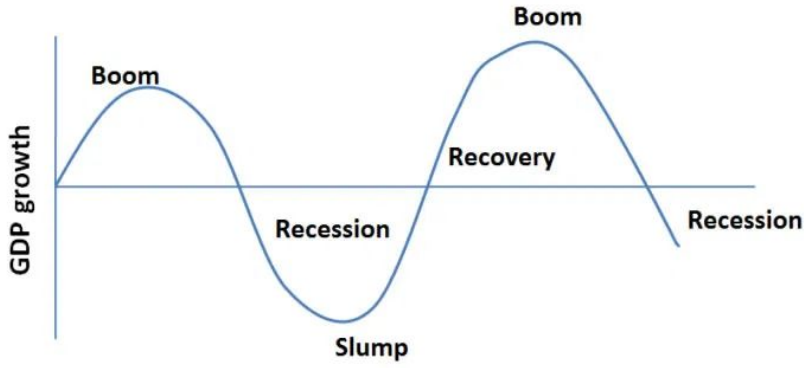
- A rise in output may be exceeded by a rise in population. Often, real GDP per head ("per capita") can be calculated to give a more meaningful result. This involves dividing real GDP by the size of the population

- Output may have risen because of an increase in **regrettables**. For example, the police force may have been increased to deal with a rise in crime, so people actually feel worse off. Also, a rise in GDP may not lead to a rise in living standards because the rise could be in capital goods like machinery, so in the short-run people may not feel better off (although they will in the long run)

- A rise in real GDP may not benefit many of the population if it is unevenly distributed. Also, a rise in output may mean that people have to work longer hours, or that negative externalities like pollution rise. This means that people experience a lower quality of life even though GDP has risen. Studies have shown that the rich are generally happier than the poor, but rich countries do not seem to get happier as they get richer, as people tend to measure their income against that of others rather than in absolute terms.

The economic (business) cycle

Real GDP can rise or fall due to changes in AD and SRAS. The rises and falls of real GDP tend to follow a regular pattern or cycle, and this is known as the **economic cycle**. This can be shown below:



- The recovery – when economic growth becomes positive after a recession
- The boom – where the rate of economic growth exceeds the rate of growth of potential GDP so that the output gap is narrowed. Consumption and investment will be high due to high consumer and business confidence. Tax revenues received will also be high and there may be a budget surplus. However, levels of imports may also be high, so there could be a trade deficit.
- The slowdown – when the rate of economic growth begins to fall and approach zero

- The recession – when the rate of economic growth becomes negative and GDP actually falls, in two consecutive quarters
- Slump - a slump or a depression is a prolonged and deep recession leading to a significant fall in output and average living standards. A depression is where real GDP falls by more than 10% from the peak of the cycle to the trough

The process highlights the distinction between long run and short run growth. Long-run economic growth is when there is an increase in the trend, or potential, rate of growth of GDP. It occurs when there is an increase in LRAS – our productive potential. The PPC will shift outwards.

Each of the stages can vary in length and severity. The existence of these common patterns implies that domestic economic policy may not be the only influence on an economy's performance.

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