AS MACROECONOMICS

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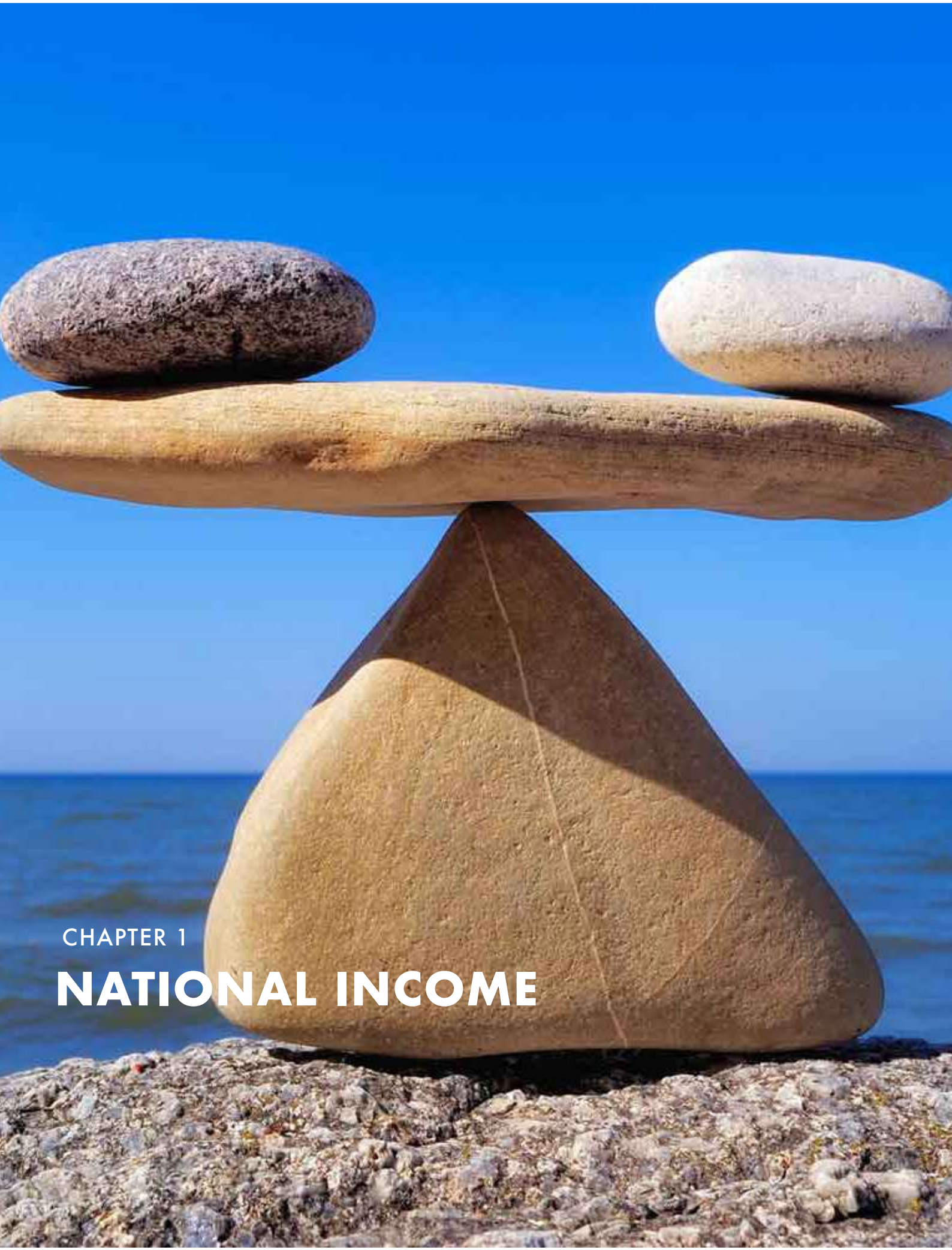


CHAPTER 1

NATIONAL INCOME

Macroeconomics deals with relationships between economic variables at the aggregate level – that is, in the economy viewed as a whole. In building a theory to explain those relationships, the starting point is to consider aggregate demand and aggregate supply.

AGGREGATE DEMAND

Aggregate demand represents the effective demand in the economy as a whole.

AD = C + I + G + X - M

This represents the total amount of effective demand in the economy as a whole. Aggregate demand comes from various sources. First, it includes the combined spending of households (on consumer goods) and firms (on investment goods). In addition, it is necessary to include international trade (exports and imports) and spending by government, in this measure.

AD = C + I + G + X - M

Consumption (C)

Consumption is influenced by the level of real income that households have given that households spend more when their real income is high.

The largest component of aggregate demand is household spending on goods and services produced in the domestic economy, often known as consumption (C). The main factor that will influence the size of consumption expenditure is likely to be the level of real income that households have at their disposal. When real incomes are relatively high, households will tend to spend more than when real incomes are low.

Investment (I)

Investment in the current period leads to a higher level of production in the future.

A second key part of aggregate demand is spending by firms – in particular, spending on investment goods (I). For example, firms may choose to invest in new machinery or transport equipment. This is important not only because it contributes to aggregate demand in the current period, but because investment in new machinery enables higher production of goods in the future.

Government Expenditure (G)

The government spends to ensure the provision of facilities to develop the economy in the future and to protect vulnerable society members.

The government plays an important role in the macroeconomy. It spends on goods and services, both to allow it to carry on its normal operations and to provide improved facilities that will allow the economy to develop in the future or to protect vulnerable members of society.

Net Exports (X-M)

The trade balance is the difference between the value of exports (X) and the value of imports (M).

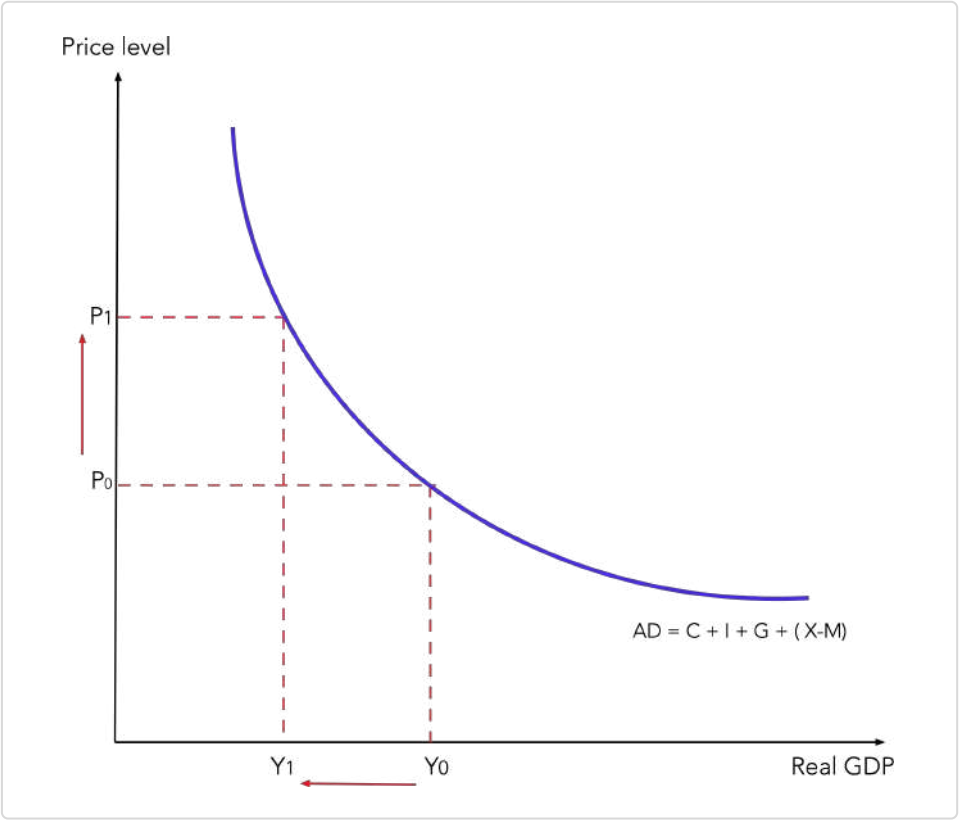
Domestic residents and firms may spend on imports (M), bringing in goods and services that are produced elsewhere in the world. At the same time, foreign consumers and firms may purchase goods and services in the domestic economy in the form of exports (X). The contribution of these transactions to domestic aggregate demand will depend on the balance between exports and imports, known as the trade balance.

The aggregate demand curve is downward sloping. In other words, when the overall price level is relatively low, aggregate demand will be relatively high, and when prices are relatively high, aggregate demand will be relatively low. This is due to the income effect and the substitution effect.

The aggregate demand curve shows the relationship between aggregate demand and the overall price level. Formally, this curve shows the total amount of goods and services demanded in an economy at any given overall level of prices.

The AD curve shows the relationship between aggregate demand and the overall price level.

Figure 1.1 Aggregate Demand



Income Effect

When the overall level of prices is relatively low, the purchasing power of income is relatively high. In other words, low overall prices can be thought of as indicating relatively high real income. The increase in real income results in consumption to rise and therefore real GDP to rise.

Substitution Effect

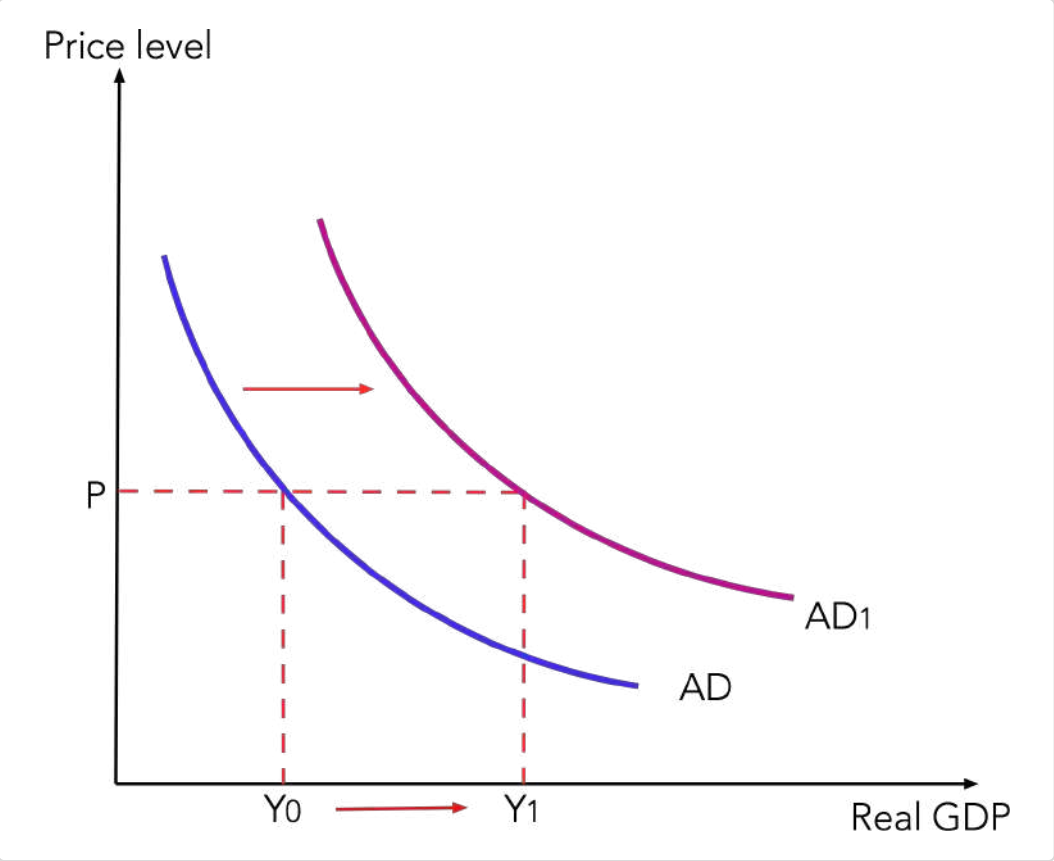
It can be argued that, ceteris paribus, when prices at home are relatively low compared with the rest of the world, this will increase the competitiveness of domestically produced goods, leading to an increase in foreign demand for exports, and a fall in the demand for imports into the economy as people switch to buying home goods and services. This rise in X-M causes real GDP to rise.

Interest Rate Effect

When prices are relatively low, interest rates also tend to be relatively low, which would encourage both investment and consumption expenditure, as interest rates can be seen as representing the cost of borrowing to households and firms.

A change in the price level causes a movement along the AD curve. If, however, any of the components of AD change for reasons other than a change in the price level, the AD curve will shift. Shift of the AD curve is called a **demand shock**. Figure below illustrates an increase in aggregate demand. This could occur because of, for example, a rise in expectations about the future economic prospects, a cut in direct tax, a fall in interest rates, a fall in the exchange rate and a rise in the quality of domestically produced products.

Figure 1.2 Shift of the AD curve



AGGREGATE SUPPLY

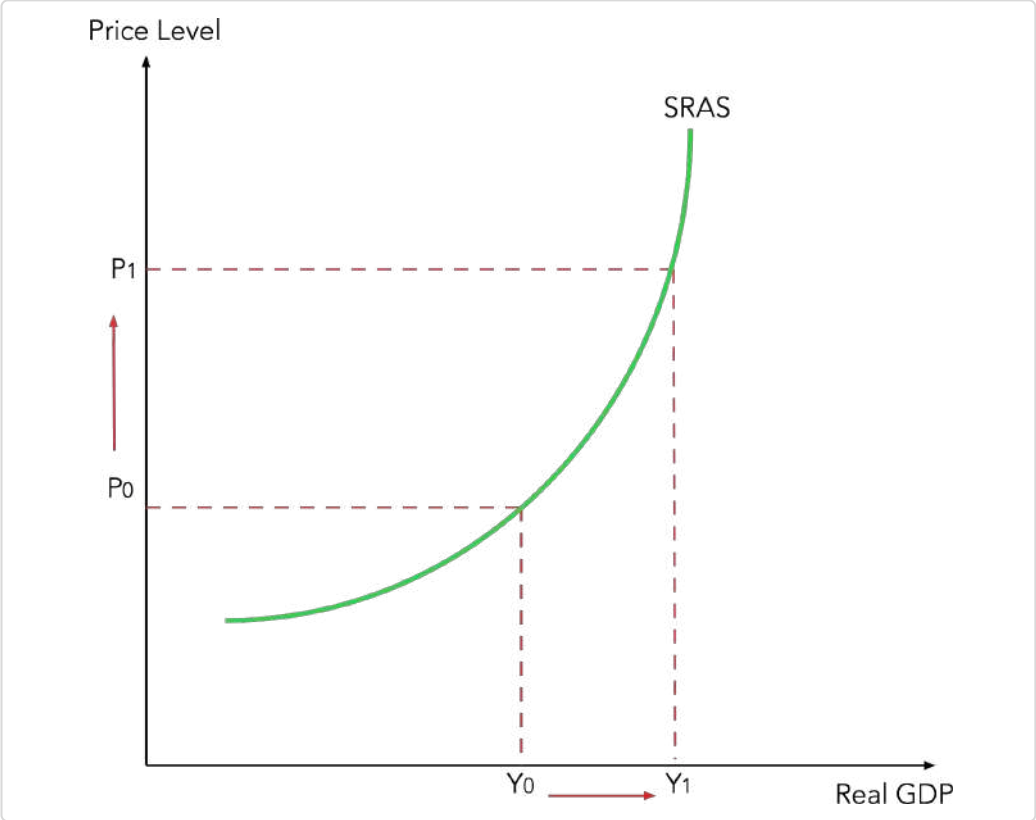
Aggregate supply is the total amount of goods and services that are produced in an economy over a period of time.

The level of aggregate supply is the total amount of goods and services that are produced within an economy during a period of time. The total quantity of output supplied in an economy over a period of time depends upon the quantities of factors of production employed. The ability of firms to vary output in the short run will be influenced by the degree of flexibility that the firms have in varying inputs. This suggests that it is necessary to distinguish between short-run and long-run aggregate supply.

Short-run Aggregate Supply

In the short run, firms may have relatively little flexibility to vary their inputs. Money wages are likely to be fixed, and if firms wish to vary output, they may need to do so by varying the intensity of utilization of existing inputs. For example, if a firm wishes to expand output, one way of doing so in the short run may be by paying its existing workers overtime, and it will be prepared to do this only in response to higher prices. This suggests that in the short run, aggregate supply may be upward sloping, as shown in Figure 1.3, where SRAS represents short-run aggregate supply.

Figure 1.3 Aggregate Supply



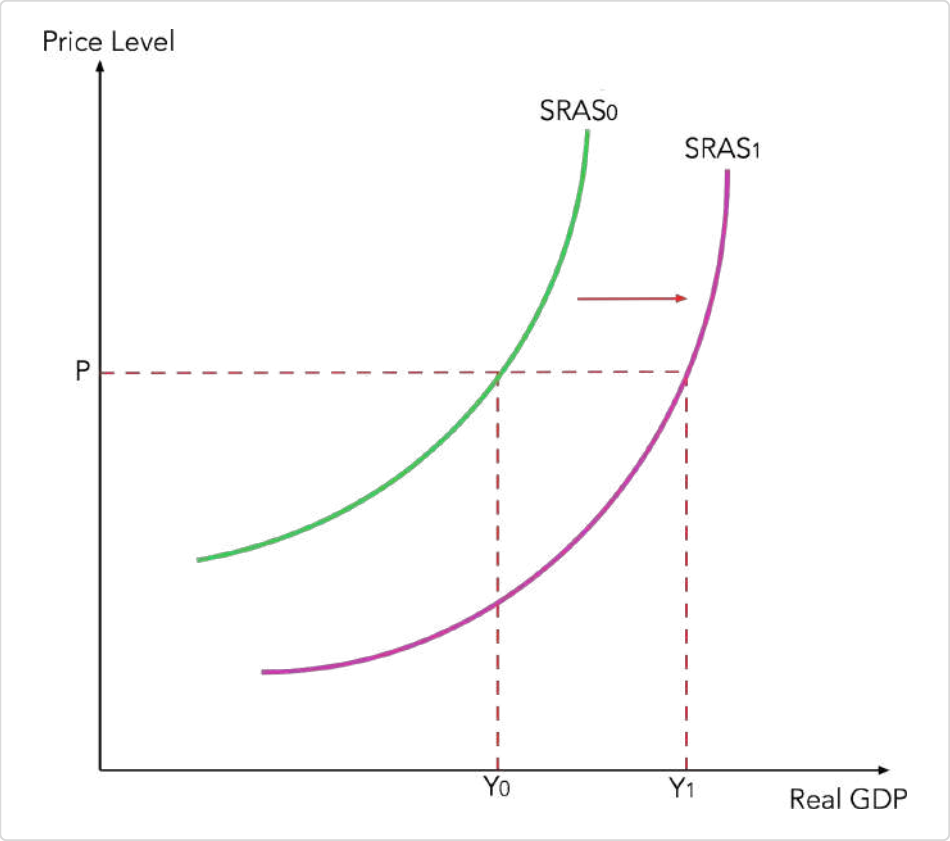
What factors influence the position of aggregate supply? Given that aggregate supply arises from the use of inputs of factors of production, one important influence is the availability and effectiveness of factor inputs. A shift of the SRAS curve is called a **supply shock**.

As far as labour is concerned, an increase in the size of the workforce will affect the position of aggregate supply. In practice, the size of the labour force tends to change relatively slowly unless substantial international migration is taking place. However, another important factor is the level of skills in the workforce. An increase in the skills that workers have will increase the amount of aggregate output

that can be produced and lead to a shift in the aggregate supply curve.

For example, in the figure 1.4, aggregate supply was originally at $SRAS_0$. An increase in the skills of the workforce means that firms are prepared to supply more output at any given overall price level, so the aggregate supply curve moves to $SRAS_1$.

Figure 1.4 Shift of the SRAS



An increase in the efficiency of capital, perhaps arising from improvements in technology, would have a similar effect, enabling greater aggregate supply at any given overall

price level, and raising the productive capacity of the economy.

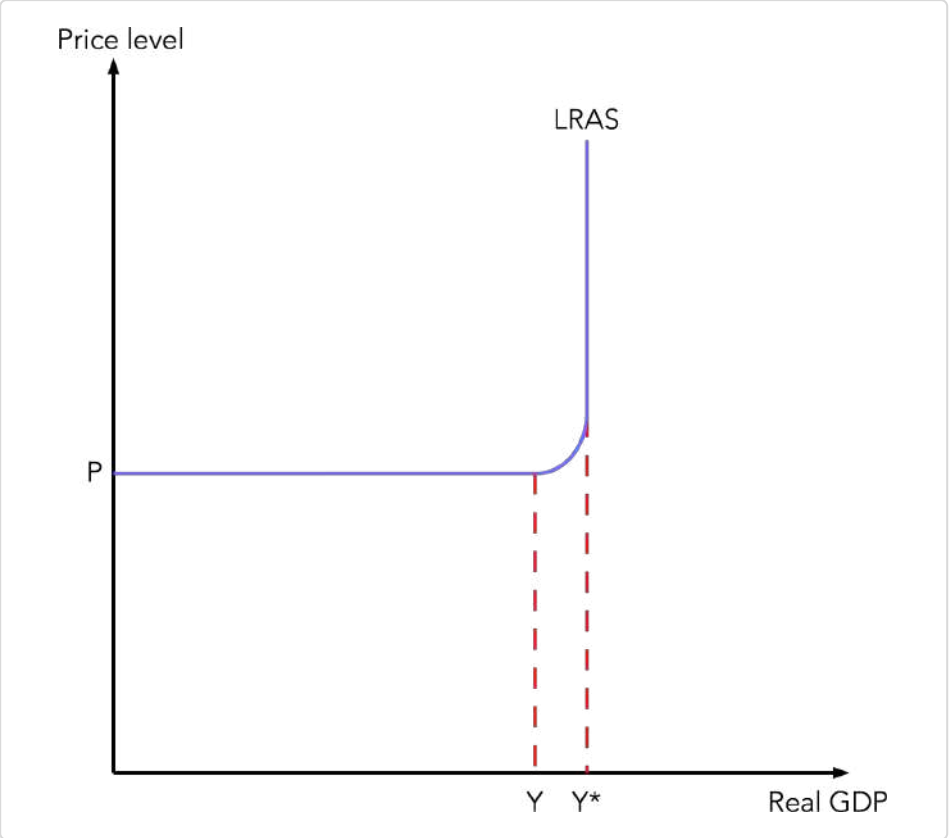
An increase in the quantity of capital will also have this effect, by increasing the capacity of the economy to produce. However, such an increase requires firms to have undertaken investment activity. In other words, the balance of spending between consumption and investment may affect the position of the aggregate supply curve in future periods.

Shape of the LRAS curve

Indeed, it might be argued that the aggregate supply curve becomes vertical at some point, as there is a maximum level of output that can be produced given the factors of production available.

Such a curve is shown in Figure 1.5 below, where Y* represents the full-employment level of real output. In this case, the economy has settled into an equilibrium that is below potential capacity output. We may regard this as a longer-run aggregate supply curve (AS), since the only way that real output can be beyond Y* is through the temporary use of overtime, which could not be sustained in the long run.

Figure 1.5 LRAS



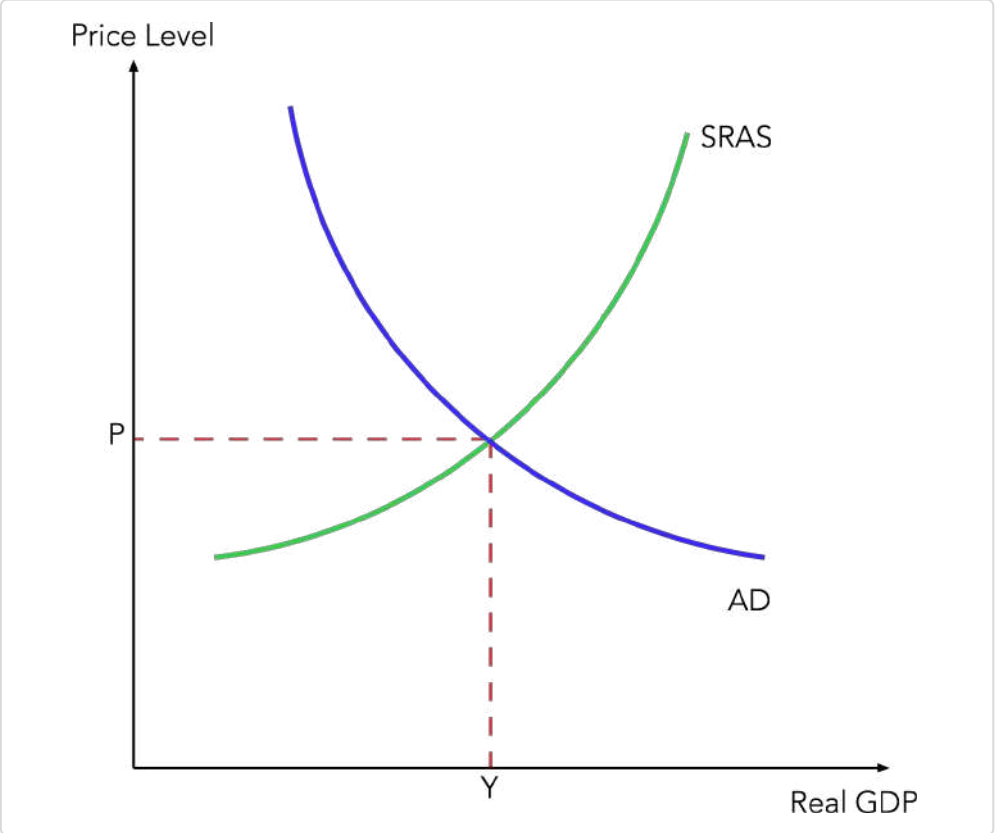
MACROECONOMIC EQUILIBRIUM

The intersection of the aggregate demand and aggregate supply curves determines the equilibrium price, P and the real output level, Y.

Bringing aggregate demand and aggregate supply together, the overall equilibrium position for the macroeconomy can be identified. In Figure 1.6, with aggregate supply given by SRAS and aggregate demand by AD, equilibrium is reached at the real output level Y, with the price level at P.

This is an equilibrium, in the sense that if nothing changes then firms and households will have no reason to alter their behavior in the next period. At the price P, aggregate supply is matched by aggregate demand.

Figure 1.6 Macroeconomic Equilibrium

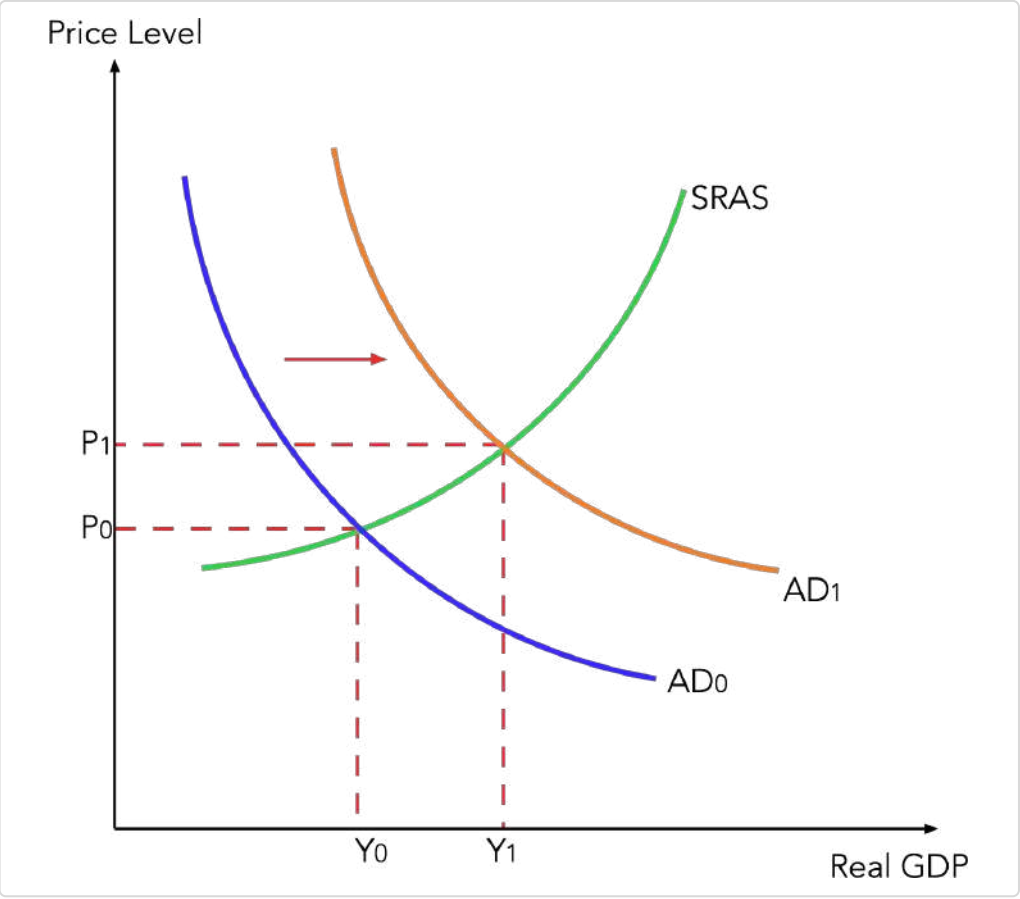


An increase in Aggregate Demand

Suppose that the economy begins in equilibrium with aggregate demand at AD_0. The equilibrium output level is Y_0, and the price level is P_0. An increase in government expenditure will affect the position of the aggregate demand curve, shifting it to AD_1. The economy will move to a new equilibrium position, with a higher output level Y_1 and a higher price level P_1.

The effect on equilibrium output and the price level of a rise in AD will depend upon how close the economy is to the full-employment level. As can be seen from figure 1.7, the SRAS becomes steeper as output and price level rises. Hence, the closer the economy is to the full-employment level, the smaller is the elasticity of supply, so an increase in aggregate demand close to full employment will have more of an effect on the price level (and hence potentially on inflation) than on the level of real output.

Figure 1.7 Demand Shock



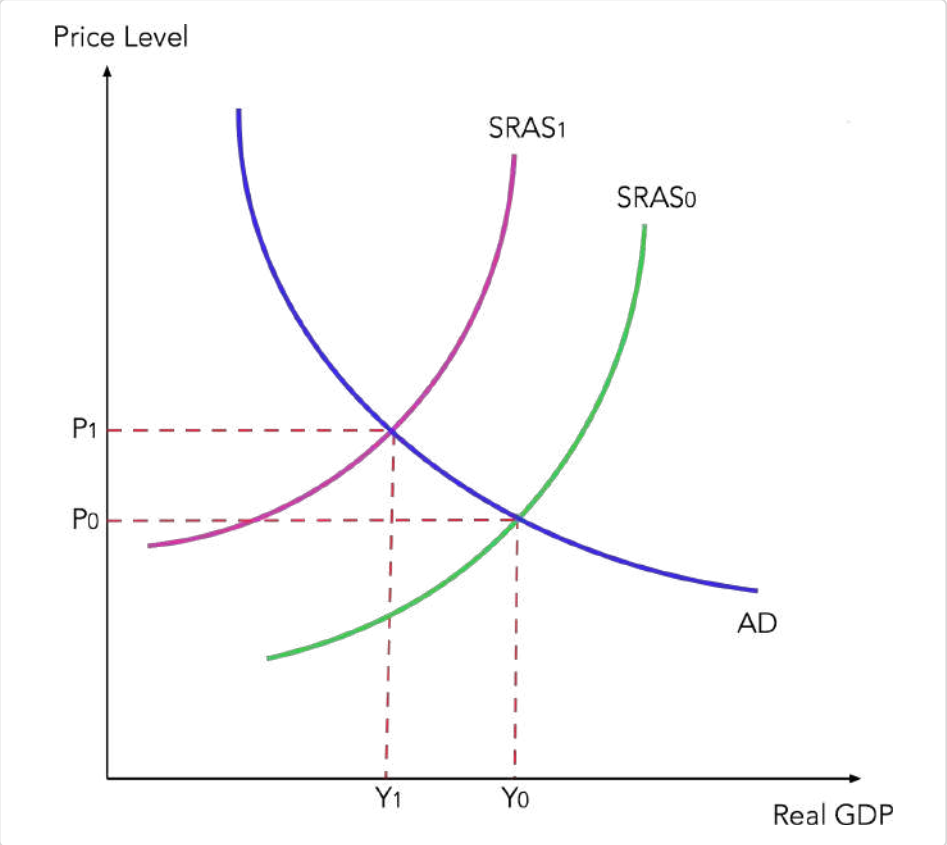
The SRAS curve shifts inwards given an increase in oil prices which leads to a fall in the overall output level and an increase in the price level.

The effect of a supply shock

The AD/AS model can also be used to analyze the effects of an external shock that affects aggregate supply. For example, suppose there is an increase in oil prices arising from a disruption in supplies in the Middle East. This raises firms' costs, and leads to a reduction in aggregate supply.

Figure 1.8 analyses the situation. The economy begins in equilibrium with output at Y_0 and the overall level of prices at P_0. The increase in oil prices causes a movement of the aggregate supply curve from $SRAS_0$ to $SRAS_1$, with aggregate demand unchanged at AD. After the economy returns to equilibrium, the new output level has fallen to Y_1 and the overall price level has increased to P_1.

Figure 1.8 Supply Shock



Gross Domestic Product (GDP) - Gross means total, domestic refers to the home economy and product means output

GROSS DOMESTIC PRODUCT

One of the key measures of national economic performance is the rate of change of output. This is known as economic growth. The most widely used measure of national income is Gross Domestic Product (GDP). Gross means total, domestic refers to the home economy and product means output. So, for example, Pakistan's GDP is a measure of the total output by the factors of production based in Pakistan.

From GDP, a number of other measures can be found.

Gross National Product (GNP)

GNP = GDP + Net property income from abroad

Net property income from abroad is the income which the country's residents earn on their physical assets owned abroad and foreign financial assets (such as shares and bank loans) minus the return on assets held in the country but owned by foreigners. So, GNP gives a measure of the income of the country's residents.

Net National Product (NNP)

NNP = GNP – Capital consumption

Capital consumption can also be called as depreciation or replacement investment as it covers investment undertaken to replace worn out and out of date capital.

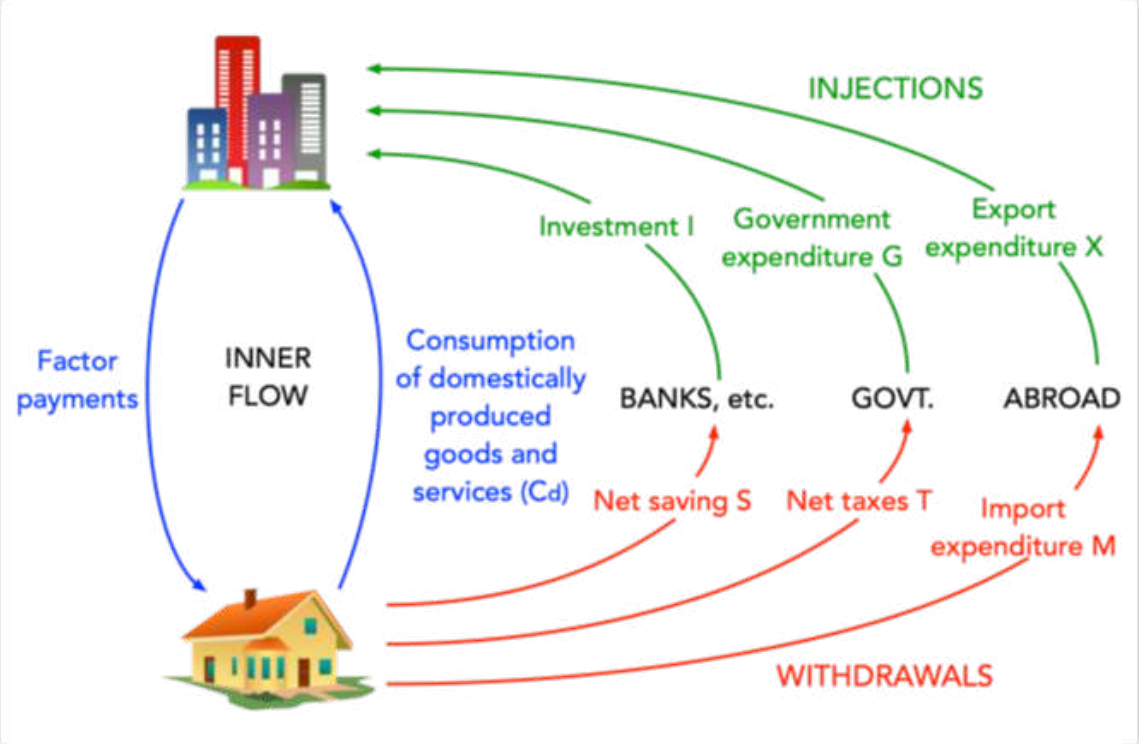
GDP – Capital Consumption = NDP

The circular flow model is a simplified representation of how the basic decision-making units of an economy (households, firms, the government and in an 'open' economy the foreign sector) interact

So gross measures include all investments whilst net measures only include investment which adds to capital stock.

CIRCULAR FLOW OF INCOME

The circular flow model is a simplified representation of how the basic decision-making units of an economy (households, firms, the government and in an 'open' economy the foreign sector) interact. It describes the flows between these units. These flows can be real (flows of factors of production, flows of goods and services) or monetary (flows of expenditures on goods and services, flows of incomes generated in the production process).



In equilibrium, injections are equal to withdrawals

Leakage or Withdrawal refer to those parts of national income that are not used for consumption. A withdrawal from the circular flow is therefore spending which does not flow back from household to firms. Injections are supplementary expenditure not originating from the domestic households.

$$W = S + T + M$$

$$J = I + G + X$$

There are indirect links between saving and investment, taxation and government expenditure, and imports and exports, via financial institutions, the government (central and local) and foreign countries respectively. If more money is saved, there will be more available for banks and other financial institutions to lend out. If tax receipts are higher, the government may be keener to increase its expenditure. Finally, if imports increase, incomes of people abroad will increase, which will enable them to purchase more of our exports.

Equilibrium in the circular flow: In equilibrium, injections are equal to withdrawals. If for example, injections exceed withdrawals, this will lead to a rise in national income. But as national income rises, so households will not only spend more on domestic goods (Cd), but also save more (S), pay more taxes (T) and buy more imports (M). In other words, withdrawals will rise. This will continue until they have risen to equal injections. At that point, national income will stop

GDP can be calculated in three different ways, which should all result in the same figure. These are the output, income and expenditure approaches.

rising, and so will withdrawals. Equilibrium has been reached.

Ways of calculating GDP

GDP can be calculated in three different ways, which should all result in the same figure. These are the output, income and expenditure approaches.

The output method measures the value of output produced by industries. In using this measure it is important to avoid counting the same output twice. For example, if the value of cars sold by car manufacturer is added to the value of output of tire firms, double counting will occur. Instead we just count the final value or the value added at each stage by the firm.

For example, if a manufacturer sells a television to a retailer for $200 and the retailer sells it to the consumer for $300, the television has not added $500 to the GDP. In fact, the final value is $300 and the value added at each stage is

$200 by the manufacturer + $100 by the retailers which also comes to $300.

The income method focuses on income paid to factors of production. These incomes include wages, rent, interests and profits. In using this measure it is important to include only those payments that are received in return for providing a good or service. So Transfer Payments, which are transfer of payments against which no output is

GDP at factor cost= GDP at market prices – Indirect taxes + Subsidies

Where GDP at market prices= C + I + G + (X-M)

produced, are not included e.g. unemployment benefits, pensions, student grants etc.

The expenditure method adds up the total expenditure in the economy made on final output. The various expenditures in an economy are consumer expenditure, government expenditure on goods and services, investment expenditure by firms as well as expenditure on net exports.

Net Exports= Exports (X) – Imports (M)

Exports represent the country's output and create income in the country, while expenditure on imports is spending on goods and services made in foreign countries and create income for people in those countries.

It is also necessary to deduct indirect taxes and add subsidies in order to get a value that corresponds to the value generated by output and income measures. Hence,

GDP at factor cost= GDP at market prices – Indirect taxes + Subsidies

Where GDP at market prices= C + I + G + (X-M)

CHAPTER 2

ECONOMIC GROWTH

Economic growth is an increase in the real output of an economy

MEANING OF ECONOMIC GROWTH

Economic growth is an increase in the real output of an economy. For real growth to occur it needs to be greater than the increase in inflation. Economic growth can be measured either in terms of GDP or GNP, but is usually referred to as a change in real GDP.

MEASUREMENT OF ECONOMIC GROWTH

The most widely used measurement of economic growth is GDP, although GNP is also used. It is measured as the percentage rate of increase in real GDP, allowing, therefore, for the effects of inflation. To allow comparison of economic growth either over time or between countries, it is often measured in terms of GDP per capita thus allowing for differing sizes of population.

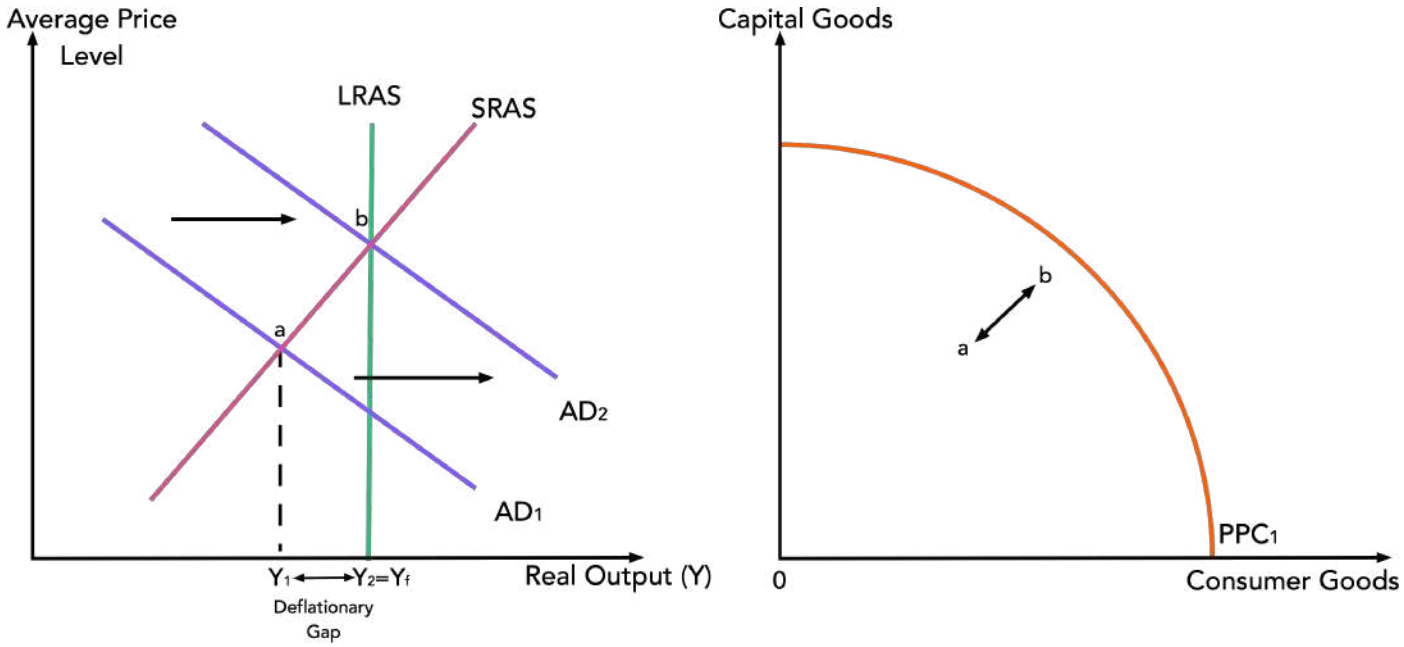
NOMINAL VS. REAL GDP

Nominal GDP is the value of goods and services using current prices. Real GDP is nominal GDP adjusted for changes in inflation. It is sometimes referred to as GDP at constant prices. If inflation is positive, real GDP will be lower than nominal. If inflation is negative – deflation – then real GDP will be higher than nominal. To move from nominal to real GDP we use the GDP deflator which measures price changes from a base year.

ACTUAL VS POTENTIAL GROWTH

Potential GDP is the level of real GDP that the economy would produce if it were at full employment. When real GDP falls short of potential GDP, the economy is not at full employment. When the economy is at full employment real GDP equals potential GDP. Real GDP can exceed potential GDP only temporarily as it approaches and then recedes from a business cycle peak.

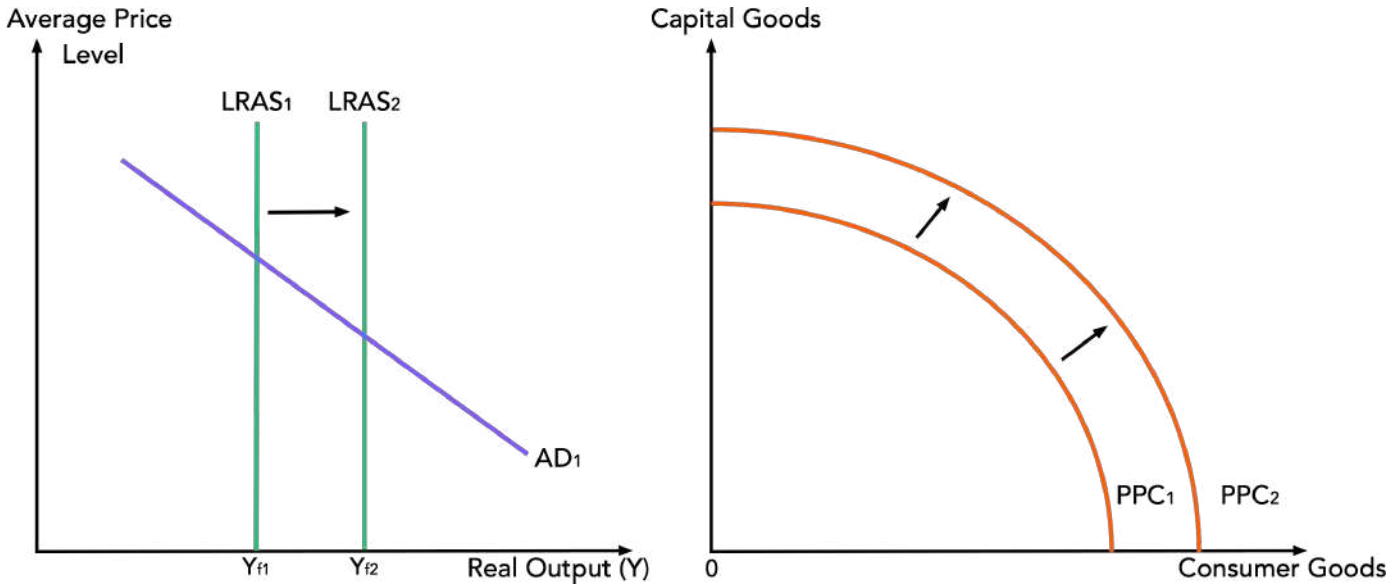
Figure 2.1 Actual Growth



An increase in the annual percentage increase in real GDP is called actual growth. This would result in the economy to reach towards its full employment level or potential output. Any shift of the AD curve to the right towards the full

employment level results in an economy to achieve actual growth as the economy would be utilizing its resources fully and efficiently.

Figure 2.2 Potential Growth



Potential growth is the growth in the productive potential of the country. It is associated with the shift of the LRAS to the right or the PPC curve to the right. An improvement in the quantity and quality of factors of production is potential growth of the economy.

Economic growth can be caused by either shifting the AD or AS curves outwards.

CAUSES OF ECONOMIC GROWTH

Economic growth can be caused by either shifting the AD or AS curves outwards.

Demand side	Supply side
Government expenditure – leading to higher G	Increased investment
Tax cuts – leading to higher C and I	Improved technology
Depreciation of the currency – leading to more X and less M	Higher labour productivity, including education and training
Lower interest rates - leading to higher C and I	Larger workforce
Higher real wages – leading to more C	Discovery or development of natural resources

Many of the causes mentioned in Table above are closely related. Some of them are developed below, while others, such as depreciation, are explained elsewhere.

1. Government expenditure is mainly in the form of investment in new or improved infrastructure such as roads and rail and power supplies. Improved transport

allows goods and people to flow more freely and thus facilitates production.

2. Lower tax rates allow individuals to spend more and firms to invest more, while lower interest rates have a similar effect.

3. Higher real wages mean that individuals are better off and feel able to spend more on goods and services.

4. Increased investment is the spending on capital goods including equipment and machinery. This is likely to increase output and also improve the quality thus leading to greater sales. It will also lead to greater labour productivity.

5. Improved technology means that more can be produced with the same quantity of capital. This is likely to lead to greater labour productivity.

6. Improved education and training affects both the quality and quantity of goods and services. Increasing education and training leads to a more literate and skilled workforce and thus greater labour productivity.

7. Discovery/development of natural resources has stimulated growth in many countries e.g. oil for Saudi Arabia and Norway or copper in Zambia.

CONSEQUENCES OF ECONOMIC GROWTH

Traditionally economic growth has been looked on as an "economic good", but it is clear that this overlooks the considerable costs involved both in terms of human lives, culture and the environment. Below are some of the main consequences in terms of benefits and costs.

Benefits

1. Rise in the standard of living – leading to reduction of absolute poverty. In addition, there should be more consumer goods.

2. Improved education and health – literacy rates should rise while infant mortality and death rates should fall together with the number of people dying from disease.

3. Increased tax revenue – to fund better infrastructure, schools, hospitals and to provide benefits for the poor etc. This increase in revenue will come from more output/higher incomes and profits rather than from higher taxes.

4. Increase in business and consumer confidence – growth should encourage business to take a positive view of the economy and to want to invest, innovate and use new technology. Consumers will be more willing to spend and thus increase aggregate demand if they feel that the economy is doing well.

Costs

1. Environmental damage – resulting from more pollution from factories, cars etc. Damage to the landscape by extracting mineral resources and in terms of the depletion of non-renewable resources. Global warming is another factor here.

2. Opportunity cost – if a country is on its production possibility frontier then more investment in capital goods can only happen if there are less consumer goods, i.e. current consumption will fall.

3. Unequal benefits – growth is likely to mean changes in economic structure and ways of production, leading to some people becoming unemployed while others gain from more work opportunities. Equally, growth may mean some workers suffer more stress in terms of both having to learn new skills, but also having to work longer hours etc.

4. Lower quality of life – due to rapid urbanization leading to poor housing and overcrowding together with greater stress, breakdown of family networks and inferior air quality. This may also involve an opportunity cost, e.g. more income, but a poorer quality of life.

CHAPTER 3

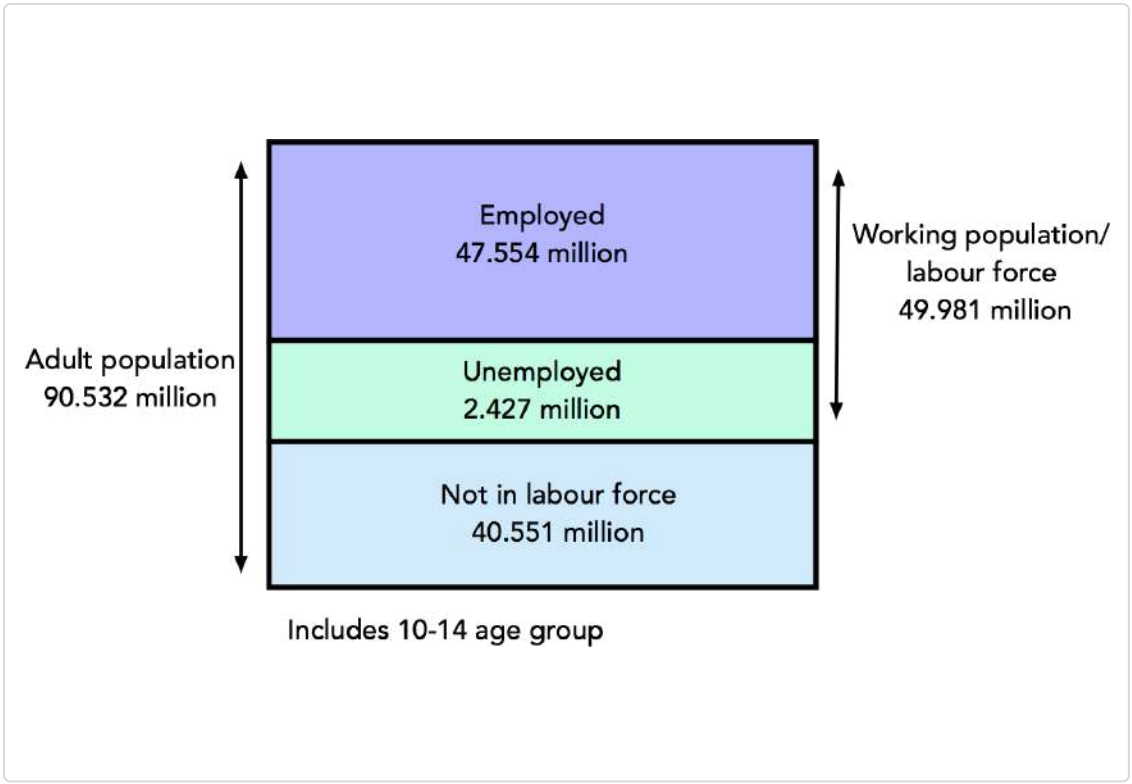
UNEMPLOYMENT

Economic growth is an increase in the real output of an economy

MEANING OF UNEMPLOYMENT

The most usual definition that economists use for the number unemployed is: those of working age who are without work, but who are available for work at current wage rates. If the figure is to be expressed as a percentage, then it is a percentage of the total labour force. The labour force are those in employment plus those unemployed.

Figure 3.1 Labour Force of Pakistan 2010



Unemployment Rate = (Unemployed/ Total Labour Force) x100= 2.42/49.98 x100 = 4.84%

Participation Rate = Total Labour Force/Total Adult Population x100 = 49.98/90.53 x100 = 55.2%

Unemployment can be measured through Claimant Count or ILO Measure

Dependency Ratio = Dependent Population/ Adult Population x100 = 70/90 = 0.78: 1 where dependent population is 0 -15 yrs & 64 above.

MEASUREMENT OF UNEMPLOYMENT

1. **Claimant Count:** Claimant count is simply a measurement of all those who receive unemployment benefits. Claimant statistics have the advantage of being very easy to collect. However, they exclude all those of working age who are available for work at current wage rates, but who are not eligible for benefits. If the government changes the eligibility conditions so that fewer people are now eligible, it will reduce the number of claimants and hence the official number unemployed, even if there has been no change in the numbers with or without work. The claimant statistics therefore understate the true level of unemployment.

2. **ILO measure/ Labor force survey**: According to this measure, the unemployment is defined as those who are available for and seeking work while currently without work. This is a consistent ILO definition. The ILO measure undertakes an extensive and standardized labor force survey to find unemployment statistics. It is used extensively for international comparisons, as it may include some of the groups missed by the claimant count method. However it is more expensive if done properly,

and may be subject to sampling and other statistical errors.

In addition to the possibility of different measures, there are a number of other problems:

1. Inactive workers. Although some of these are genuinely not interested in work, e.g. those who have retired early, many would work if either their situation changed, e.g. mothers or fathers with young children, or if the wage rate was more attractive.

2. Discouraged workers are those who are willing and able to work, but because they have had no success finding a job have given up actively seeking employment.

3. Part-time workers. Many of these may be working part time because they wish to, e.g. mothers or fathers with children at school may want hours which fit with the school day. Others, however, may want to work full time. These are counted as employed, but could be seen as semi-unemployed.

4. Unreported legal employment. Some workers may register as unemployed to collect state benefits, but in fact work, thus defrauding the state.

5. Unreported illegal employment. The so-called "underground economy" consists of illegal activities, such as gambling, the sale of drugs and prostitution. People

engaged in these illegal activities, however, are in employment but are registered as unemployed.

CAUSES OF UNEMPLOYMENT

The causes of unemployment are something that different schools of economists have differing views about. Causes are not the same as types, see below, although they clearly overlap.

There are two main causes of unemployment - **equilibrium** and **disequilibrium unemployment**.

Disequilibrium Unemployment

1. **Classical or Real wage Unemployment**

Classical economists maintain that external interference in the labour market causes supply to not equal demand. They would argue that factors such as minimum wage laws, restrictive union practices, taxes on companies, unemployment and other benefits, and regulations and red tape which detract from production and employment all prevent the market from clearing. Occupational or geographical immobility will have the same effect.

2. **Demand deficient or cyclical unemployment:**

Keynesians believe that unemployment was not a result of the labor market disequilibrium. Labor is derived demand, derived from the demand for the good that is produced. If there is a big fall in the demand for products in the goods market then the demand for labor will fall causing

unemployment. Keynesians argue that in times of recession, the aggregate demand curve for the economy as a whole will shift to the left. This will cause the demand for labor to shift to the left as well. However, the wages may not fall as they are sticky downwards. This causes a disequilibrium in the labour market.The downward stickiness in real wage may be the result of unions seeking to protect the living standards of their members or of firms worried about the demotivating effects of cutting the real wages of their workers.

Equilibrium Unemployment

1. Frictional Unemployment: Frictional unemployment is a voluntary form of unemployment for workers who are looking for better jobs. Many qualified workers seeking work are not able to find new jobs right away, usually because of a lack of complete information about new job openings. While it is likely that qualified workers will soon be matched with new jobs, these workers are considered frictionally unemployed during the time that they spend searching for their new jobs. The bigger the imperfections in the labor market, the longer will be this period of 'unemployment' for each worker and the higher will be the search costs for individuals.

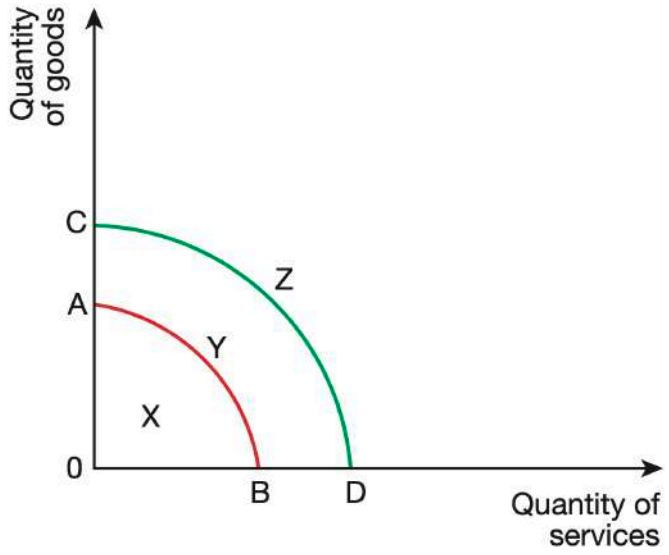
2. **Structural Unemployment**: It is caused by changes in the structure of the economy. A huge shift away from

manufacturing to service sector in the recent times is one reason of structural unemployment. Another example is when demand switches away from domestic industries to more competitive foreign industries. Structurally unemployed workers are not qualified for the new job openings that are available, mainly because they lack the education or training needed for the new jobs. Consequently, the structurally unemployed tend to be out of work for long periods of time, usually until they learn the skills needed for the new jobs or until they decide to relocate.

3. **Seasonal Unemployment**: In some industries the demand for workers depends on the time of the year. This is especially the case in industries such as agriculture, building and tourism.

Consequences of unemployment

Unemployment leads both to a wastage of resources and to the opportunity cost of lost potential output. This can be seen in the figure below where the economy is operating at point X. It has both economic consequences for the economy and the individual as well as social consequences.



Economic consequences include the following:

1. Labour resources are wasted not only because output is below what it could be, but also because the resources invested in education and training are not being utilised.

2. Fall in living standards as unemployment means less income leading to lower consumption.

3. Lower aggregate demand not only from those made unemployed, but also from those in employment deciding to save more, and consume less, in case they are made unemployed. This fall in consumption then

leads to further unemployment and the development of a deflationary gap. The rise in savings can lead to a reverse multiplier effect.

4. Those made unemployed may find that their skills become outdated so that it is harder to find work, leading to a lack of confidence and motivation and higher long run unemployment. This is sometimes called the hysteresis effect. Hysteresis can indicate a permanent change in the workforce from the loss of job skills making workers less employable even after a recession has ended.

5. In many countries governments provide unemployment benefits, so a rise in unemployment means more money is spent on these benefits. This increases the cost to the taxpayer of having to support these people when governments are receiving less revenue from both incomes and consumer expenditure. This can lead to a budget deficit.

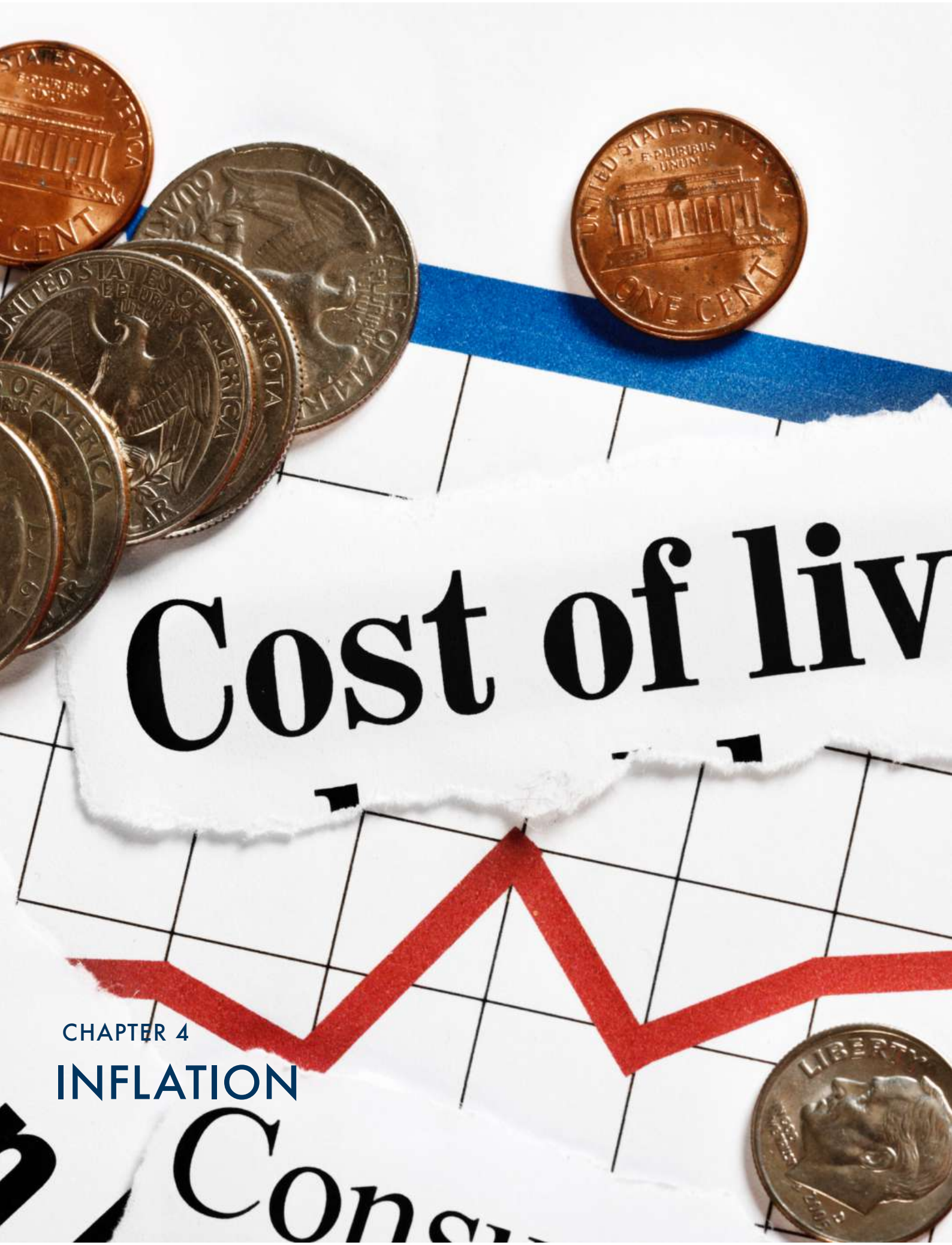
6. Income inequality can be widened as more people go into relative poverty.

Social consequences include the following:

1. Health: in some countries the loss of income can make it more difficult to provide medical care, while in others financial worries can cause both mental and physical health problems and even higher suicide rates.

2. Education: where education has to be paid for, families may be tempted to save money by withdrawing children from schools while at the same time sending them out to work to bring in more income.

3. Family: the stress of unemployment can cause divorce and family break-ups if homelessness occurs. It can lead to higher crime rates as people are desperate to survive.



CHAPTER 4

INFLATION

Inflation is the general and sustained increase in the price.

Inflation is a general and sustained increase in the price level. In times of inflation, the nominal measurements will be higher than the real measurements.

REAL AND NOMINAL MEASUREMENTS

Measurements made using prices that are current at the time a transaction takes place are known as measurements of nominal values. When prices are rising, these nominal measurements will always overstate the extent to which an economic variable is growing through time.

Nominal values overstate the extent to which an economic variable grows overtime which is why it is important to use Real Values.

Clearly, to analyze performance, economists will be more interested in 'real' values – that is, the quantities produced after having removed the effects of price changes. One way in which these real measures can be obtained is by taking the volumes produced in each year and valuing these quantities at the prices that prevailed in some base year. This then enables allowance to be made for the changes in prices that take place, permitting a focus on the real values. These can be thought of as being measured at constant prices.

For example, suppose that last year you bought a good for $2, but that inflation has been 10%, so that this year you had to pay $2.20 for the same good. Your real consumption of the item has not changed, but your spending has increased. If you were to use the value of your spending to measure changes in consumption through time, it would be

misleading, as you know that your real consumption has not changed at all (so it is still $2), although its nominal value has increased to $2.20.

HOW TO MEASURE INFLATION

An important macroeconomic measure by the government is the general price level, which is the recognized measure of the cost of living, at any point in time. Changes in the general price level, on a year-by-year basis, are a measure of the rate of inflation in an economy. The general price level is calculated periodically, by using some forms of the consumer price index.

To measure inflation a general price index can be used. A typical basket of goods is defined to reflect the spending pattern of a representative household. The cost of this bundle is calculated in the base year and then in the subsequent years.

CONSUMER PRICE INDEX (CPI)

The most important general price index in the UK is the consumer price index (CPI). This index is based on the prices of a bundle of goods and services measured at different points in time. 180 000 individual price quotes on 680 different products are collected each month, by visits to shops, and using the telephone and internet. Data on spending is used to compile the **weights** for the items included in the index. These weights are updated each year, as changes in the consumption patterns of households need to be accommodated if the index is to remain representative.

The calculation of the CPI is a major statistical task, involving three main stages:

1. A survey to find out what families buy and how much they spend on particular items – this provides the weights.
2. Recording how much the prices of some 680 selected items have changed – this information is collected from all main types of retail outlet, as well as from gas, water, electricity and transport suppliers at a base date.
3. The percentage change in price for each item is then multiplied by its weight – from this the average change in the CPI is determined.

Here is a simple example that shows how the calculation is done:

Step 1: Find the percentage change in prices for each item

Food: 25%

Fuel: 8.3%

Housing: 10%

Step 2: Find the weighted average for each item

Food: 25% x 60% = 15%

Fuel: 8.3% x 30% = 2.49%

Housing: 10% x 10% = 1%

Item	Base Year Price	Index in Base Year	Weights	Price in Year 1
Food	$2	100	60%	$2.5
Fuel	$3	100	30%	$3.25
Housing	$5	100	10%	$5.5

Step 3: Find in value of index in Year 1 and rate of inflation

Rate of inflation in Year 1 = 15% + 2.49% + 1% = 18.49%

Index in Year 1 = 100+18.49 = 118.49

Now for example if the value of index in Year to rises from 118.49 to 120, the rate of inflation for Year 2 will be:

Rate of inflation = 1.27%

This would mean rate of inflation has fallen from 18.49% to 1.27%

DEGREES OF INFLATION

Percentage change per annum	Outcome
<5	Very mild inflation which can actually aid competitiveness.
5-9	Mild inflation which must be kept under control to avoid future difficulties.
10-19	Inflationary pressures build up which increase wage demands and high interest rates; savings begin to be affected. Strict policies are essential if the problem is to be resolved.
20-50	Serious inflation. Economic relationships are in real danger of breaking down. Confidence in money is seriously eroded.
50 and above	Signs of hyperinflation. Depending on severity, domestic economic structures collapse and currency becomes worthless on foreign exchange markets and also internally.

PROBLEMS OF MEASURING INFLATION

1. The basket used in any country represents the purchasing habits of a "typical" household, but this will not be applicable to all people. The purchasing habits of different people will clearly vary greatly. For example, the "basket" of a family with children will be very different from that of an elderly couple or a single person with no children.

2. The weights used to construct the average price level are fixed. As a result, the effect on the inflation rate of an increase in the price of a particular good is overestimated. Even though consumers will switch away from it and purchase other cheaper substitutes, its significance (its weight) in the construction of the average will be the same.

3. New products are not immediately taken into account in the construction of the average price level. It took a few years for the price of mobile phone services to enter the typical basket of goods and services in many countries.

4. Improved quality of goods and services may not be properly accounted for in the construction of the average price level. A better version of a product may be 10% more expensive but may last 50% more than the older version, rendering it effectively cheaper. Again, the official inflation rate may overestimate true inflation.

5. There may be large statistical errors in the collection and tabulation of data that limit the accuracy of the final results. Some examples of such issues are sampling errors, time lags, wrong range of outlets selected and invalid statistics due to calculation error.

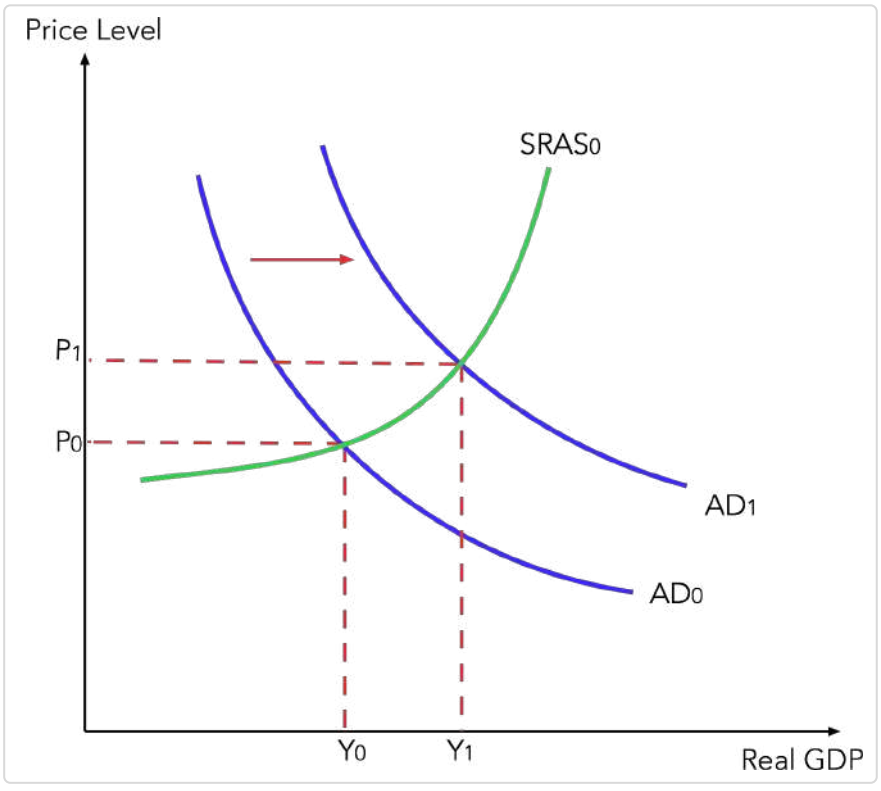
6. The base year selection has to be done carefully. A base year which is not stable with fluctuating prices may not be a true measure of the cost of living of an economy.

CAUSES OF INFLATION

Demand Pull Inflation

An increase in any component of AD may prove responsible for demand-pull inflation. An increase in aggregate demand leads to a rise in prices, especially if the SRAS curve becomes so steep in the long run as to become vertical, i.e. the economy does not have the spare capacity to meet the increased demand.

FIGURE 4.1 **Demand Pull Inflation**



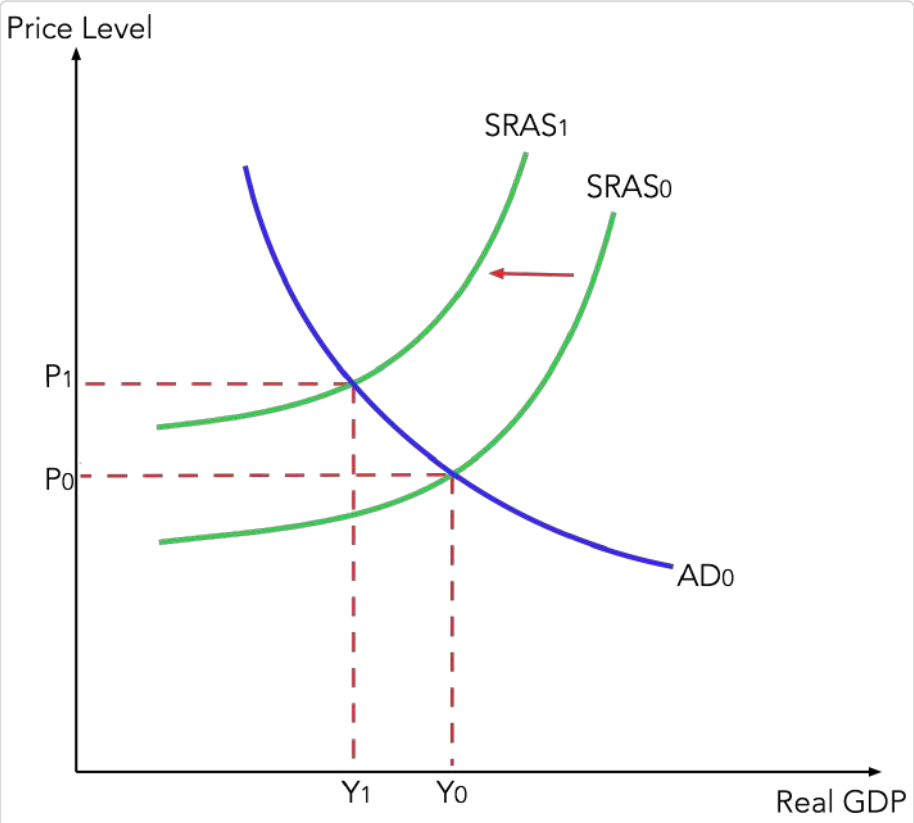
Demand-pull inflationary pressure may originate from a rapid increase in consumption and investment expenditures caused by excessively optimistic and confident households and firms. Surging exports may also exert upward pressure on prices. Export growth may accelerate, as a result of an

undervalued or depreciating currency or faster growth abroad. Governments are sometimes responsible for demand-pull inflation when they incur very high spending.

Cost-Push Inflation

Cost-push inflation is associated with continuing rises in costs and hence continuing leftward (upward) shifts in the SRAS curve. Such shifts occur when costs of production rise independently of aggregate demand.

FIGURE 4.2 **Cost Push Inflation**



If firms face a rise in costs, they will respond partly by raising prices and passing the costs on to the consumer, and partly by cutting back on production. This is illustrated in the figure above. There is a leftward shift in the

aggregate supply curve: from $SRAS_0$ to $SRAS_1$. This causes the price level to rise to P_1 and the level of output to fall to Q_3.

Rises in costs may originate from a number of different sources. As a result, we can distinguish various types of cost-push inflation:

- **Wage-push inflation**: This is where trade unions push up wages independently of the demand for labor.
- **Profit-push inflation**: This is where firms use their monopoly power to make bigger profits by pushing up prices independently of consumer demand.
- **Import-price-push inflation**: This is where import prices rise independently of the level of aggregate demand.
- **Tax-push inflation**: This is where increased taxation adds to the cost of living. Here, the government causes the inflation to occur.

Inflationary expectations themselves are a common cause of continuing inflation. If prices are expected to continue climbing then firms and workers with pricing power will increase their prices and wages to keep ahead of the game, adding to the inflationary spiral.

Targeting inflation, whether explicitly or implicitly, is said to be beneficial as it results in a reduction in inflationary expectations. The target acts as an anchor, holding down inflationary pressure. If they do not expect higher inflation

then they will not make demands for increases in wages any higher than the expected rate of inflation and this will keep the costs of labour from rising excessively. This suppresses cost-push inflationary pressure.

COST OF INFLATION

Reducing inflation is an important macroeconomic priority because the government considers stable prices as an important indicator of the economy's performance, which is crucial in creating an environment in which investment and economic growth can be encouraged. A sustained rise in price level is considered a problem for many reasons:

1. **Shoe Leather Cost:** High rates of inflation also mean that people and companies may lose considerable purchasing power if they keep money lying idle and not earning interest. Economists refer to this as shoe leather costs. These are the costs involved in moving money from one financial asset to another in search of the highest rate of interest. The term can also be applied to firms and consumers spending more time searching for the lowest prices.

2. **Menu Cost**: Menu costs are the costs involved in changing prices. Menu costs affect firms, for example catalogues, price tags, bar codes and advertisements have to be changed. Changing prices involves staff time and is unpopular with customers.

3. **Redistribution Cost:** Inflation redistributes income away from those on fixed incomes and those in a weak bargaining position, to those who can use their economic power to gain large pay, rent or profit increases. It redistributes wealth to those with assets (e.g. property)

that rise in value particularly rapidly during periods of inflation, and away from those with types of savings that pay rates of interest below the rate of inflation and hence whose value is eroded by inflation. Pensioners may be particularly badly hit by rapid inflation.

4. **Uncertainty and lack of investment**: Inflation tends to cause uncertainty among the business community, especially when the rate of inflation fluctuates. (Generally, the higher the rate of inflation, the more it fluctuates.) If it is difficult for firms to predict their costs and revenues, they may be discouraged from investing. This will reduce the rate of economic growth.

5. **Balance of Payment**: Inflation is likely to worsen the balance of payments. If a country suffers from relatively high inflation, its exports will become less competitive in world markets. At the same time, imports will become relatively cheaper than home-produced goods. Thus exports will fall and imports will rise. As a result, the balance of payments will deteriorate and the GDP will decline.

Factors affecting the consequences of inflation

The effects of inflation depend on:

1. The cause of inflation. Demand-pull inflation is likely to be less harmful than cost-push inflation. This is because demand-pull inflation is associated with rising output whereas cost-push inflation is associated with falling output.

2. The rate of inflation. A high rate of inflation is likely to cause more damage than a low rate especially if the high rate develops into hyperinflation. Indeed, hyperinflation can lead to households and firms losing faith in the currency and may bring down a government.

3. Whether the rate of inflation is accelerating or stable. An accelerating inflation rate, and even a fluctuating (constantly changing) inflation rate, will cause uncertainty and may discourage firms from investing. The need to devote more time and effort to estimating future inflation rates will increase costs.

4. Whether the inflation rate is the one that has been expected. Unanticipated inflation, which occurs when the inflation rate was different from that expected, can also create uncertainty and so can discourage some consumer expenditure and investment. In contrast, if households, firms and the government have correctly anticipated inflation, they can take measures to adapt to it and so avoid some of its potentially harmful effects.

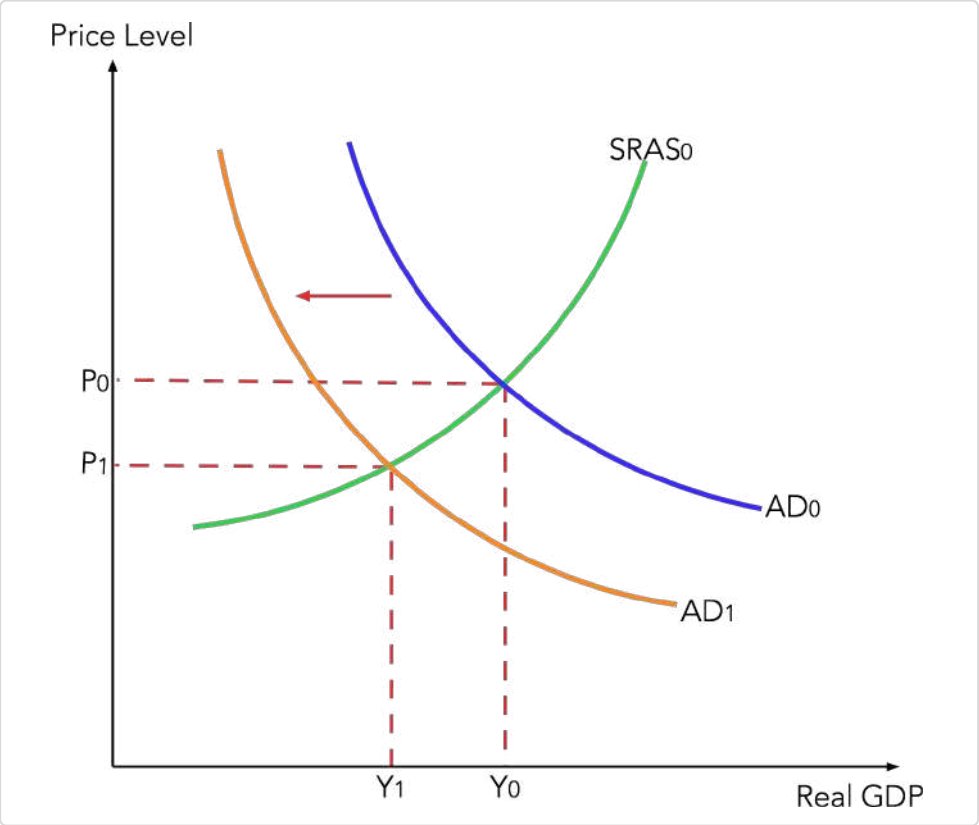
For instance, firms may have adjusted their prices, money interest rates may have been changed to maintain real interest rates and the government may have adjusted tax brackets, raised pensions and public sector wages in line with inflation.

5. How the inflation rate compares with the rate of other countries. It is possible for a country to have a relatively high rate of inflation, but if it is below that of competing countries its products may become more internationally competitive.

DEFLATION

Deflation is defined as a persistent fall in the average level of prices in the economy. If deflation comes about from improvements in the supply side of the economy and/or increased productivity it may not be bad.

FIGURE 4.3 **Deflation**



However, if deflation or falling prices is due to a lack of demand in an economy then it could have serious implications.

1. **Consumer Confidence**: With falling prices, consumer confidence tends to be low; consumers are concerned

about the future, and know that if they do not buy today, they might be able to buy at a cheaper price tomorrow.

2. **Investment**: A lack of consumer confidence then feeds into a lack of business confidence and lower investment as businesses expect to make less profit, or make losses. This has negative implications for future economic growth.

3. **Unemployment**: With falling demand and investment, businesses are likely to lay off workers. This would result in further fall in incomes and a reduction in demand causing a deflationary spiral, as an economy may go into deep recession.

4. **Costs to borrowers**: Anyone who has taken a loan suffers as a result of deflation because the value of their debt rises as a result of deflation. If profits are low, this may make it too difficult for businesses to pay back their loans and there may be many bankruptcies. This will further worsen business confidence.

There are benefits of falling price level to some economic groups. People on fixed income, like pensioners, and creditors will benefit. Also export prices will fall and import prices will rise, and given they are price elastic, their value will also rise, ultimately resulting in the balance of payment to improve.

However, the depressing effect on demand of deflation is the key reason why economists suggest that the ideal rate

of inflation is a positive 1-2%. Very low inflation means that the costs of inflation are low. At the same time, very mild inflation is associated with economic growth and increasing prosperity

CHAPTER 5

INTERNATIONAL TRADE

THE GAINS FROM INTERNATIONAL TRADE

Some of the gains from trade include lower prices and more variety for consumers, increased competition, more efficient resource allocation

International trade is the exchange of goods and services between countries. There are a number of gains to be made from international trade:

1. **Lower prices**: Consumers are able to buy less expensive products and producers are able to purchase less expensive raw materials and semi-manufactured goods. This is the main reason for trade. Prices may be lower in some countries than others because of access to natural resources, differences in the quality of the labour forces, or differences in the quality of capital and the levels of technology. The cause of these lower prices is mainly determined by the concept of comparative advantage.

2. **Greater choice**: International trade enables consumers to have a greater choice of products. They now have access not just to domestically produced products, but also to products that come from a number of different countries.

3. **Differences in resources**: Different countries possess different resources. There are some resources that a country may need, but quite simply does not have. For example, many countries do not possess copper, diamonds, or oil naturally. However, they may need them in order to produce other products and so have no option but to import the commodities they lack. To do this, they will need to export goods or services, in order

to earn foreign currency and so buy the required resources.

4. **Economies of scale**: When producing for an international market, as well as for a domestic one, the size of the market, and thus demand, will increase. This means that the level of production and the size of production units will also increase. The increased levels of production should provide scope for economies of scale, or lower average cost, to be achieved and production should become more efficient. In addition, if countries specialize in the production of certain commodities, such as chemicals, there will be cost benefits to be gained from acquiring experience and expertise. This is known as moving down the "learning curve" (the long-run average cost curve). Hence, international trade, and with it larger markets and production units, should enable production in a country's export industries to become more efficient in the long run. It should also make the producers more competitive. It should lead to a reduction in long- run average costs.

5. **Increased competition**: International trade may lead to increased competition, as domestic firms compete with foreign firms. This should lead to greater efficiency and may mean that consumers gain by being offered less expensive goods and services. It is also likely that the quality and variety of goods available to consumers will increase, with increased competition.

6. **More efficient allocation of resources**: When international trade takes place freely, without government interference, then the countries that are best at producing certain goods and services will produce them; they will be able to produce these goods and services at the lowest cost and take advantage of their efficiency. If this happens in all of the different trading countries, then it is fair to assume that the world's resources are being used most efficiently when free trade is taking place.

COMPARATIVE ADVANTAGE THEORY

Comparative advantage is when a country has a lower opportunity cost in the production of a good and hence has to give up fewer units of a good to produce another good.

Countries specialize in the production of the good and services for which they have a relative advantage.

Comparative advantage exists when a country has a lower opportunity cost in the production of a good or service, as compared to another country. In other words, a country has to give up fewer units of other goods to produce the good in question than does another country.

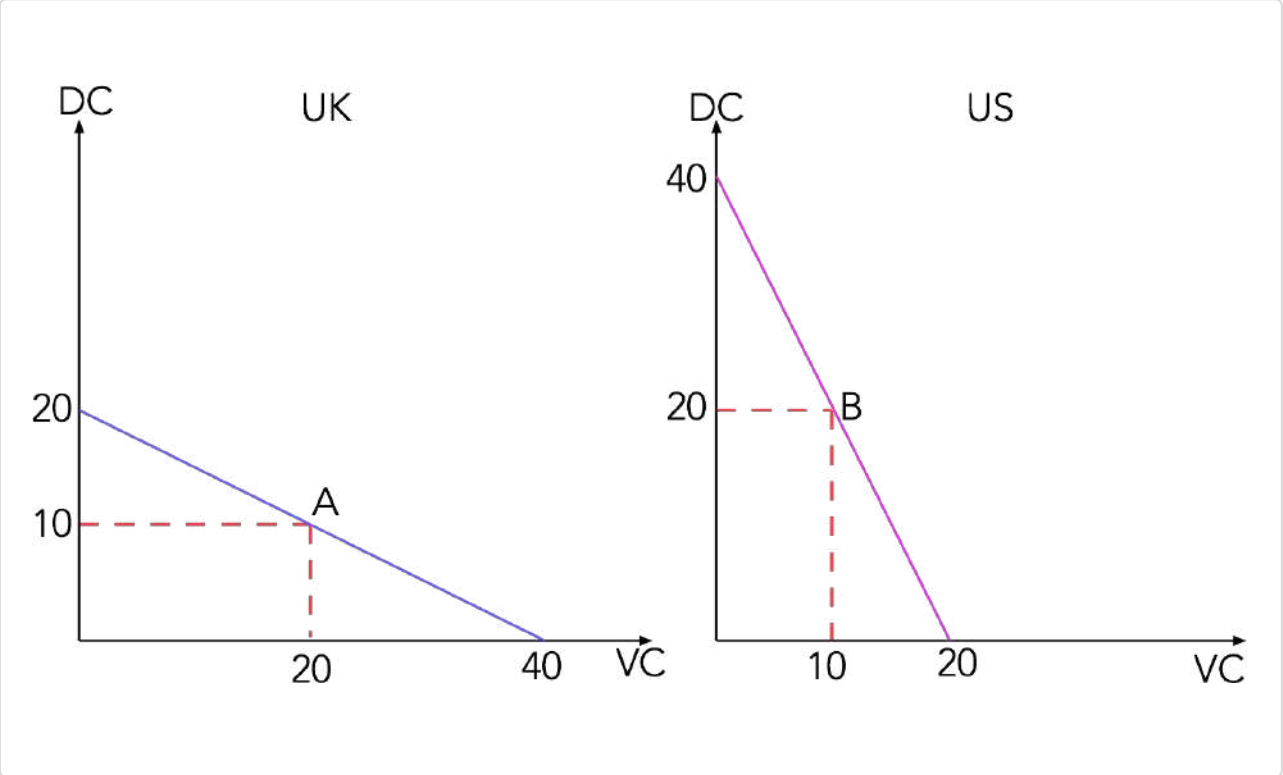
Countries will usually specialize in those goods and services where they have a relative advantage. This will result in an increase in total output and an improvement in economic welfare.

Example of Comparative Advantage

Lets assume that there are two countries, UK and US, and they are devoting the same quantity of resources in the production of two goods, vacuum cleaners (VC) and digital camera (DC).

Pre Specialization

FIGURE 5.1 **Production possibilities for the UK and US**



Opportunity Cost:

UK: 10DC = 20 VC or 1DC = 2VC or ½ DC = 1VC

US: 20DC = 10 VC or 2DC = 1VC or 1DC = ½ VC

The UK has a comparative advantage in vacuum cleaner because when it makes one vacuum cleaner it loses only ½ of the digital camera. The US, on the other hand, has a comparative advantage in digital camera because when it makes one digital camera, it loses only ½ vacuum cleaner.

Due to their respective comparative advantages, the UK should specialize in the production of the vacuum cleaner and the US should specialize in the production of digital camera.

After Specialization

This would mean, in Figure 5.2, UK would move to A' while the US would move to B'. However in order to take advantage of specialization, the countries now have to agree on a mutually beneficial exchange rate or terms of trade.

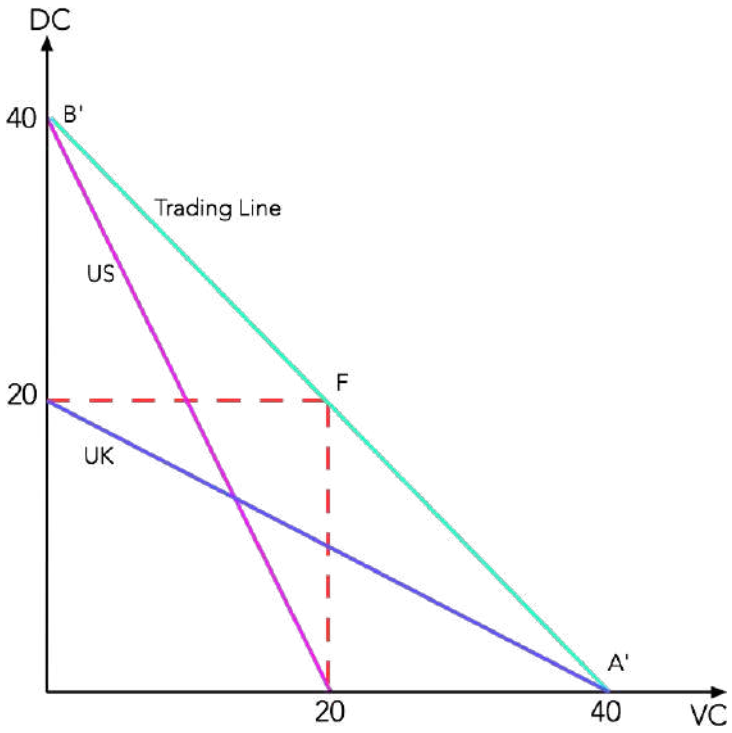
UK ½ DC = 1 VC

TOT 1 DC = 1 VC

US 2 DC = 1 VC

One such acceptable exchange rate is 1 DC=1 VC; where the UK can get 1 DC rather than ½ DC previously and the US can get 1 VC rather than ½ VC previously. Therefore both countries can benefit.

FIGURE 5.2 **Trading possibilities**



The trading line shows the new PPC with trade and suggests that with trade both countries can specialize and have higher production therefore higher consumption possibilities.

A country is said to have an absolute advantage in the production of a good if it can produce it using fewer resources than another country. In this case, UK has an absolute advantage in vacuum cleaners and US has it in digital cameras.

Sources of comparative advantage

The ultimate determinants of a country's comparative advantage include:

1. **Differences in factor endowments**: Differences in the quantity and quality of factors of production available include differences in the stock of natural capital and its productivity, differences in the stock of human capital and its productivity and differences in the stock of physical capital and its productivity. Higher quality and quantity of resources can result in a lower opportunity cost and therefore a comparative advantage for the country.

2. **Differences in technology:** These differences are manifested indirectly as technology is embodied in the physical capital available and affects the productivity of human capital and can result in a comparative advantage of that country.

3. **Changes in the Exchange rate**: The exchange rate, which is the price of a currency expressed in terms of another, can also affect comparative exchange rate. For example, if the exchange rate rises (appreciates) then exports become less competitive and a country loses its comparative advantage.

4. **Changes in the relative inflation rates:** Changes in the relative inflation rates can also affect competitiveness. For example, if average inflation in country X is 8% while

in country B it is 4%, the goods and services produced by country X will become relatively more expensive over time. This worsens their competitiveness and causes a loss in comparative advantage.

5. **Export subsidies:** These can also be used to create an artificial comparative advantage for a country's products – US cotton producers, recipients of massive state subsidies, provide a good example.

6. **Non-price factors**: can lead to the creation or the loss of comparative advantage and competitiveness (such as product design, reliability, quality of after-sales support). Export sales of German capital goods, for example, are not easily affected by an appreciating euro as their reputation is excellent in foreign markets.

Assumptions of comparative advantage

These assumptions are:

1. Constant costs of production reflected in the linear PPCs. This may imply perfect factor mobility of resources among competing uses.
2. There is no transport costs assumed in the comparative advantage
3. The is free trade and no trade barriers.

Limitations of Comparative Advantage

The above assumptions do not accurately reflect real world conditions. These assumptions are the basis for the

criticisms of the comparative advantage model and its predictions. The criticisms are as follows.

1. Costs of production need not be constant. Labour and the other factors of production suffer from both occupational and geographical immobility. Hence, PPC cannot be linear.

2. Transportation costs do exist in the real world and can sometimes eliminate any comparative advantage that exist.

3. Trade barriers are also a reality which prevents world trade flows from reflecting comparative advantage conditions among nations.

For these and other reasons the actual pattern of trade flows does not fully reflect comparative advantage. Still, comparative advantage is a most useful concept in understanding and explaining much of what is going on in the world of trade.

Governments can and historically have promoted policies that help to create a comparative advantage in specific industries. A government could invest in education, increasing the stock of human capital and raising labour productivity and lowering average costs in specific industries. It could create favorable investment conditions for private firms by ensuring price stability (low inflation), long-run equilibrium in the exchange rate and, more generally, a conducive business environment.

TRADE PROTECTION

Arguments for protecting trade

In spite of the well-known gains from trade, countries often seem reluctant to open their economies fully to international trade, and tend to intervene in various ways to protect their domestic producers.

1. **Infant Industry Argument**

Some industries in a country can be in their infancy, but have a potential comparative advantage. This is particularly likely to happen in a developing country. Infant industries are too small to have gained economies of scale, and without protection, these industries will not survive competition from abroad. Protection from foreign competition will allow these firms to expand, the workers to become more experienced, and as a result, the industry to become more efficient. Once they have achieved the comparative advantage the protection can be removed to enable them to compete internationally.

There are two problems associated with the infant industry argument:

a) Government needs to be able to identify those infant industries, which will grow successfully. To protect industries that are not winners in the long term can result in economic inefficiency.

b) Industries protected by trade barriers lack the competitive pressure to become efficient; complacency may set in and protection can become the only reason for survival.

2. **Sunset Industry/Job Protection**

Another argument for protecting industries is on the grounds of protecting declining or sunset industries, which provide local jobs. If protection is not provided, the human cost of sudden industrial closure can be very high in terms of loss of income, skills and motivation.

There are two problems with the policy:

a) Although the policy may benefit manufacturers, consumers are likely to have less choice as they pay higher prices. Much of the gain for producers is therefore an internal transfer of resources from domestic consumers.

b) Foreign countries could retaliate by imposing trade restrictions on exports, leading to a loss of jobs in another sector of the economy.

3. **Dumping**

It is selling of goods to other countries below their cost of production. Foreign firms may sell products at a loss for the following reasons:

a) They may have overproduced a good and have failed to find a market for them, so they are dumped into another country to get rid of the surplus.

b) To penetrate a foreign market by selling it at loss only to increase the price later when domestic producers are out of business. This kind of pricing is called predatory pricing, where prices are lowered purposely to destroy existing competition in the overseas market.

4. **To protect a country's balance of payments**

Governments sometimes impose protectionist measures to attempt to reduce import expenditure and thus improve a current account deficit whereby the country is spending more on its imports of goods and services than it is earning for its exports of goods and services.

The problems with the balance of payment argument are following:

a) Trade protection will only work in the short run. It does not rectify the actual causes of the deficit, such as lack of demand or loss of comparative advantage.

b) Also, if countries do this, then it is likely that other countries will retaliate with protectionist measures of their own.

Arguments against protectionism

The arguments against protectionism are really related to the reasons why countries trade. In brief, the arguments against protectionism include the following:

1. Protectionism may raise prices to consumers and producers of the imports that they buy.
2. Protectionism would lead to less choice for consumers.
3. Competition would diminish if foreign firms are kept out of a country, and so domestic firms may become inefficient without the incentive to minimize costs. Innovation may also be reduced for the same reason.
4. Protectionism distorts comparative advantage, leading to the inefficient use of the world's resources. Specialization is reduced and this would reduce the potential level of the world's output.
5. For the reasons listed above, protectionism may hinder economic growth.

TYPES OF PROTECTION

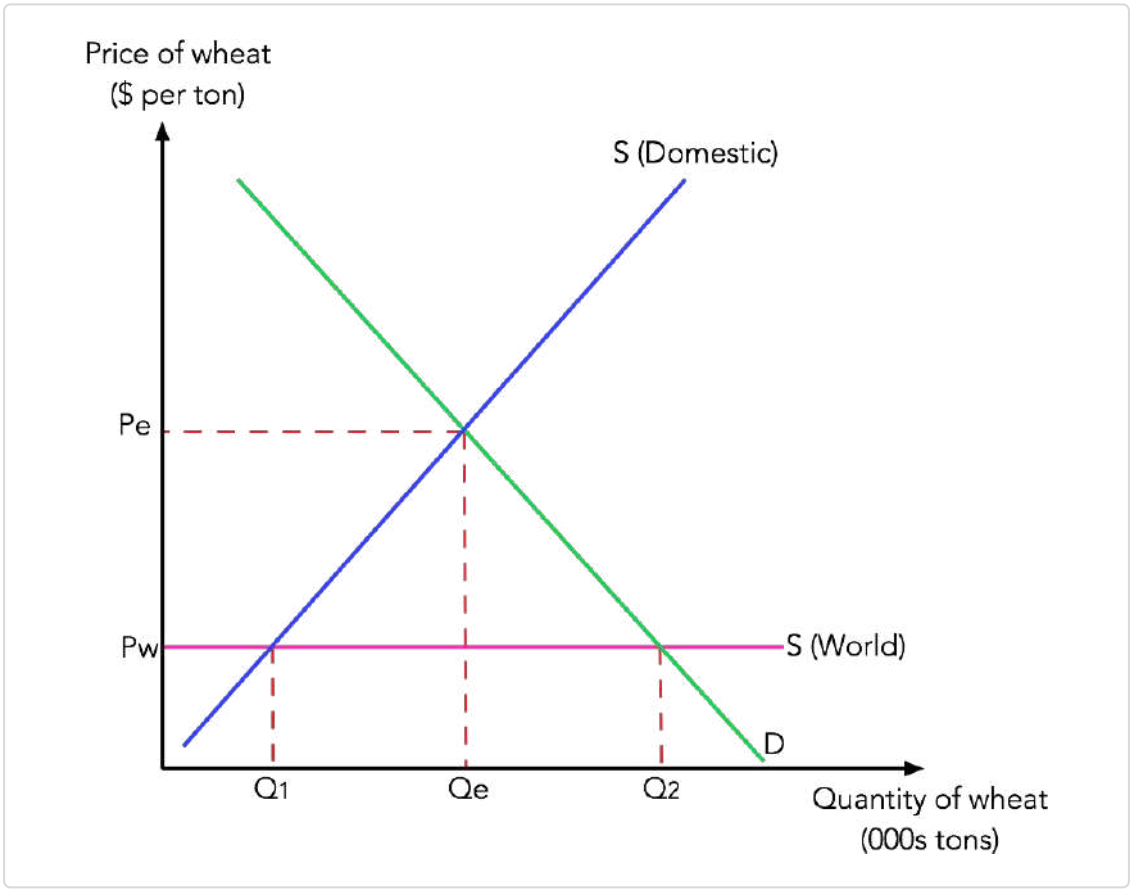
There are a number of different methods used to protect economies from imports. In order to look at them, it is best to first consider what the situation would be if a country had free trade in a given commodity, for example, wheat. We will then consider how different protectionist measures might alter the free trade situation.

Figure 5.3 shows the situation where free trade is taking place in a country where wheat is both produced domestically and imported. If there was no foreign trade, then domestic farmers would produce 0Qe tons of wheat at a price of Pe per ton. If we now assume that the market is open and that foreign trade does take place, then the situation changes. Consumers find that they can import wheat at the world price and that, if they are prepared to pay the world price, they can import as much wheat as they like. This means that the supply curve faced by the importers, S (World), is perfectly elastic. S (World) must be below Pe or there would be no point in trading.

With free trade, the price of wheat in the country will be Pw. At this price, domestic farmers will only be prepared to supply $0Q_1$ tons of wheat. However, the demand for wheat will be $0Q_2$ and so the excess demand is satisfied by imported wheat. Foreign producers will supply Q_1Q_2 tons of wheat. Thus domestic consumers get to consume QeQ_2 more wheat at a lower price.

Now that we know what happens in a free trade situation, let us look at the different types of protectionism that may be employed.

FIGURE 5.3 **International Trade**



Tariffs

A tariff is a tax that is charged on imported goods. In the case of a tariff, it will shift the world supply curve upwards, since it is placed on the foreign producers of the good and not the domestic producers. The effect of a tariff on imported wheat is shown in Figure 5.4.

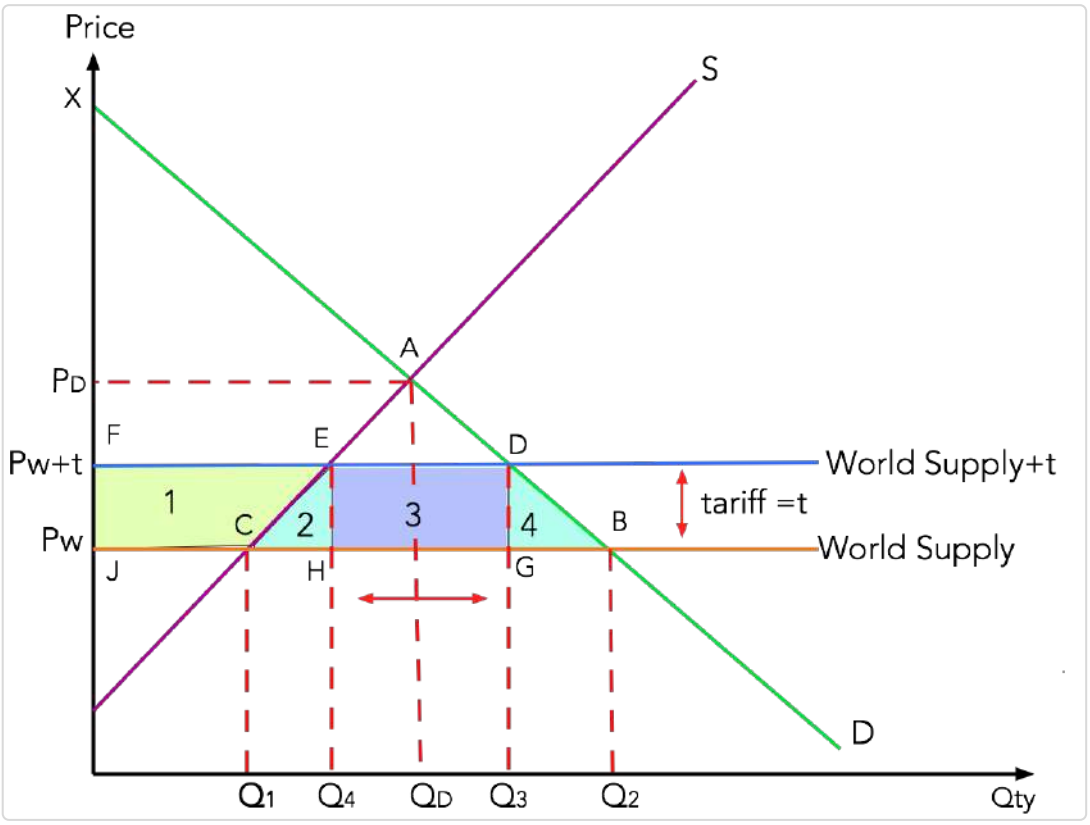
Before the tariff, Q_1 of cars were bought at a price of Pw. Domestic production was Q_1 and imports were $Q_2 – Q_1$. When the tariff is imposed, S (World) shifts up by the amount of the tariff to S (World) + tariff and so the market price rises to Pw+t. Total quantity demanded falls from Q_2 to Q_3, because the price has risen. Domestic producers increase production to Q_4. Foreign producers supply the rest, which is now $Q_3 – Q_4$.

The consumer surplus before tariff is Area XBJ. After tariff it falls to XDF. The loss of consumer surplus is therefore Area 1 + 2 + 3 + 4. Of which Area 3 is government revenue from tariff, Area 1 is increase in domestic producer surplus and Area 2 + 4 is social welfare loss to society. The welfare loss of Area 2 is because production moves away from efficient foreign producers to inefficient domestic producers ($Q_4 – Q_1$). The welfare loss of Area 4 is because after tariffs higher prices will result in domestic consumers ($Q_2 – Q_3$) to be denied of the good.

Tariffs are the most common type of anti-dumping measure. If a country has been able to prove that dumping

has taken place, then it can place a tariff on the imported goods to raise their prices and eliminate the cost advantage of the dumped imports.

FIGURE 5.4 **Tariff**

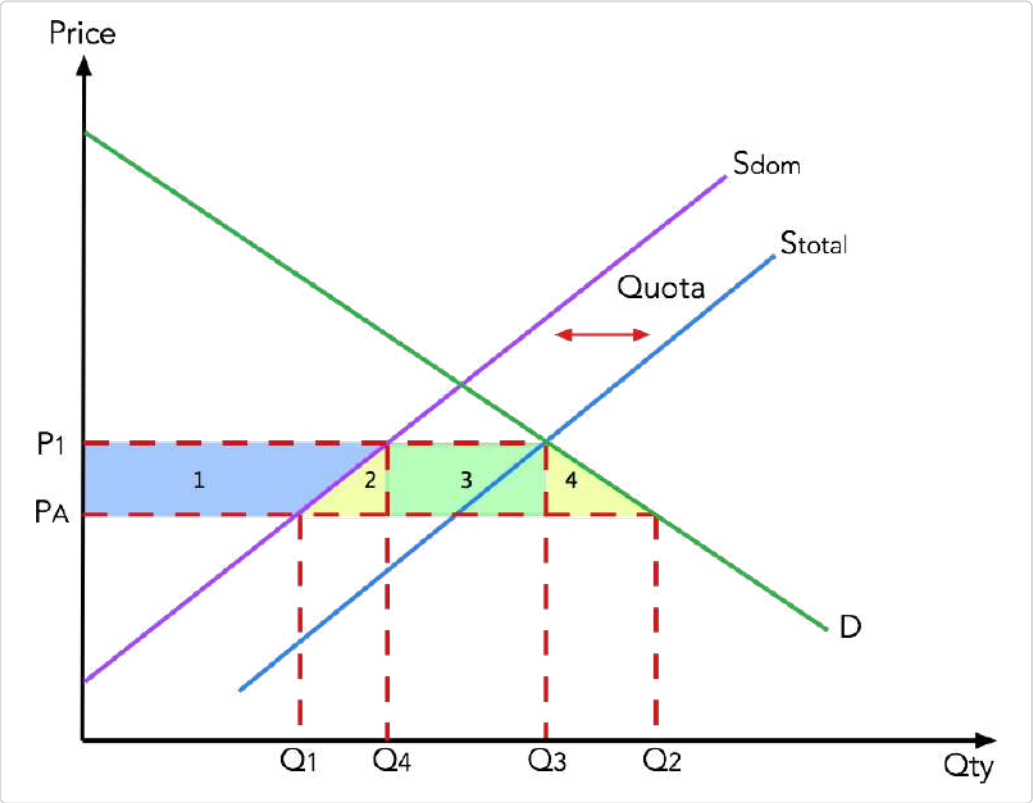


Quotas

An alternative policy that a country may adopt is to limit the imports of a commodity to a given volume. For example, a country may come to an agreement with another country that only a certain quantity of imports will be accepted by the importing country. Such arrangements are sometimes known as voluntary export restraints (VERs).

Figure 5.5 illustrates the effects of a quota. D represents the domestic demand for this commodity, and S_{dom} is the quantity that domestic producers are prepared to supply at any given price. Suppose that, without any agreement, producers from country A would be prepared to supply any amount of the product at a price P_A. If the product is sold at this price, Q_2 represents domestic demand, of which Q_1 is supplied by domestic producers and the remainder ($Q_2 - Q_1$) is imported from country A. By imposing a quota, total supply is now given by S_{total}, which is domestic supply plus the quota of imports allowed into the economy from country A. The market equilibrium price rises to P_1 and demand falls to Q_3, of which Q_4 is supplied by domestic producers and the remainder is the agreed quota of imports.

FIGURE 5.5 **Quotas**



The figure shows who gains and who loses by this policy. Domestic producers gain by being able to sell at the higher price, (as in the case of the tariff), so they receive additional surplus given by Area 1. Furthermore, the producers exporting from country A also gain, receiving Area 3 (which in the case of the tariff was tax revenue received by the government). As in the case of the tariff, area 2 and 4 represent the loss of welfare suffered by the importing country.

Such an arrangement effectively subsidizes the foreign producers by allowing them to charge a higher price than they would have been prepared to accept. Furthermore, although domestic producers are encouraged to produce

more, the protection offered to them is likely to lead to inefficiency and weak attitudes towards competition.

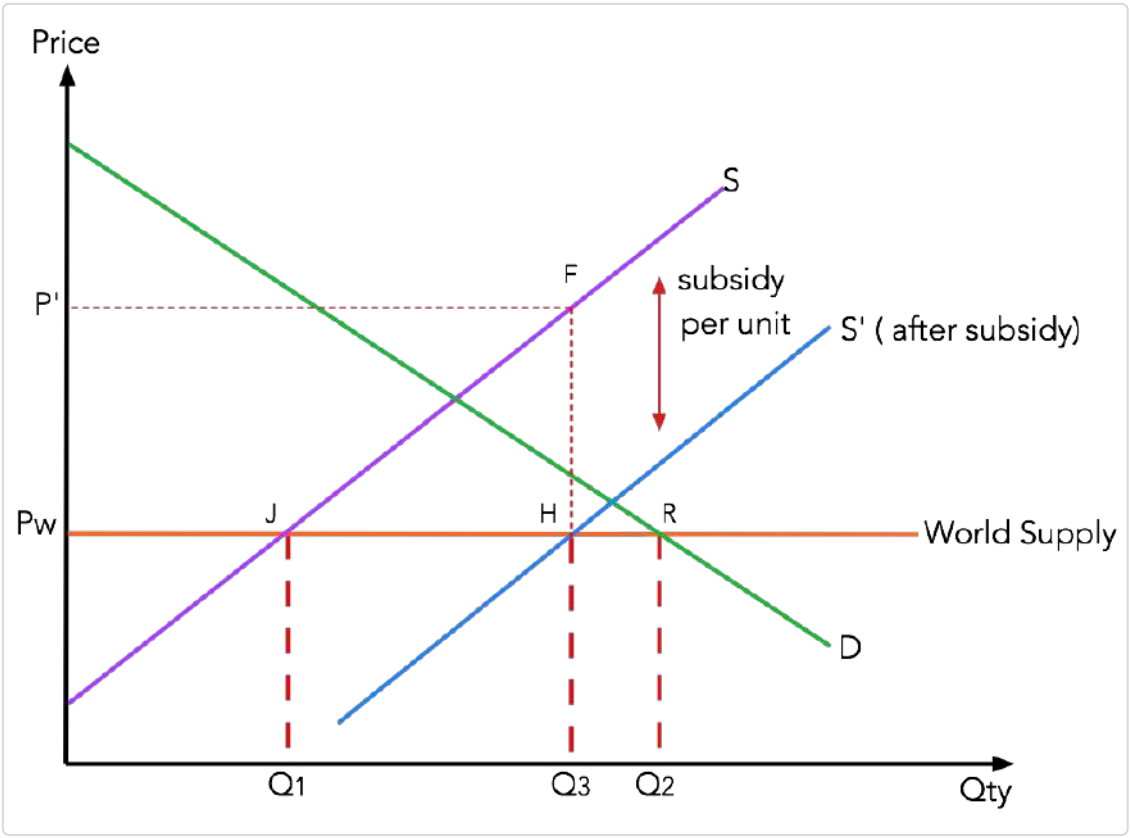
Voluntary export restraints (VERs)

Setting up VERs is a form of trade protection that is a slightly different version of imposing quotas. VERs are agreements between an exporting and an importing country limiting the maximum amount of exports in a given period. The domestic (importing) government asks the foreign government to restrict the exports of the good; the term 'voluntary' is misleading since the request is really a demand and it is made clear that unless the foreign government 'voluntarily' complies, more restrictive protectionist barriers will be imposed. The effects are similar to that of a quota so area (3) may still end up in the pockets of foreigners, making it less costly than if a tariff was imposed.

Subsidies

Subsidies lower production costs of firms and therefore artificially increase their competitiveness. As a result, subsidies will decrease imports and may even lead to exports. The US cotton industry is the recipient of huge government subsidies and ranks number one in world cotton exports. The effects of a subsidy are illustrated in Figure 5.6.

FIGURE 5.6 **Subsidy**



Initially, assume free trade with the world price of the product at Pw. The domestic industry will be willing to produce and offer Q_1 units per period whereas consumption (quantity demanded) will be at Q_2 units per

period leading to Q_1-Q_2 units of imports. If a subsidy is granted to the domestic firms then their production (marginal) costs will decrease by the amount of the subsidy. Supply will increase, shifting vertically downward by the amount of the subsidy to S'.

The world price Pw is not affected (assuming again a 'small country' case) but now at the world price Pw, domestic firms are willing to offer more. Domestic production at Pw is now, as a result of the subsidy, at Q_3 units per period. Consequently, the volume of imports will shrink from Q_1-Q_2 to Q_3-Q_2 units. Domestic firms will earn Pw per unit plus the per unit subsidy which is the vertical distance HF between the two supply curves. Total revenues for the domestic industry have increased from area ($0Q_1JP_w$) to area ($0Q_3FP'$). Consumers enjoy the same amount at the same price, but the government and eventually taxpayers are burdened by the cost of the subsidy which is equal to area (PwHFP').

Excessive administrative burdens ('red tape')

Perhaps this is the most common form of protection. Regulatory barriers include product standards (to meet certain domestic requirements), sanitary standards (to protect the domestic consumers), pollution standards, etc. Often these standards are set to protect domestic producers rather than domestic consumers by making it more difficult (and costly) for foreign firms to comply.

TERMS OF TRADE

The terms of trade measures the rate of exchange, of one good or service, for another, when two countries trade with each other. It is defined as the ratio of the average price of exports over the average price of imports, expressed as index numbers times 100.

$$\text{Terms of Trade} = \frac{\text{Index of Export Prices}}{\text{Index of Import Prices}} \text{ X } 100$$

For example

If Year 0 has a base index of 100 and Export price index = 105 and Import price index = 101, then:

TOT = 103.9

If year 1 terms of trade is equal to 103.9, this means that on average a country is receiving relatively better prices for its exports, than it is having to pay other countries for its imports. So in this case terms of trade have improved.

On the other hand if Export price index = 102 and Import price index = 105, then:

Terms of Trade = 97.14

In constant, if year 1 terms of trade equal to 97.14, this means that on average, a country has to pay relatively higher prices for its imports, than it is receiving for its exports. In this case terms of trade has worsened.

If exports prices are rising faster than import prices, then terms of trade will rise. This means fewer exports have to be given up for a given volume of imports.

Causes of changes in the Terms of Trade

1. **Exchange Rate**: A rise in the exchange rate leads to a fall in the prices of imported goods and the rise in the price of exported goods. This results in the terms of trade to improve.
2. **Inflation**: If inflation is higher in a country relative to other countries, export prices will rise and import prices will fall making the terms of trade to rise.
3. **Demand for Exports and Imports**: Change in demand for exports or imports can also lead to a change in terms of trade. For e.g. higher demand for exports results in higher prices for exports and therefore an improvement in the terms of trade.
4. **Rising productivity**: If productivity increases, cost of production decreases and this results in the price of exports to fall. As a result, the terms of trade will worsen.
5. **Changes in income**: Changes in income will affect the patterns of demand. For e.g. as income rises, demand for imports will rise if a country has a higher propensity to imports leading to an increase in import prices and terms of trade to worsen.

BALANCE OF PAYMENTS

The balance of payments account is a record of the value of all the transactions between the residents of one country and the residents of all other countries in the world over a given period of time. Receipts of money from abroad are regarded as credits, and are entered in the account with a positive sign. Outflows of money from the country are regarded as debits and are entered with a negative sign.

Current Account

The current account records payments of imports and exports, of goods and services, plus income flowing into and out of the country, plus net transfers of money into and out of country.

Trade in goods records imports and exports of physical goods. The balance of these goods is called the visible trade balance.

Trade in services record imports and exports of services. The balance of these is called the invisible balance.

The balance of both these accounts is called the **Balance of Trade.**

Current Transfer

This is a measurement of the net transfers of money from abroad. These are payments made between countries when no goods or services change hands. At a government level these payments include things such as foreign aid and

grants. At an individual level they include foreign workers sending money back to their families in their home country (remittances) or private gifts sent from a person in one country to a person in another.

Net Income Flows

This is often known as net investment incomes (net factor income from abroad). It is a measure of the net monetary movement of profit, interest, and dividends moving into and out of the country over a given period of time, as a result of financial investment abroad.

Current account balance = Balance of trade in goods + Balance of trade in services + Net income flows + Net transfers

Note that any of these accounts might be in surplus or deficit at any given time—there could be a deficit on the trade in goods, a surplus on the trade in services, a surplus on net income flows, and an overall surplus on the current account. The current account balance is an overall balance and may be in deficit or in surplus.

Relationship between Terms of Trade and Balance of Trade

$$\text{Terms of Trade} = \frac{\text{Index of Export Prices}}{\text{Index of Import Prices}} \text{ X } 100$$

Balance of Trade = (Px)(Qx) – (Pm)(Qm)

Changes in the terms of trade can have an effect on the balance of payment or current account section, depending upon the PED for exports and imports.

Exports are Price Elastic

If exports are price elastic, then this means an increase in export prices leads to a larger proportionate fall in export quantities. The total value of exports will fall, resulting in the worsening of the balance of trade in the current account, despite the improvement in the terms of trade.

Imports are Price Elastic

If imports are price elastic, then an increase in price of imports results in terms of trade to worsen but balance of trade to rise, as quantity of imports will fall by much more, resulting in the value of imports to fall.

CHAPTER 6

EXCHANGE RATES

An exchange rate is the value of one currency expressed in terms of another currency.

An exchange rate is the value of one currency expressed in terms of another currency, for example, £1 = $2. The internal value of money is inflation or domestic purchasing power of a country, while the external value of the currency is the exchange rate, which is the value of the currency expressed in terms of other currencies.

The way that a country manages its exchange rate is known as its exchange rate regime. There are three main types; a fixed exchange rate, a floating exchange rate, and a managed exchange rate.

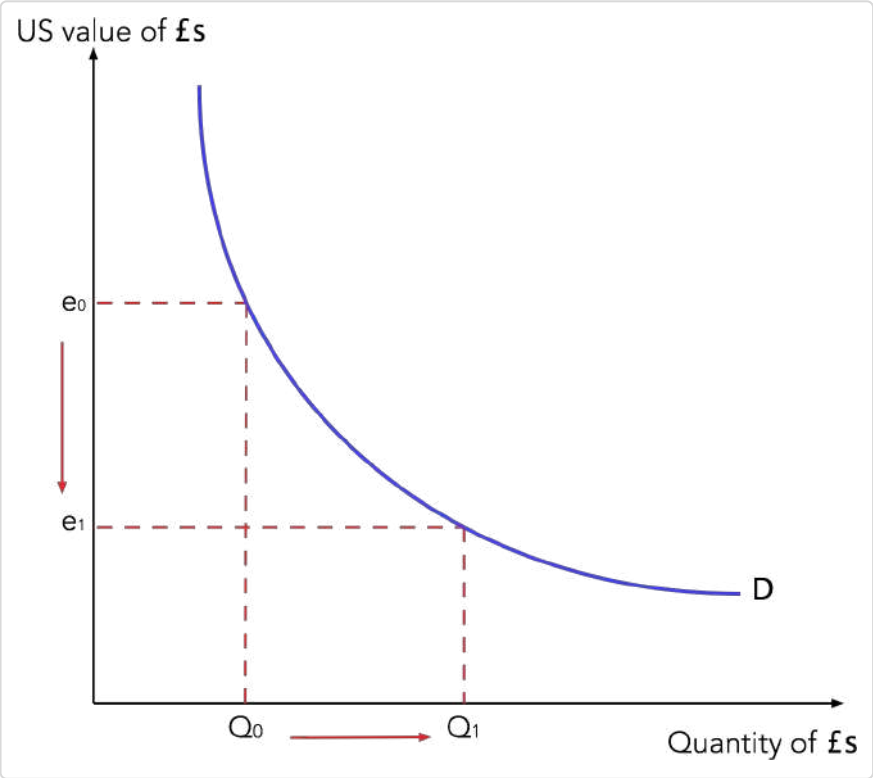
The demand and supply of the currency on the foreign exchange market determines the value of the currency.

FLOATING EXCHANGE RATE

A floating exchange rate is an exchange rate regime where the value of a currency is allowed to be determined solely by the demand for, and supply of, the currency on the foreign exchange market. There is no government intervention to influence the value of the currency.

Demand for the currency

FIGURE 6.1 **Demand for £s**

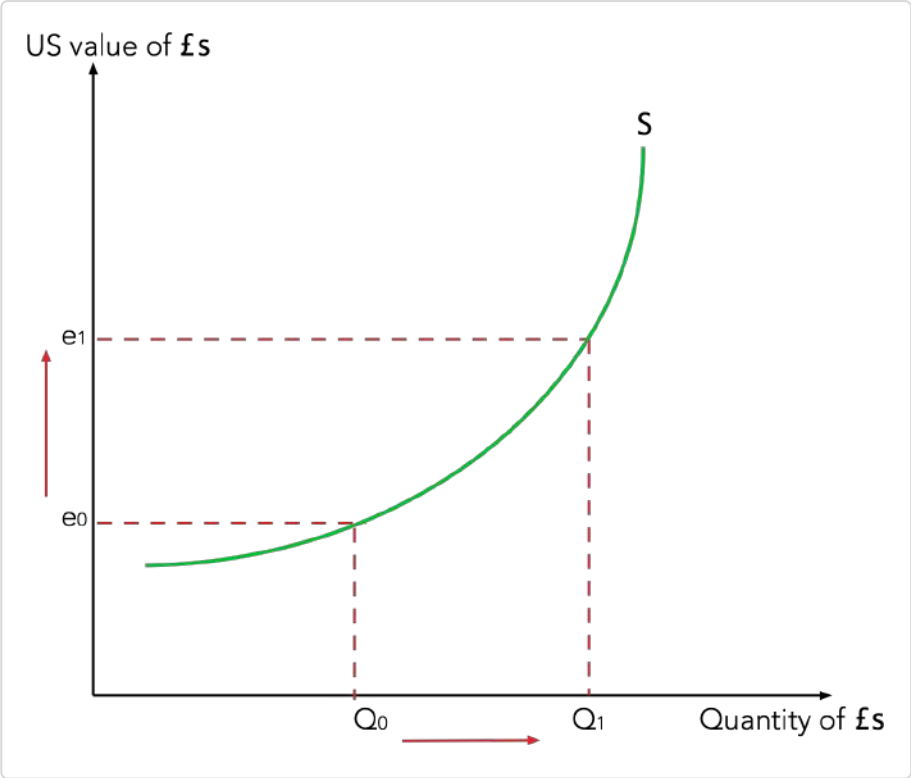


The £ is demanded when foreign residents, for e.g. US consumers, want to undertake transactions in the UK. Demand for £s in the foreign exchange market is downward sloping. This is because when the price of the £ in terms of the $ is high, at e_0, then UK goods will become expensive

to the US consumers as they have to pay more $s to gain £. As a result the demand for UK goods will be low and this means fewer £s will be demanded. Similarly, at e_1, UK goods will become cheaper to the US consumers as they have to pay less $s to gain £; as a result the demand for UK goods will be high and this means higher £s will be demanded.

Supply of the currency

FIGURE 6.2 **Supply of £s**



£s are supplied when UK residents undertake transactions abroad, for e.g. buying US goods. When £s are supplied, $s are obtained, which can be used to buy US goods. Supply of £ in the foreign exchange market is upward sloping. When the £ is strong or high against the $, like at

e_1, then UK consumers will find US goods to be cheaper to buy. As a result, more US goods will be bought and therefore more £s will be supplied in the foreign exchange market. When the £ is weak or low against the $, like at e_0, then UK consumers will find US goods to be expensive. As a result, less US goods will be bought and therefore less £s will be supplied in the foreign exchange market.

Possible Sources of Demand

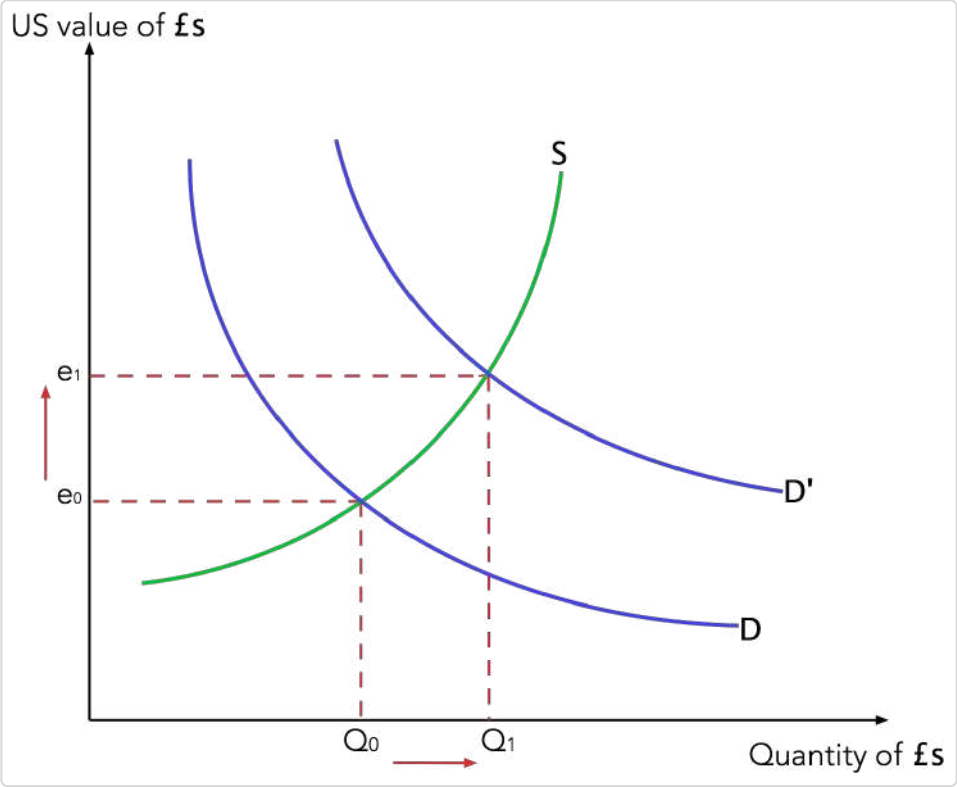
1. Foreign consumers demand UK goods and services
2. Foreign tourists visit UK
3. Foreign investors purchase UK assets
4. Speculators who think £ will appreciate
5. Other governments demanding UK £ for foreign reserves.

Possible Sources of Supply

1. UK residents purchase of foreign goods
2. UK residents traveling abroad
3. UK investors purchase of foreign assets
4. Speculators who think £ will depreciate
5. UK government supplying £s to buy foreign currencies for the reserves

Case 1 – UK hosts Olympics in 2012

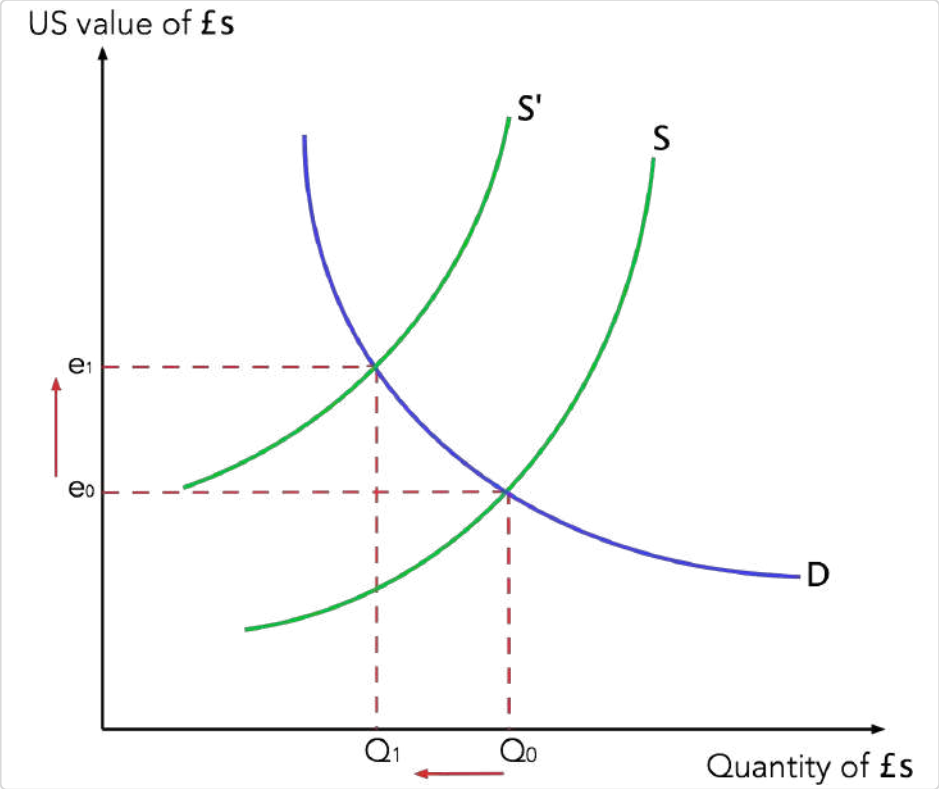
FIGURE 6.3 **Increased demand of the £**



The demand for the pound increased, as many tourists visited the UK to watch the Olympics.

Case 2 – A reduction in the value of imported goods to the UK

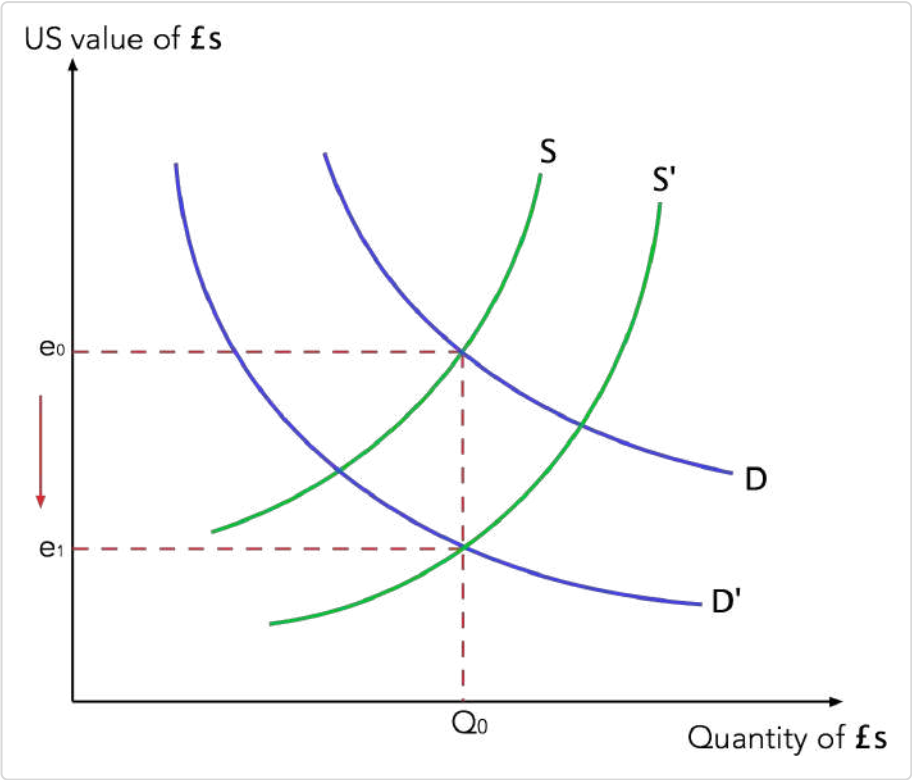
FIGURE 6.4 **Decreased supply of the £**



A fall in the value of imported goods results in the supply curve to shift backwards, as of now, less of foreign currency is demanded to buy imported goods.

Case 3 – A fall in interest rates in the UK

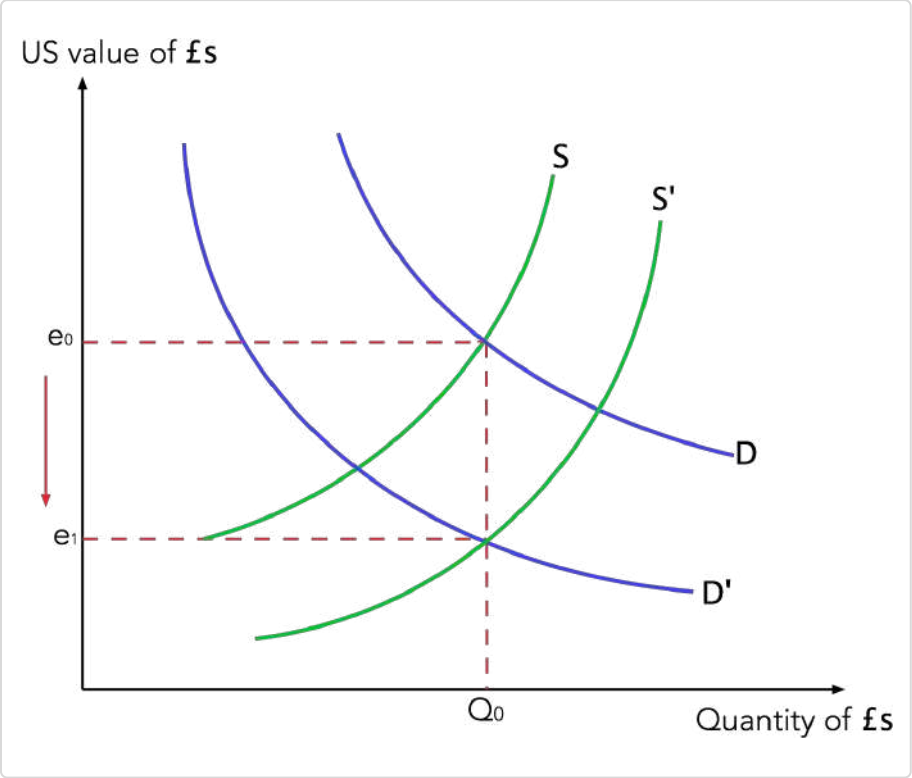
FIGURE 6.5 **Effect of fall in interest rates**



When interest rates are lower in the UK, foreign investors will take money away from the UK bank accounts to other countries, which are offering better interest rates. This results in the demand for UK pounds to fall. At the same time, UK residents will also take their money away from the UK banks to banks in other countries. They will supply more pounds to buy more of other currencies. The overall effect of this decrease in interest rates is hot money or short term monetary flows to flow out, and exchange rate to depreciate.

Case 4 – Higher inflation in UK than abroad

FIGURE 6.6 **Effect of relative higher inflation**



If inflation in the UK is higher than its trading partners, then its exports will become expensive and imports will become relatively cheaper, causing the demand for the currency to fall and supply of the currency to rise. This will result in the exchange rate to depreciate.

Factors that Influence Exchange Rate

1. **Inflation:** If inflation in the UK is lower than elsewhere, then UK goods will become more competitive and there will be an increase in demand for UK pounds. Also, foreign goods will become less competitive and there will be a fall in the supply of UK pounds. This results in the exchange rate to appreciate, as the demand for the currency will rise and supply will fall.

2. **Interest Rate:** If UK interest rate rises as compared to elsewhere, it will become more attractive to deposit money in the UK. The demand for the currency will rise and supply of the currency will fall as both foreign and domestic investors will deposit money in the UK, causing the exchange rate to appreciate. This short term flow of money is regarded as 'hot money'.

3. **Speculation:** If speculators believe that the £ will rise in the future, they will demand more now, to be able to make a profit. This increase in demand will cause the exchange rate to appreciate.

4. **Strong Economy:** If the British economy is growing strongly, the demand for its goods will be stronger and of higher value than domestic demand for imports resulting in exchange rate to be stronger.

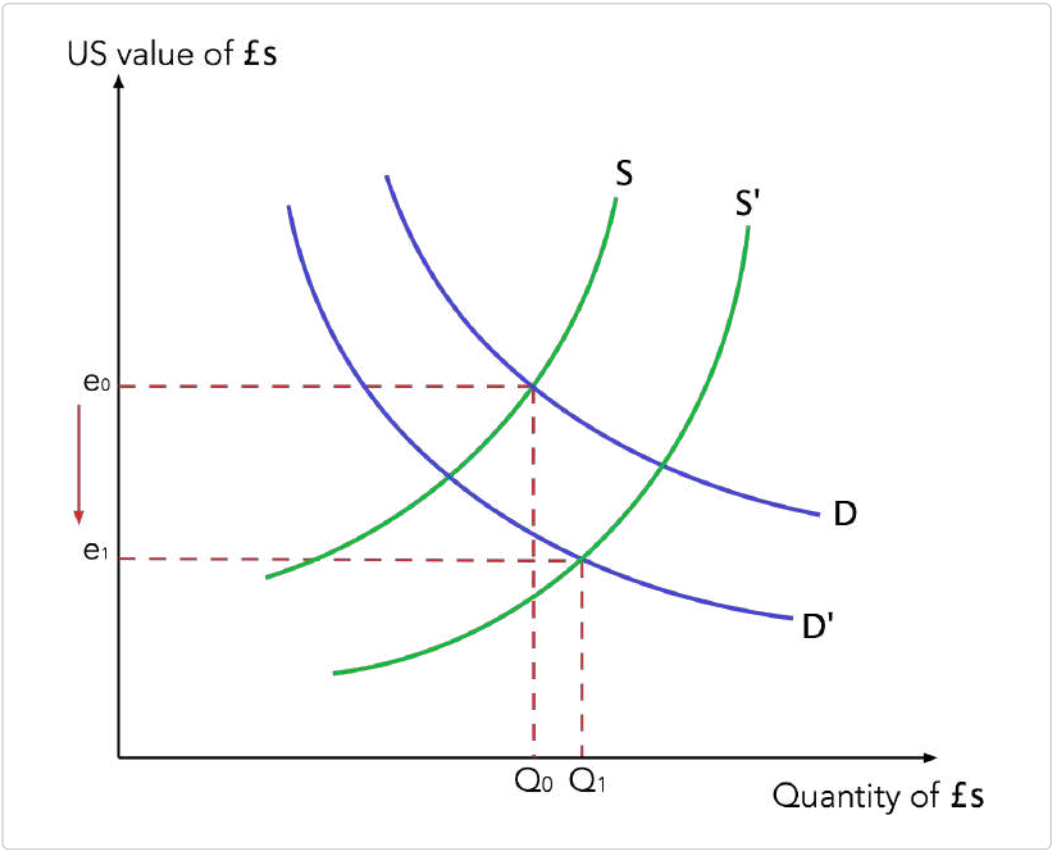
5. **Current Account Deficit:** A larger deficit on the current account is likely to cause a depreciation in the value of the exchange rate, as lower exports would result in lower

demand for the currency, and higher imports will imply increase in supply of the currency.

EXCHANGE RATES AND INFLATION

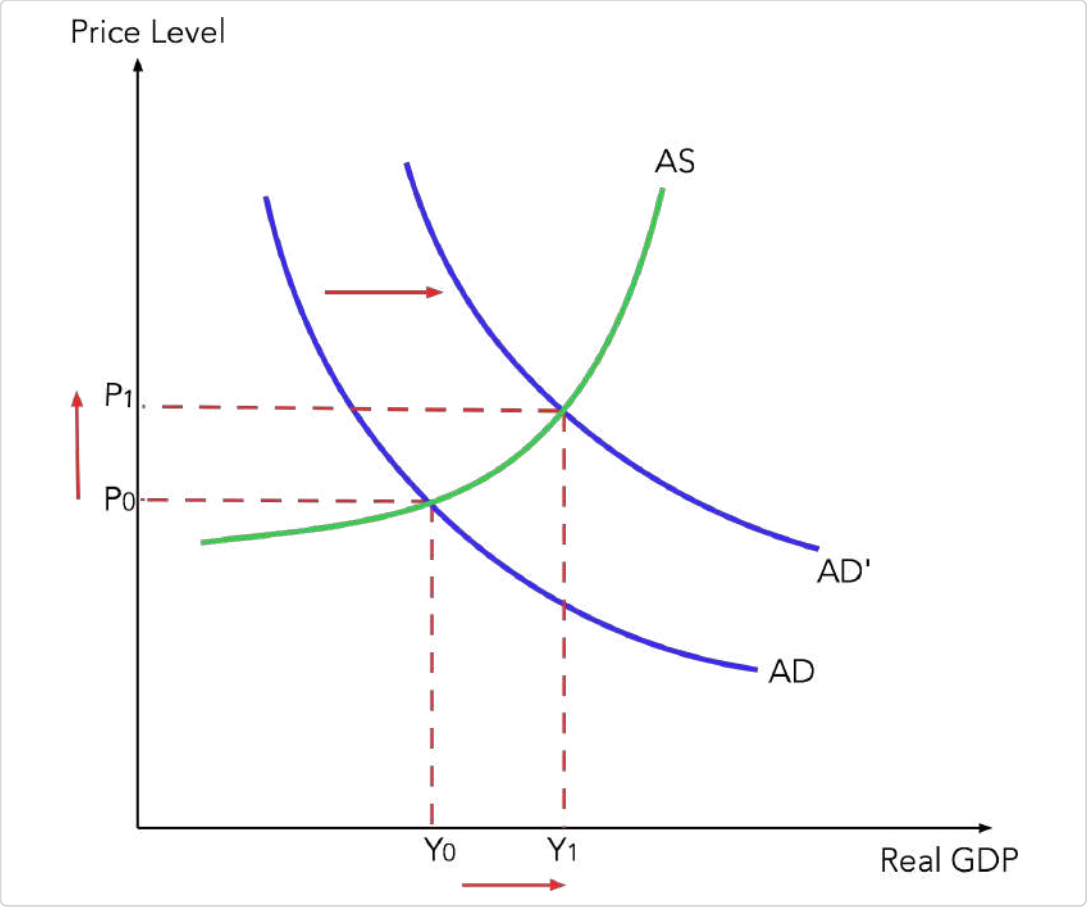
The internal value of a country's currency or inflation and its external value or exchange rate is closely connected. If the price level rise as a result of a rise in its inflation rate, above that of its competitors, demand for its products will fall. This will cause the demand for the currency to fall as foreigners buy fewer of the country's exports, whilst the supply of the currency on the foreign exchange market will rise as more imports are purchased. The outcome will be a depreciation of the currency, depending on the strength of these effects.

FIGURE 6.7 **Depreciation of the £ due to inflation**



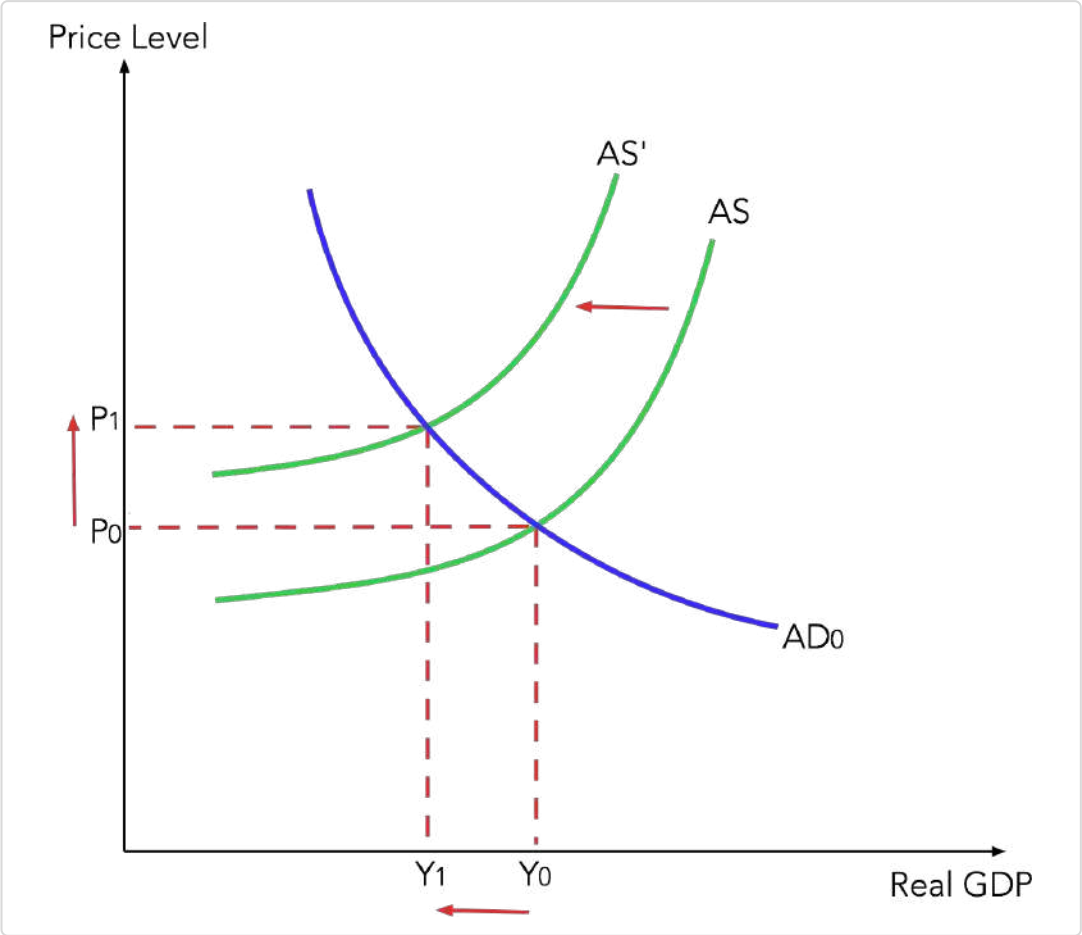
Similarly, a change in the exchange rate will also affect the internal purchasing power of a country's money. A fall in the exchange rate will raise the price of imports and lower the price of exports. This will cause net exports to rise, if exports and imports are price-elastic, and a shift of AD curve to the right, ultimately causing demand-pull inflation to take place.

FIGURE 6.8 **Demand pull inflation due to currency depreciation**



Also, if inputs are imported, like oil, then the cost of production will rise and this can also result in cost-push inflation to also take place.

FIGURE 6.9 **Cost push inflation due to currency depreciation**



STRONG VS. WEAK CURRENCY

Possible advantages of a high exchange rate

1. **Downward pressure on inflation**: If the value of the exchange rate is high, then the price of finished imported goods will be relatively low. In addition, the price of imported raw materials and components will reduce the costs of production for firms, which could lead to lower prices for consumers.

2. **More imports can be bought**: If the value of the exchange rate is high, then each unit of the currency will buy more foreign currencies, and so more foreign goods and services can be bought leading to a higher standard of living of an economy.

3. **A high value of currency forces domestic producers to improve their efficiency**: The high exchange rate will threaten their international competitiveness so they will be forced to lower costs and become more efficient in order to maintain competitiveness.

4. **Terms of Trade**: The terms of trade will also improve as export prices rise and import prices fall. This may cause net exports to rise if goods are inelastic in nature.

Possible disadvantages of a high exchange rate

1. **Damage to export industries**: If the value of the exchange rate is high, then export industries may find it difficult to sell their goods and services abroad, because

of their relatively high prices. This could lead to unemployment in these industries.

2. **Damage to domestic industries**: With greater levels of imports being purchased, because imports are now relatively less expensive, domestic producers may find that the increased competition causes a fall in the demand for their goods and services. This may lead to a further increase in the level of unemployment as firms cut back.

3. **Rise in deficit**: A rise in deficit in the current account can take place if exports and imports are elastic in nature and high exchange rates make exports expensive and imports cheaper.

CHAPTER 7

MACROECONOMIC POLICIES

GOVERNMENT MACROECONOMIC POLICY OBJECTIVES

Although there is a range of economic policies that governments strive to achieve at this stage, this is confined to price stability, control of inflation, unemployment and economic growth.

Economic policy is the attempt by government to generate increases in economic welfare. Ever since the so-called "great depression" of the late 1920s and 1930s, economists have recognized that there is a role for government and monetary authorities in trying to ensure increased economic welfare by controlling inflation, unemployment and economic growth.

This control is through demand-side policies which affect AD. These are fiscal policy and monetary policy. Supply-side policies can also be used which affect AS.

Price Stability

One of the most prominent objectives of macroeconomic policy in recent years has been the need to control inflation.There are a number of costs of inflation which may justify the introduction of a policy to control inflation. In particular if prices are increasing at a very rapid rate, then markets will not be able to operate effectively, and thus the economy will be damaged. Furthermore, if inflation is unpredictable, then this may affect firms' expectations of the future and discourage investment. This has

repercussions for the overall productive capacity of the economy.

Full Employment

For an economy to be operating on the production possibility curve, the factors of production need to be fully employed. From society's point of view, surplus capacity in the economy represents waste. In addition, there may be a cost suffered by the people who are unemployed in this situation and who could have been productively employed.

Economic growth

If the ultimate aim of a society is to improve the well-being of its citizens then, this means that the resources available within the economy need to expand over time, in order to widen people's choices. From a theoretical point of view, economic growth can be thought of as an expansion of the productive capacity of an economy. It is an expansion of the potential output of the economy, or an outward shift of the production possibility curve. This can be achieved through an improvement in the quality or quantity of factors of production.

Balance of Payment

Lists of macroeconomic policy objectives include equilibrium on the balance of payments as a key item. A balance of payment disequilibrium occurs when over a particular period of time a country is recording persistent

deficit or surplus in its current account of the balance of payment.

FISCAL POLICY

The government budget is an annual financial statement showing estimates of expected revenue and expenditure during a fiscal, or tax, year.

The current budget deficit, or budget surplus, is the difference between the government's day-to-day expenditure and its (tax) revenue, that is, the difference between what it spends and what it receives.

If the government spends more than it receives then it would run a budget deficit. The opposite of this is that the government spends less than it receives, then it would run a budget surplus.

Meaning and significance of the national debt

The national debt is the net accumulation of the central government's annual budget deficits. It is the total amount of money that the central government owes its creditors.

If a government has a budget deficit then it needs to raise extra finance. It can raise finance either by printing more money or by borrowing. Printing money will reduce its value, leading to inflation.

Borrowing can be either short term or long term, and can be from domestic or foreign sources. The most common

method is for the government to issue government bills (short term) or stock (long term).

Either of these, however, will result in an increase in the national debt. The size of the national debt only becomes important when a large proportion is owed abroad or if it looks as if it cannot be repaid. Otherwise a lot of the debt will be owed to a government's own citizens.

Taxation

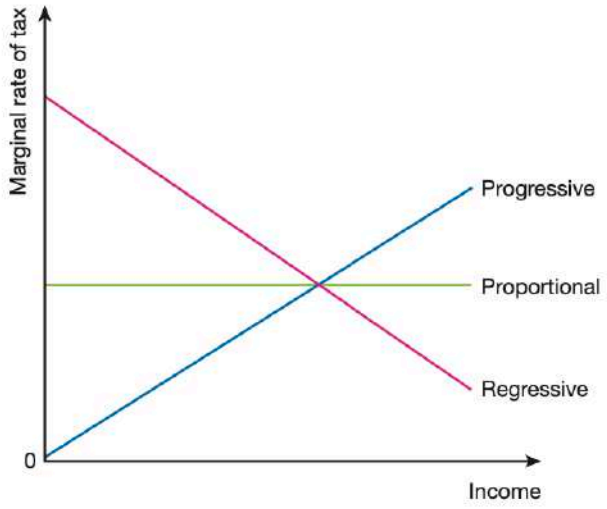
The first way to look at type of tax is to distinguish between direct and indirect taxes.

A **direct tax** is one which is levied on the incomes of individuals and firms. They also include taxes on inherited wealth. Examples include income tax, corporation tax and inheritance tax.

An **indirect tax** is one which is levied when goods and services are bought. They are, therefore, taxes on expenditure. Examples include value added tax (VAT) and goods and services tax (GST).

Indirect taxes can take different forms. Firstly, there is excise duty, which is a tax imposed on a product, such as petrol, and is usually a specific amount placed on a product. Secondly, an ad valorem tax is one which places a percentage rate on a good or service, e.g. VAT might be set at 20 per cent.

Another way in which taxes can be grouped is progressive, regressive and proportional.



A **progressive** tax is one where as people's income rises a higher proportion of the increase is taken in tax. In this case, the marginal rate of tax (MRT) increases. In many countries, the proportion of income taken in tax rises when the income goes above certain levels or thresholds. For example, income tax might start at 20 per cent and then increase to 30 per cent, 40 per cent and 50 per cent as income levels rise.

Regressive taxes are the opposite of progressive. As people's income rises a lower proportion of the increase is taken in tax. In this case, the MRT falls. This will tend to apply to indirect taxes as the specific amount does not change nor does the fixed percentage of ad valorem taxes.

Finally, **proportional** taxes take the same proportion of a person's income whatever the level. These taxes have a constant MRT. In this situation, the marginal and the average rate of tax (ART) is the same.

Rates of tax

Average rates of taxation refer to the average percentage of total income which is paid in taxes. The average rate of tax can also be known as
the effective rate of tax or the average propensity to pay tax. It can be calculated as:

ART = total tax due /total taxable income

Marginal rates of taxation refer to the proportion of an increase in income which is taken in tax. It can be calculated as:
MRT = change in tax due/ change in taxable income

In a progressive tax system, such as income tax usually is, MRT will be greater than ART as income increases

Reasons for taxation

There are four main reasons for taxation:

1. To raise revenue to help finance government spending. It is important to note that in most countries taxation is not the only way in which this is done because governments may need to spend now while taxes come in across the year.

2. To manage aggregate demand. Taxation is one way in which a government can try to meet its economic objectives.

3. To change the distribution of income and wealth. Taxes such as income tax are deliberately designed in many countries to take money from the better off and give it to those who do not have enough.

4. To manage market failure and environmental targets. Taxes are one way in which market failures, such as pollution, can be reduced.

Government spending

Types of spending: capital (investment) and current

Capital expenditure, or gross fixed capital formation, are the terms used for government investment. This is spending by the government on goods and services intended to create future benefits, such as:

1. Infrastructure investment in transport, such as road building

2. Health and education, such as new hospitals or schools or sewage systems

3. Research spending, such as defense, space or vaccinations.

Current expenditure is government consumption expenditure on goods and services for current use to directly satisfy the individual or collective needs of

members of the community. This can include the wages of public sector employees, road maintenance, etc.

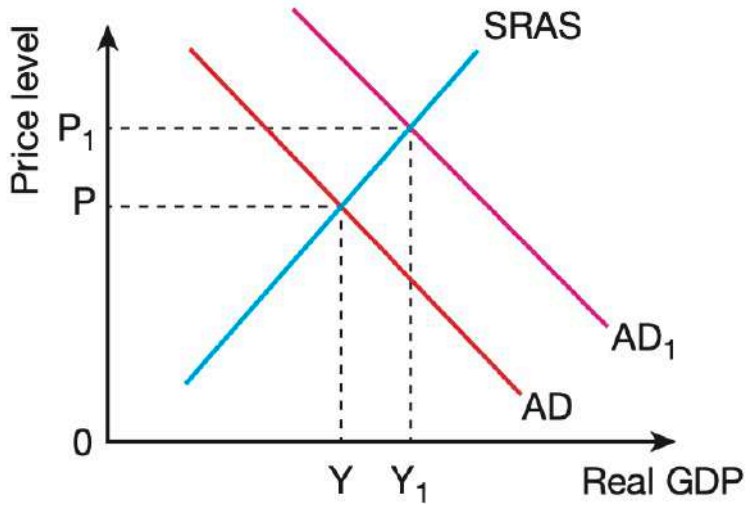
Reasons for government spending

Governments spend money for many different reasons including to:

1. Supply goods and services that the private sector would fail to do, such as public goods, including defense; merit goods such as hospitals and schools; and welfare payments and benefits, including unemployment and disability benefit
2. Achieve supply-side improvements in the macro economy, such as spending on education and training to improve labour productivity
3. Reduce the effects of negative externalities, such as pollution
4. Subsidize industries which may need financial support, and which is not available from the private sector. An example of this in many countries is agriculture
5. Help redistribute income and achieve more equity
6. Inject extra spending into the macro-economy, to help achieve increases in aggregate demand and economic activity.

Expansionary and contractionary fiscal policy

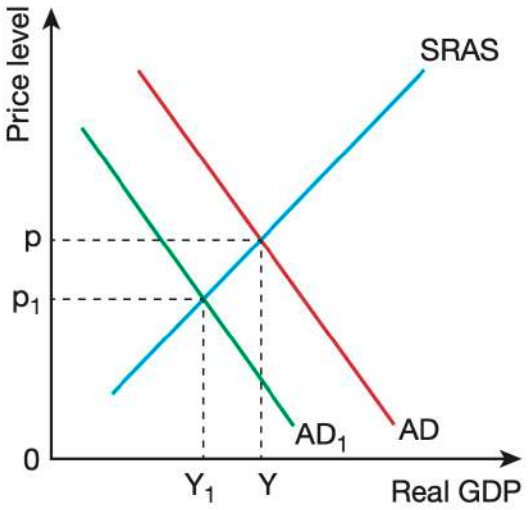
Expansionary fiscal policy involves increasing aggregate demand resulting in economic growth, more employment, but also higher inflation and possibly a deficit in the balance of payments. In general, expansionary fiscal policy would result in a budget deficit.



The figure above shows the effects of expansionary fiscal policy. An increase in government expenditure (G) or cut in tax rates (T) will lead to an increase in AD from AD to AD_1. This has resulted in a rise in the equilibrium national income from P to P_1 and a rise in real output and employment from Y toY_1 and in the price level from P to P_1.

The opposite is **contractionary** (sometimes called **deflationary**) fiscal policy where government revenue is increased, often leading to a budget surplus, leading to lower inflation, higher unemployment and lower economic growth.

The opposite effects for contractionary fiscal policy can be observed in the figure below. Here the equilibrium national income falls from Y to Y_1 and the price level falls from P to P_1.



MONETARY POLICY

Monetary policy is a demand-side economic policy. It is usually controlled by the central bank. It involves the management of money supply and the rate of interest.

Monetary policy has consisted of:

1. Targeting the money supply

2. Controlling interest rates

3. Maintaining the exchange rate.

Tools of monetary policy

1. **Interest rates** are the cost of borrowing money and the return on lending money. Central banks raise or lower interest rates to ensure that they meet by the inflation target set by the central bank and to ensure liquidity in the economy.

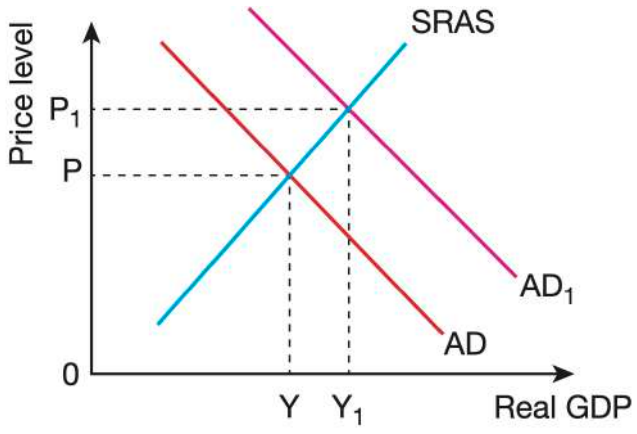
2. **Money supply** is the total amount of money in an economy. This can be taken as notes, coins and easily accessible accounts, e.g. current accounts. Controlling the money supply has proved to be very difficult and has been largely abandoned in favour of interest rates, although money supply is still measured as one aspect to consider when deciding policy. In recent years many central banks have used quantitative easing as a means of increasing the money supply.

3. **Credit regulations** are qualitative control measures used by the central bank to regulate the consumer credit on a certain products which are affected by inflation or deflation. They make borrowing and spending money, therefore, more difficult, in case of inflation, or easier, in the case of deflation.

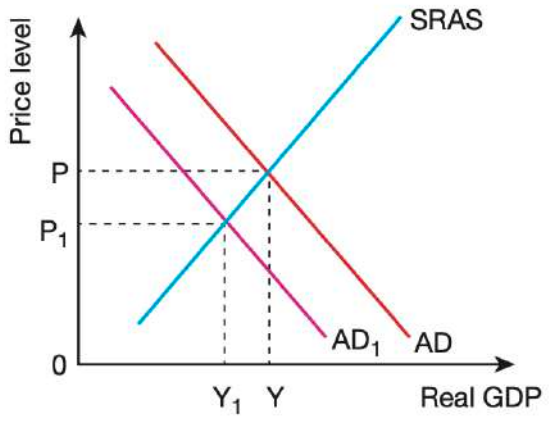
Expansionary and Contractionary monetary policy

The central bank of a country can adopt an expansionary or contractionary monetary policy. An expansionary monetary policy is focused on expanding, or increasing, the money supply in an economy. On the other hand, a contractionary monetary policy is focused on decreasing the money supply in the economy. The central bank uses its monetary policy tools to increase or decrease the money supply.

An expansionary monetary policy, such as a cut in interest rates, means that the AD curve shifts to the right, from AD to AD_1 in the figure below. This will result in a rise in real GDP and employment from Y to Y_1 and an increase in the price level from P to P_1.

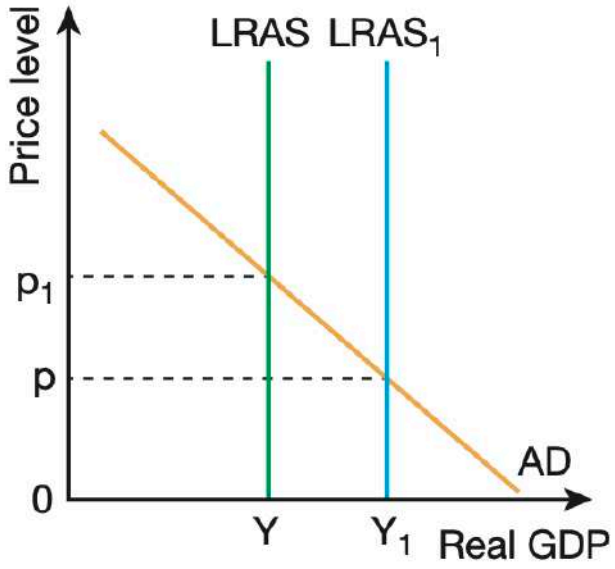


A contractionary monetary policy, such as a rise in interest rates, results in the opposite effects. This means that the AD curve shifts to the left, from AD to AD_1 in the figure below. This will result in a fall in real GDP and employment from Y to Y_1 and a fall in the price level from P to P_1.



SUPPLY SIDE POLICIES

Supply side policies are government attempts to increase productivity and shift AS to the right. Supply-side policy that increases the long-run capacity of the economy to produce can lead to an improvement in the international competitiveness of the economy, and thus lead to an improvement in the current account of the balance of payments. However, these benefits will only be seen in the long run.



Supply side policies can help the economy in various ways:

1. **Lower Inflation**: Shifting AS to the right will cause a lower price level.

2. **Lower Unemployment**: Supply side policies can help reduce structural, frictional and real wage unemployment.

3. **Improved Economic Growth**: Supply side policies will increase economic growth by increasing AS.
4. **Improved Trade and Balance of Payments**: By making firms more competitive they will be able to export more.

Examples of Supply Side Policies

1. **Privatization**: This involves selling state owned assets to the private sector. It is argued that the private sector is more efficient in running business because they have a profit motive to reduce costs and develop better services.
2. **Deregulation**: This involves reducing barriers to entry in order to make the market more competitive.
3. **Reducing taxes and State Welfare Benefits**: It is argued that lower taxes (income and corporation) increase incentives for people to work harder, leading to more output. Also, lower benefits may encourage the unemployed to take jobs.
4. **Increased education and training**: Better education can improve labour productivity and increase aggregate supply and achieve economic growth.
5. **Improving transport and infrastructure**: In a free market there is likely to be under provision of public transport. If this were increased firms would benefit from lower costs.

Causes of a Current Account Deficit

1. **Strong Consumer Demand for Imports**: If a country has a high income elasticity of demand for goods produced overseas, then demand for imports will grow quickly when the income level in an economy is rising.
2. **Overvalued or Strong Exchange Rate**: This can also result in imports to be cheaper, and cause an expenditure switching effect away from domestically produced goods towards imported goods. Similarly, if export prices are also rising due to strong exchange rate, the value of exports will fall and deficit will increase.
3. **Higher Domestic Inflation**: can make exports expensive and imports cheaper and the deficit to rise.
4. **Shift in Comparative Advantage**: Trade balances can also get affected by shifts in comparative advantage, for e.g. China, which has achieved rapid growth due to cost advantage resulting from cheap labor but this has also resulted in other countries to lose its comparative advantage.
5. **Developing Countries**: can suffer from balance of payment disequilibrium due to:

- Limited domestic production and strong reliance in imported goods for much of their consumer demand.
- As far as exports are concerned, the raw materials are sometimes imported, resulting in imports to rise.

Consequences of a Current Account Deficit

1. Foreign exchange reserves may be used to increase the financial account and so to regain balance with a deficit in the current account. However, no country, no matter how rich and powerful, is able to fund long-term current account deficits from its reserves. Eventually, the reserves would run out.

2. It may be that a high level buying of assets by foreigners is financing the current account deficit. Foreign investors may be purchasing such things as property, businesses, or stocks or shares in businesses. In this case this inflow into the financial and capital account is funding the current account deficit, but as it must be based upon foreign confidence in the domestic economy it is not considered to be harmful. However, there are sometimes fears that if foreign ownership of domestic assets were to become too great then this may be a threat to economic sovereignty. Moreover, if there is a drop in confidence then foreign investors might prefer to shift their assets to other countries. Selling the assets would result in a sharp decline in the value of these assets and even a sharp decrease in the country's exchange rate.

3. It may be that it is financed by high levels of borrowing from abroad. If this is the case then high rates of interest will have to be paid, which will be a short-term drain on the economy and will further increase the current account deficit in years to come.

4. A persistent deficit results in the government to undertake corrective measures, such as contractionary fiscal and monetary policies, which can slow down the domestic economy and cause unemployment to take place.

Does current account deficit matter?

The following factors are to be considered to assess whether the current account deficit can become a problem for a country:

1. **Size of Deficit:** A small deficit relative to a country's GDP may not be a problem because a country could easily afford it.
2. **Continuity**: A continuous deficit running for many years can be a serious problem, as compared to a deficit, which is there for a shorter duration.
3. **Cause of Deficit**: If the deficit is due to the country importing capital goods then it would result in long term economic growth for the economy, and higher living standards and may not be a problem.
4. **Affordability**: A current account deficit cannot be considered a serious problem if the country has an ease of borrowing or high levels of foreign reserves or a financial account that runs into a surplus.

Policies to correct BOP disequilibrium are expenditure switching, expenditure dampening and supply side policies

POLICIES TO CORRECT BOP DISEQUILIBRIUM

There are two broad policy approaches that can be used to correct an imbalance in the balance of payment, Expenditure Switching and Expenditure Dampening.

EXPENDITURE SWITCHING POLICY

Expenditure-switching policies are any policies implemented by the government that attempt to switch the expenditure of domestic consumers away from imports, towards domestically produced goods and services. If successful, then expenditure on imports will fall and so the current account deficit should improve. Expenditure switching policies may include import controls or devaluation.

1. **Import Controls**: It may include all the trade barriers, like tariffs, quotas or export subsidies that result in domestic consumers to switch their expenditure from imports to domestic products.

The disadvantages of these policies are:

- They interfere with the functioning of the market, and prevent consumers from benefitting from specialization and trade.
- It will also be ineffective, if the demand for imports is price inelastic, or if domestically produced goods are poor quality substitutes.

- Government's ability to adopt expenditure-switching policies is limited by its membership of the WTO and retaliation from other countries.

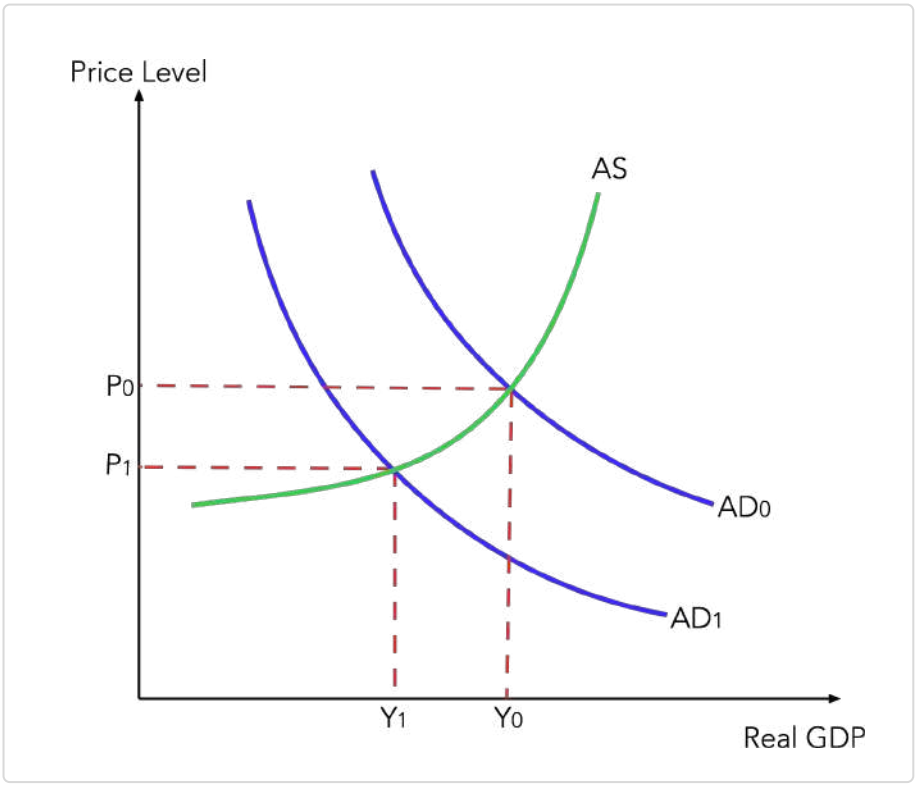
2. **Devaluation**: In the case of a country operating under fixed exchange rate regime, it can resort to devaluation, which will reduce the level of the exchange rate. Exports should become less expensive and imports should become more expensive. Depending upon how responsive domestic consumers and foreign consumers are to these price changes, this should see an improvement in the current account as export revenue rises and import expenditure falls.

Expenditure dampening policies include fiscal and monetary policies

EXPENDITURE DAMPENING POLICIES

Expenditure dampening or reducing policies are any policies implemented by the government that attempt to reduce overall expenditure in the economy and shifting the aggregate demand (AD) curve to the left. If this occurs then expenditure on all goods and services should fall and, since this would include expenditure on imports, the current account deficit should improve. Also because the domestic producers may find that their domestic market is dampened, they may try to make up for the decrease in domestic sales with an increase in sales abroad. Two tools used by the government to alter AD are Fiscal and Monetary policies.

FIGURE 7.1 **Shift of AD to the left**



Fiscal Policy

If a country is experiencing a deficit on the current account of its balance of payments, it may use a variety of fiscal policy tools. To reduce demand for goods and services including imports, it could use contractionary fiscal policy, increasing income tax and reducing government spending. A rise in income tax will reduce disposable income, leaving less income for households to spend on imports as well as products produced by domestic firms. Lower government spending will directly reduce demand for goods and services which may reduce imports and put pressure on domestic firms to increase their exports.

If a government is seeking to reduce a current account surplus, it could use expansionary fiscal policy. Lower income tax and higher government spending on, for instance, state pensions will increase consumer expenditure. More imports will be purchased and some products may be diverted from the export market to the home market.

Monetary Policy

Reducing the growth of the money supply may be used to reduce the growth in spending on imports. However, it can be difficult to control the money supply.

Changing the rate of interest to influence the current account position is a more complex process. If an economy has a low rate of inflation and a current account deficit, its

central bank may reduce the interest rate in an attempt to put downward pressure on a floating exchange rate. A lower exchange rate may result in the country's products becoming more internationally competitive, but there is a risk it may generate inflationary pressure. In contrast, a higher interest rate may act as a way of cutting consumer expenditure, reducing demand for imports and reducing inflationary pressure. It may, however, raise a floating exchange rate that could reverse the fall in demand for imports.

To reduce a current account surplus, a government may seek to increase consumer expenditure by using expansionary monetary policy. In this case, it may raise the money supply and cut the rate of interest. It might also try to encourage an appreciation of the exchange rate.

Evaluation of the Expenditure Dampening Policies

Fiscal policy measures may alter a country's current account position in the short term but are unlikely to be a long-term solution. This is because once the policy measures are stopped, households and firms are likely to go back to spending the same amount on imports relative to the amount of export revenue earned.

Raising taxes may also have adverse side effects. They lower demand, which may increase unemployment and slow economic growth. Higher taxation can also create disincentive effects and so may reduce aggregate supply.

Most monetary policy tools are not likely to be effective in reducing imbalances in the current account of the balance of payments in the long-term. This is because they are unlikely to be tackling the structural weaknesses in the economy, such as low productivity, which are causing a current account deficit. They may also not have any long-term effect on structural strengths, such as a high rate of innovation and ownership of scarce raw materials, which are causing a current account surplus.

Evaluation of Supply-side policy

Supply-side policy tools may reduce a current account deficit by making domestic products more price competitive and by making domestic markets more attractive to invest in. For instance, deregulation and privatisation may increase the competitive pressure on

domestic firms to keep costs and prices low, to improve quality and to become more responsive to changes in consumer demand.

Increased spending on education and training and increased investment subsidies may also increase exports. A more skilled labour force and better capital equipment may reduce the relative price of domestic output and raise its quality. Both of these effects will be likely to increase domestic firms' share of the home market and the international market.

A skillful labour force and good-quality capital equipment may also attract foreign multinational companies (MNCs) to set up a local branch in the country in expectation they will be able to produce good-quality products at low cost. Such multinational companies may contribute to the country's exports.

Trade union reform may enable domestic firms to work with more flexibility and so be more responsive to changes in demand. A resulting fall in industrial action combined with greater flexibility may make foreign firms more willing to buy the country's exports.

Supply-side policy is unlikely to be a quick way of correcting imbalances in the current account of the balance of payments. It is also not designed to reduce a current account surplus as it seeks to increase the quantity and quality of the country's resources. It does, however, have

the potential to correct a deficit in the current account in the long run.