

Macroeconomics

for A Level Year 2

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Macroeconomics for **A Level Year 2**

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For Sarah, Jacob, Phoebe and Clara
and
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ISBN 978-1-78014-039-1
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Anforme Ltd, Stocksfield Hall, Stocksfield, Northumberland NE43 7TN.

Typeset by George Wishart & Associates, Whitley Bay.
Printed by Potts Print (UK) Ltd.

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The Economic Cycle

Fluctuations in economic growth

Figure 1.1: The economic cycle: the four stages

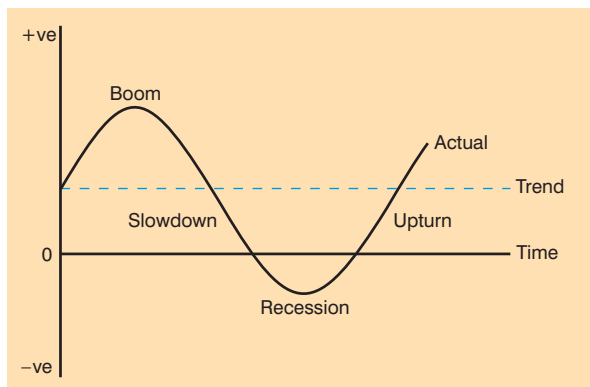
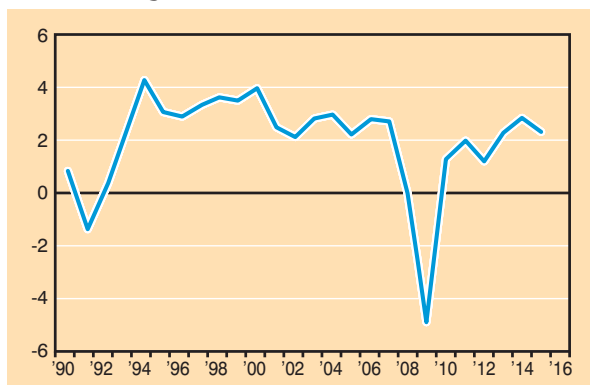


Figure 1.2: Real GDP growth in the UK, % p.a. (deflated using RPI)



Source: HM Treasury

A key role for economic policymakers (governments and central banks) is to slow aggregate demand down during a boom and speed it up in a slowdown. This is called **stabilisation policy** and helps the government and central bank to achieve the key macroeconomic policy objectives which can be listed as follows:

- Steady, sustainable economic growth
- A low inflation rate
- A low unemployment rate
- A satisfactory position on the current account of the balance of payments
- A satisfactory position with respect to the government finances/budget balance

This latter objective of 'balancing' the government's finances has taken on greater importance in recent years due to the austerity policies in place from 2010, and which now may be loosened or even abandoned by Teresa May's administration.

Theories of economic growth

A fundamental issue in macroeconomics is what causes economic growth to fluctuate. Economists separate such theories into two groups: **endogenous** and **exogenous**. Endogenous theories aim to explain economic phenomena such as the economic cycle by internal events. Exogenous theories stress the importance of external shocks in influencing economic performance.



One economic cycle theory from the nineteenth century explained recessions and booms through the recurrence of sun spots. It was proposed that the natural pattern of different levels of sunshine dictated the harvests of crops such as wheat. In a good year the output of agricultural goods would be high and food would therefore be cheap. Both the demand and supply sides of the economy would grow as households and producers both benefit. On the other hand, in years where harvests were weak there would be widespread poverty, even starvation. Economic growth would decline as both households and firms suffered from the shortage of food.

The sunspot theory may appear outdated now in an era where food availability (at least in developed economies) is rarely an issue due to capital-intensive production methods and where agricultural goods can be stored for long periods of time. Nonetheless it is a useful example of an exogenous theory: changes in levels of sunshine are very much an external factor to the macroeconomy!

We can identify four other explanations of changes in the level of economic activity. Firstly, changes in the levels of confidence; secondly, the multiplier-accelerator theory; thirdly, the stock cycle and finally the impact of shocks on the economy. We review each of these in turn.

Business and consumer confidence

Changes in the levels of **confidence** in the economy can have far-reaching implications. Both consumers and producers make spending decisions based on expectations of the future. If households expect their income to remain stable or even increase, and if firms believe that growth will be strong in the months ahead, consumption and investment will increase. The formula for aggregate demand is as follows:

$$AD = C + I + G + (X - M)$$

Where C = consumption

I = investment

G = government spending

X = exports

M = imports

For the UK, (C+I) accounts for well over half of GDP. This means that when both consumption and investment are increasing economic growth is almost certain to occur. Conversely, weaker confidence will lead to falling levels of consumption and investment as both households and firms reduce non-essential spending to adapt to more pessimistic expectations of the future.

The confidence theory of the economic cycle helps to explain how economies can move quickly from boom to slowdown. Data suggesting possible weakening of economic performance (e.g. rising unemployment or a decline in asset markets such as the stock exchange or the housing market) can be seen as evidence that a slowdown is likely. As these fears feed into lower consumer spending, firms cut investment. When combined with each other, these two effects reduce aggregate demand and the decline in confidence becomes a self-fulfilling prophecy. This theory helps to explain why politicians will invariably be as positive as possible about the economy – even in the face of clear evidence of slowdown or recession.

It can be argued that confidence can be both an endogenous or exogenous factor. In the case of the housing market, for example, prices are determined by a combination of market fundamentals (incomes, prices of related goods, levels of supply) and ‘the animal spirits’ of buyers and/or investors.

The multiplier-accelerator model

Two endogenous theories are the **multiplier-accelerator** theory and the inventory (or **stock cycle**) theory. These theories are very similar as they use the same mechanism for exploring the implications of changes in economic growth, but with different initial stimuli.

The multiplier-accelerator model combines the multiplier and accelerator effects to explain how aggregate demand can rise and fall dramatically. The theory hinges on the different ways in which consumption and investment change in response to national income. National income and consumption are positively

related: as households experience higher incomes they increase spending on goods and services. The average level of consumption (C) to national income (Y) is calculated as C/Y and is called the average propensity to consume (APC). Of greater interest to economists is the marginal propensity to consume (MPC – not to be confused with the Monetary Policy Committee of the Bank of England) which is the ratio between change in consumption with respect to a change in income. The MPC determines the size of the multiplier effect: how an increase in national income (or GDP, or aggregate demand) causes higher consumption, which in turn increases aggregate demand, resulting in further increases in consumption. The multiplier is the ratio of the overall increase in GDP to the level of the initial stimulus; for example, if an increase in government spending of £10bn increases national income by £28bn, the value of the multiplier is 2.8 (£28bn/£10bn). The value of the multiplier is calculated as:

$$1/(1-MPC)$$

(1-MPC) is also known as the marginal propensity to withdraw; it is equal to the proportion of total withdrawals to income.

$$\begin{aligned} &\text{marginal propensity to save} + \text{marginal tax rate} + \text{marginal propensity to import} \\ &= \text{marginal propensity to withdraw} \end{aligned}$$

Table 1.1

Year	Index of real GDP (base year 2000)
2012	100
2013	105
2014	108
2015	108

Table 1.2

Year	Index of real GDP	Economic growth (% change on previous year)
2012	100	
2013	105	5.0%
2014	108	2.9%
2015	108	0.0%

Table 1.3

Year	Index of real GDP	Economic growth	Consumption £bn	Investment £bn
2012	100		500	300
2013	105	5.0%	525	330
2014	108	2.9%	540	340
2015	108	0.0%	540	310

Consumption changes in line with economic growth, and thus remains flat in 2015 as GDP fails to grow. Investment behaves very differently. Between 2012 and 2013 investment grows by 10%, double the rate of economic growth. As GDP rises well above trend, firms view the future with confidence and expand supply in preparation for higher consumer spending. Even in 2014, when growth slows to 2.9%, investment grows by more than this rate. In 2015, however, when GDP growth is flat, investment falls dramatically as firms choose to cease to expand and prepare for economic contraction.



Households have to maintain a basic consumption level (autonomous consumption) regardless of income: this is spending on necessities such as food, rent or mortgage and utility bills. Firms, on the other hand, can cut investment much more sharply. A retailer may freeze all store expansion plans or cut back heavily on staff training. This reduces revenue for other firms (the building contractor who would have built the new stores, for example, or the training consultants), which, when aggregated through the whole economy, in turn leads to a slowdown in economic activity and thus economic growth and causes unemployment to rise. As the proportion of the workforce with a job declines, average household income falls and the multiplier effect will push consumption and national income downwards.

Thus the accelerator and multiplier effects combine to move the economy quickly into downturn. Table 1.4 shows the combined (C + I) value for the four years shown. (This is a hypothetical example.)

Table 1.4

Year	Index of GDP	Economic growth	Consumption + Investment
2012	100		800
2013	105	5.0%	855
2014	108	2.9%	880
2015	108	0.0%	850

With falling levels of (C + I) it is likely that, even with the possibility of growth in government spending or the current account, this economy could move into severe slowdown or recession in the near future.

Similarly, a jump in investment – as firms see greater business opportunities arise – will feed into higher consumer spending and an upwards multiplier effect. In both cases, the change in the rate of economic growth triggers a proportionately greater change in investment than consumption, but consumption quickly follows in the same direction as national income adjusts to changes in the size of its components.

Chapter 7 has data on consumption and investment in the UK which could be seen to support this theory.

The inventory cycle

The **inventory** or **stock cycle** (inventory is the US term for stocks) explains the economic cycle via changes in stock levels. Stocks in this context are raw materials, semi-finished goods or finished goods waiting to be sold (not *financial* stocks) and they perform an important function in the economy by acting as a buffer between production and consumption.

Very simply, an economy aims to produce the goods which are demanded by households, but the supply process is complex. Raw materials are extracted and processed into manufactured goods which are then distributed through wholesalers to retailers and sold to consumers. But as the exact demand for a particular good is unpredictable, at each stage of supply there are stocks. Retailers buy the supplies of, say, bottled mineral water that they think they will need to meet demand, but they will often overstock a good as demand may suddenly increase (e.g. due to a spell of hot weather) and they do not wish to lose customers to a rival firm if stocks run out. Similarly, wholesalers will hold stocks to cater for surges in demand from their customer: the retailer.

When economic growth is strong, i.e. during a boom, stocks will at first run down as consumers increase demand above usual levels and retailers see stocks fall. They increase their orders from their suppliers, who in turn will demand higher production from factories, who in turn buy more raw materials. The increase in demand feeds all the way back through the supply process until all agents adapt to the higher level of economic activity in their sector and stock levels return to their usual levels. However, if there is a downward change in consumer demand stocks will quickly accumulate throughout the supply chain. This may take time to clear even when demand rises again. This helps explain the persistence of recessions even when some economic indicators are signalling an upturn.

Exogenous demand and supply shocks

The models outlined above are good at showing how changes in confidence or household and business behaviour can quickly change the direction of economic growth. However, none gives a complete picture of how a recession (or boom) can result from first principles, i.e. *what causes* the initial shift in confidence or spending levels.

Exogenous demand shocks are external influences on the components of aggregate demand (consumption, investment, government spending, exports and imports) and they may result from a wide-ranging set of changes. They include, for example, a change in household taxation, shifting opportunities for expansion and profitability in the world economy and a change of government with new economic policies and attitudes to the optimal level of government intervention in the economy. Other possible sources of change relate to overseas demand (itself resulting from growth, employment and spending levels in other economies) or changes in the tastes for and relative prices of foreign-produced goods in the domestic economy.

Exogenous supply shocks are external influences on supply decisions, most typically those influencing the costs of extraction, production and distribution of raw materials, energy and goods and services.

Real world examples of exogenous shocks in recent years include (but are certainly not limited to) the 9/11 attacks on the World Trade Centre, the 7 July 2005 attacks in London and conflict in the Middle East. Other examples not associated with terrorism and wars are the growth of the internet and the rise and fall of the dot com industry in the late 1990s, the growth of cheap airlines, the expansion of the European Union and the fall of the Iron Curtain. Still more examples are various stock market and housing market bubbles and crashes, more open trade policy in China, the Credit Crunch and pro- and anti-globalisation policies by various governments. In each case, there are usually always both demand and supply-side effects and thus AD and/or SRAS and LRAS are likely to shift.

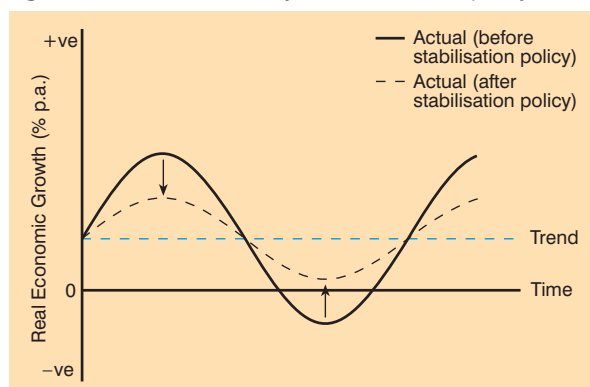
Demand-side shocks influence the actual level of (real) GDP in the economy and thus will determine the length and severity of upturn, boom, slowdown and recession. Supply-side shocks will affect both the actual and trend rate of growth and may therefore increase or reduce the productive potential of the economy. These factors will be discussed in greater detail in Chapter 3.

Stabilisation policy: managing the economic cycle

Demand management policy is used to control fluctuations in the macroeconomy over the course of the economic cycle. This is also called stabilisation policy and takes two main forms in the UK: fiscal policy and monetary policy.

Fiscal policy uses government spending and taxation to influence the level of spending in the economy, either directly (G is a component of aggregate demand) or indirectly (higher or lower levels of tax will reduce or increase consumption and possibly investment levels). The supply-side influence of fiscal policy is also increasingly being recognised as an important driver of long-run growth.

Figure 1.3: The economic cycle: stabilisation policy



Monetary policy uses the price (the interest rate) and the quantity of money (money supply) to target aggregate demand. Interest rates, as influenced by the base rate of interest set by the Bank of England, affect consumption, investment and (see Chapter 5 for more detail) the current account of the balance of payments.



If used effectively, fiscal and monetary policy can even out the fluctuations of the economic cycle and move actual growth nearer to the trend rate of growth as shown in Figure 1.3.

Output gaps are the difference between actual output and potential output. A positive output gap occurs when actual GDP is above the productive potential of the economy, and negative output gaps occur when actual GDP is below the productive potential. Output gaps (both positive and negative) are smaller in both boom and recession after successful intervention, but demand management policy is much more difficult in practice than theory.

Limitations on the effectiveness of demand management policy

There are several reasons why the use of stabilisation policies in practice encounter problems.

Government failure and time lags (fiscal and monetary policy)

Government failure arises when intervention fails to increase, or actually decreases, social welfare. This may arise if policies aimed at improving macroeconomic performance fail to do so. Imperfect information regarding the performance of the economy can result in inappropriate policy, and this can be exacerbated by sudden changes in the economy such as those resulting from exogenous shocks. If there is a belief that the economy is growing strongly then tighter demand management policy will be applied to slow down growth and dampen inflationary pressures. However, if growth slows of its own accord due to internal or external factors, the higher taxes and interest rates may bite just as the economy requires the opposite policy.

Both fiscal and monetary policies involve **time lags** between the identification of a problem, the implementation of an appropriate policy, and the full impact of that policy instrument on output, jobs and prices.

Financial disintermediation (monetary policy)

A problem specific to monetary policy in an increasingly globalised world is that of **disintermediation** in credit markets. Disintermediation occurs when middlemen in a supply chain are removed, increasing the transparency of a market. In credit markets the price of debt is the interest rate, and domestic monetary policy depends on the careful control of interest rates, via the base rate. Thus if inflation in the UK is increasing the Bank of England will raise the base rate. This increases the cost of borrowing for UK banks, who in turn can pass on this higher cost to households and firms in commercial rates of interest on loans.

However, UK banks can increasingly borrow money from foreign lenders where rates will be determined by foreign base rates. Thus greater competition in global credit markets reduces the power of domestic policy making.

The constraints of fiscal rules

In the past policies such as the **golden rule** limited current government spending to tax receipts over the course of one economic cycle. The **sustainable investment rule** limited capital spending to a level which will not see national debt rise above 40% of GDP. In the Eurozone the **Stability and Growth Pact** limits a country's budget deficit to a maximum of 3% of GDP and national debt to a maximum of 60% of GDP. Experiences of both the UK (which suspended its own fiscal rules in light of the recession in 2008–09, and later undertook more drastic austerity measures) and the Eurozone (which made the Stability and Growth Pact more flexible in 2005, but has been forced to accept breaches of its rules by even some of the stronger European economies) have brought into question the usefulness of such constraints. The key criticism is that authorities will adhere to rules until it is convenient for them to be broken!

The constraints of taxation principles

Fiscal policy may be constrained by its impact on society and perceptions of 'fairness' and 'value for money' from public services. Most people consider a progressive tax (where, as income rises, a higher proportion is paid in tax) as more desirable than a regressive tax (where, as income rises, the proportion



Governments often find it easier to justify tax increases on demerit goods such as alcohol, cigarettes and petrol.

paid in tax declines). We can refer to an effective tax as one which is fair (related to ability to pay) and economic to collect (administrative costs do not exceed the revenue generated). On a wider level, it might be useful to consider 'the 4R's of taxation': representation (accountability on the part of the Treasury to use funds fairly and effectively), repricing (correcting for externalities), redistribution (higher income households can afford to pay taxes more, and require the help of government less, than poorer households) and revenue (funding public expenditure). These facets of taxation hamper full freedom to deploy fiscal policy. Moreover changes in levels of spending and taxation will rarely affect all households and firms equally and thus the pattern of fiscal policy can affect certain groups as much as the overall fiscal position.

Governments often find it easier to justify tax increases if they are imposed on demerit goods such as alcohol, cigarettes and petrol. But relying on these goods to raise indirect taxation may distort patterns of expenditure and economic activity, and may even harm the macroeconomy if the good being taxed more heavily is exported, for example.

Direct taxation (income taxes) is the most important source of tax revenue in the UK. Changes in the level of income tax have influences on both a microeconomic and macroeconomic level. If the top rate of income tax was raised, for example, to increase funding to the NHS, this would help to redistribute income at the expense of slower economic growth. The microeconomic impact, however, could involve higher levels of employment in the NHS (more jobs for doctors, nurses and other staff) and job creation and higher profits for suppliers of drugs and medical equipment. In contrast, businesses depending on spending by the higher income households who are now paying more tax may suffer, for example swimming pool manufacturers or luxury car showrooms. This illustrates how a change in government spending or taxation may impact on the private sector such that the intended change in aggregate demand is not realised.

Crowding out

Crowding out is a controversial theory which examines the impact of looser fiscal control on the economy. It explores the impact of higher government spending on the economy, and in particular the effect on investment. With respect to the formula for aggregate demand earlier in the Chapter, the argument is that



higher G may actually reduce I , thus negating the fiscal expansion. Crowding out provides a critique of 'bigger government': put simply, an increase in government activity in the economy reduces the opportunities for private investment.

Closely related to the concept of crowding out is '*crowding in*'. This is the theory that tighter fiscal discipline in the form of lower government spending can actually boost the economy through creating stronger incentives for private investment. Both of these concepts argue in favour of smaller government.

Summary questions

1. What problems are caused by fluctuations in the level of aggregate demand in the economy?
2. Explain the importance of confidence in the macroeconomy.
3. Distinguish between the multiplier effect and the accelerator effect and show how changes in the level of economic activity may have different impacts on consumption and investment.
4. What are exogenous shocks? Give an example of one demand-side and one supply-side shock from recent years.
5. Summarise the key limitations in using monetary and fiscal policy to control the macroeconomy.

Extension questions

- A. What theory (or combination of theories) do you believe best explains the phenomenon of the economic cycle?
- B. There is an argument that the 'economic cycle' is no more than a coincidence of periodic adjustments to external events – and thus not a regular cycle at all. To what extent do you agree with this point of view? What evidence may support this argument?
- C. Evaluate the impact on macroeconomic performance and stability of abandoning austerity in favour of a more expansionary fiscal policy stance.

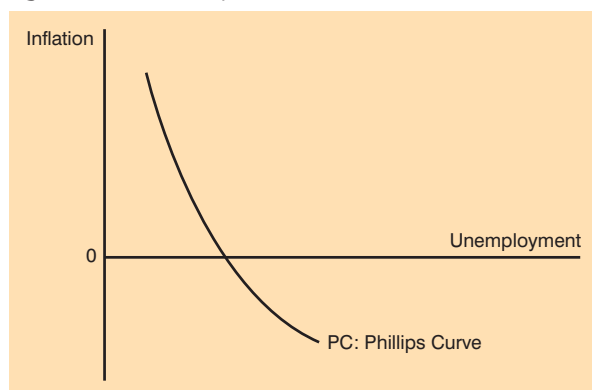
Policy Conflict in the Macroeconomy

Macroeconomic management is constrained by policy conflict: changes in policy to influence one macroeconomic target can have knock-on effects on others. The main macroeconomic objectives of government were identified in the previous chapter.

Inflation and unemployment

One of the key policy conflicts in macroeconomics is that between inflation and unemployment. This relationship has for many years been the subject of much debate. Inflation tends to rise when there is strong growth in aggregate demand (demand-pull inflation) and firms face shortages of factors of production (resulting in higher factor prices and thus cost-push inflation) and some of these higher costs will be passed onto consumers. In addition, households demand higher incomes to maintain the real value of their earnings. In extreme cases the interplay of higher prices and the subsequent wage demands can result in a wage-price spiral.

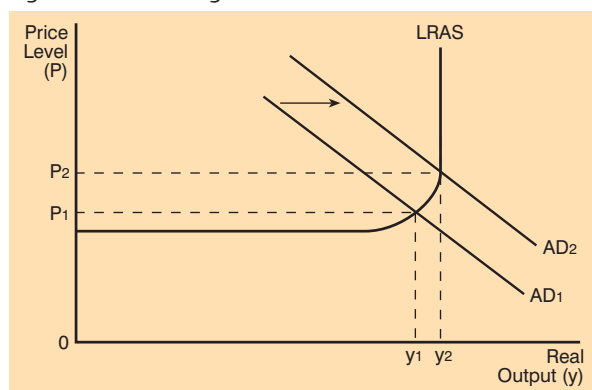
Figure 2.1: The Phillips Curve



Unemployment increases when aggregate demand is growing below trend and thus demand-deficient or cyclical unemployment is closely linked to downturn or recession.

It appears that the relationship between inflation and unemployment is therefore negative: as the economy grows more quickly, we expect to see higher inflation and lower unemployment. Hence there is a trade-off between inflation and unemployment and this relationship was first formalised in the Phillips Curve as shown in Figure 2.1

Figure 2.2: The Long-Run AS Curve



Throughout the 1950s and 1960s Keynesian economists believed that governments could choose between low inflation and low unemployment – or a compromise point in the middle. Fluctuations in the level of aggregate demand (the economic cycle) would cause movements along the curve, but these changes could be controlled with demand-side policies such as fiscal and monetary policy. Given the Keynesian Long-Run Aggregate Supply curve, higher aggregate demand leads to higher real output

and falling unemployment is accompanied by rising inflationary pressure as shown in Figure 2.2. It was therefore the role of government to use demand management measures – fiscal and monetary policy – to move the economy to the desired point on the Phillips Curve.

However, the Phillips Curve trade-off appeared to break down in the 1970s in major economies such as the UK and USA. Whereas the post-war period had been a time where economies suffered from the threat of high inflation or high unemployment, a combination of factors created the simultaneous pressures of



Figure 2.3: Stagflation and the Phillips Curve

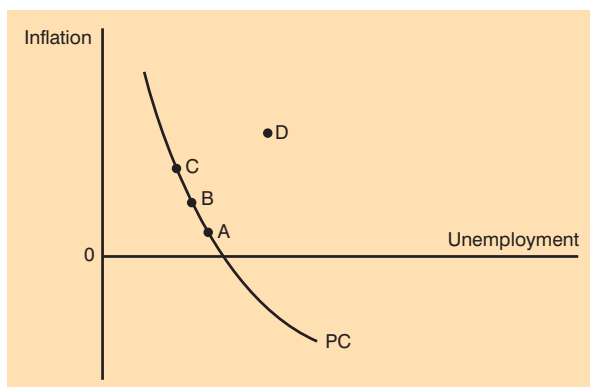
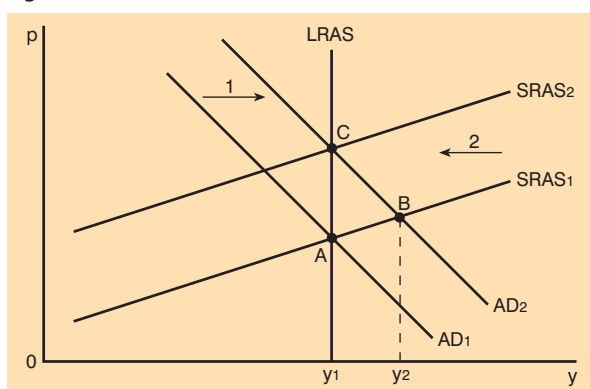


Figure 2.4: The Monetarist view



higher inflation and higher unemployment. Such a scenario is known as **stagflation** – a stagnant economy (low or negative growth, with high unemployment) combined with high inflation.

On Figure 2.3 points A, B and C represent combinations of inflation and unemployment which correspond to the trade-off position described above in the Phillips Curve. But when both variables increase there is a movement away from the curve – for example point D on the diagram. So the Phillips relationship would then no longer seem a robust one.

The post-war Keynesian consensus came under real scrutiny in the 1970s. The key figure in the anti-Keynesian school was Professor Milton Friedman at the University of Chicago who became synonymous with the Monetarist school. **Monetarists** (a term used loosely along with Supply-Siders and Neo-Classicalists) argued that the 1950s and 1960s had been characterised by governments running budget deficits to fund public

expenditure, and this had inevitably led to inflation. The Keynesian school had argued that higher aggregate demand resulting from loose fiscal and monetary policies may have allowed inflation to occur but this was offset by the benefits of lower unemployment. The Monetarist school, however, argued that in the long-run the only consequence of expansionary demand policies was high inflation.

Starting at point A in Figure 2.4, an increase in aggregate demand from AD1 to AD2 may be caused by either government policy (budget deficit or lower interest rates) or a boom in the economy. In the short-run this increases real output from y_1 to y_2 , opening an output gap (the difference between actual GDP, y_2 , and potential GDP, y_1). However, the Classical or Monetarist school would argue that this increase in real output pushes up prices as bottlenecks occur in the economy. There are now shortages of factors of production, particularly labour, and this pushes up wages, rents, energy costs and raw material prices. This upward pressure on costs forces the short-run aggregate supply curve upwards from SRAS1 to SRAS2. Wages will rise until real output and unemployment return to their original levels at y_1 .

The movement from point A to B on Figure 2.4 represents an increase in inflation and a fall in unemployment. This appears to support the picture of the macroeconomy represented on the conventional Phillips Curve. However, the Monetarists would argue that point B is not sustainable in the short-run: in the long-run the economy moves back to point C. This combination of short-run and long-run positions is represented by the Short-Run Phillips Curve (SRPC) and Long-Run Phillips Curve (LRPC). Points A, B and C on Figure 2.5 are equivalent to the points on Figure 2.4, and LRPC – like LRAS – is vertical.

For the Monetarists, therefore, as with the Classical Model, the long-run real output level is determined entirely by supply-side factors: factor productivity and the incentives given to households and firms to supply labour and enterprise to the economy.

Demand management policy and the LRPC

Figure 2.5: The Long-Run Phillips Curve

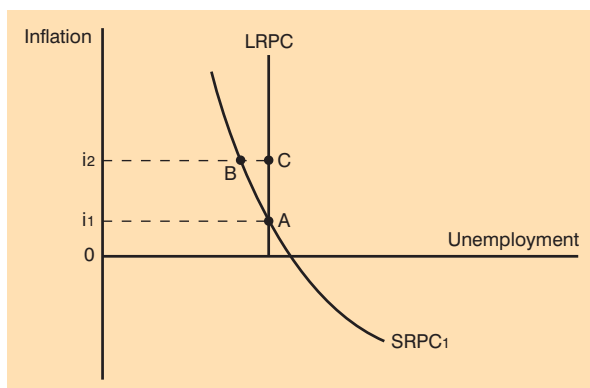
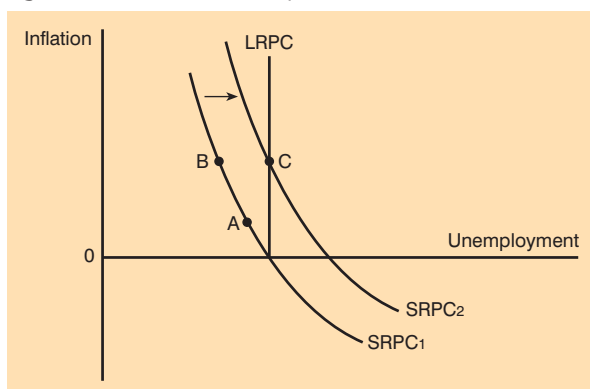


Figure 2.6: Short-Run Phillips Curves



Stagflation in the 1970s seemed to be explained using the Monetarist view of the economy. If the government decides to reduce unemployment they can use expansionary fiscal policy (lower taxes and/or higher government spending) or expansionary monetary policy (lower interest rates and/or higher money supply), both of which will hopefully increase consumption and investment. But, building on Figure 2.5, this will increase inflation and reduce unemployment, but only in the short-run. Figure 2.6 shows how increasing AD will push SRPC1 out to SRPC2 in the long-run.

This view is linked to the Monetarist interpretation of the Fisher Equation, also known as the Quantity Theory of Money. It is given (regardless of economic philosophy) that the following identity is true:

$$MV = PT$$

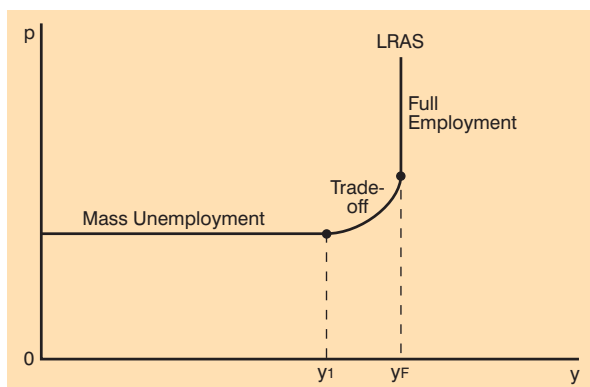
M is the money supply (in simple terms, the total value of notes and coins in circulation), V is the velocity of circulation (the number of times a given note or coin changes hands in,

say, one year), P is the price level (the average price goods and services are traded for) and T is the number of transactions (effectively, the real output of the economy, or y).

According to the Monetarists, V and T are constant. This means that any increase in money supply – such as printing money to fund higher government spending – will directly feed into higher prices. In the words of Milton Friedman, ‘inflation is always and everywhere a monetary phenomenon’. Yet the assumption that V and T are constant is itself controversial. If even one of these variables is allowed to change – say, T – it can be shown that an increase in the level of money in the economy can have one of three impacts, rather than just one. These changes are shown below:

1. Constant P, higher T
2. Higher P and higher T
3. Higher P and constant T

Figure 2.7: The Keynesian Curve

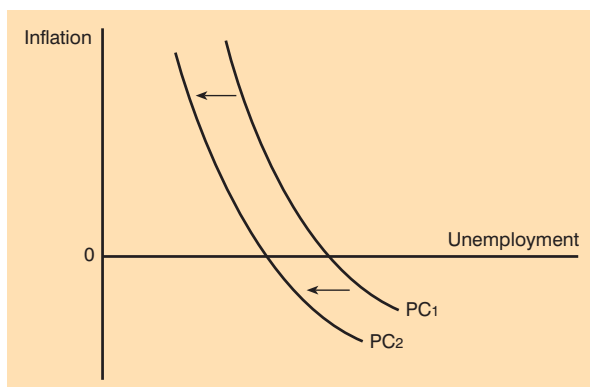


If the number of transactions is equivalent to real output (both measure the quantity of goods and services traded over a given period of time) these differing outcomes can be represented on the Keynesian view of the Long-Run Aggregate Supply Curve as shown in Figure 2.7

The flat section of the curve (mass unemployment) shows that real output can grow with no increase in prices. As the economy nears full employment there is an increasing



Figure 2.8: A leftward shift in the Phillips Curve



due to technological innovation or higher labour market participation) can move the Phillips Curve inwards – as shown in Figure 2.8.

trade-off between higher real output and higher prices, until at full employment (yF) any attempt to increase real output will be unsuccessful, only resulting in higher prices.

The Keynesian riposte to the Monetarist critique of the Phillips curve is that stagflation results from supply-side rather than demand-related pressures. Thus when supply-side growth is low and costs are rising (for example, due to oil crises or high levels of trade union power) the Phillips Curve will shift outwards; similarly, supply-side growth (e.g.

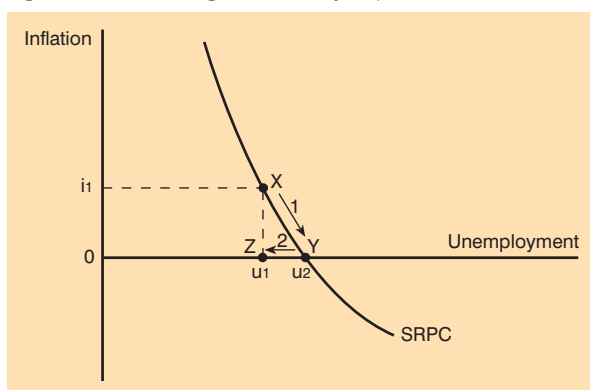
A shift in the Short-Run Phillips Curve

The early 1980s were a fascinating period for economists (if a very difficult time for many of the people living at the sharp end of the economy) as the competing ideologies of Keynesians and Monetarists competed to explain the difficulties experienced in Western Europe and the USA. On both sides of the Atlantic there were governments which adopted the views of Friedman and his followers; in the UK, this was known as **Thatcherism** and, in the USA, **Reaganomics**.

If inflation was seen as a monetary phenomenon, the cure for inflation was to reduce monetary expectations. In the UK, after years of strong trade union power which pushed up costs and reduced productivity, the Thatcher government systematically reduced trade union power at the same time as operating tight monetary and fiscal policies. As aggregate demand slowed, unemployment continued to rise. At the same time, the process of deindustrialisation was underway and the UK economy experienced falling levels of employment in the energy and manufacturing sectors; unemployment reached 3 million in 1983 and continued to rise until 1985.

Despite the problem of unemployment, government policy was focused on inflation. In today's economic climate where the annual rate of CPI inflation is around zero struggling to reach the 2% target, it is easy to forget that in May 1975 the RPI measure of inflation recorded a figure of 4.2% per month – an annual inflation rate of 24.2% for 1975 as a whole.

Figure 2.9: Reducing inflationary expectations



and the economy returns to the long-run equilibrium output and unemployment levels at point Z, with zero inflation.

The impact of economic slowdown in the Monetarist model is shown in Figure 2.9.

As the economy moves along SRPC from point X to point Y there is higher unemployment and lower inflation in the short-run. The Monetarists argued that only by reducing inflationary expectations – breaking the wage-price spiral which fuels inflation – could households and firms regain a belief that prices and costs will be more stable. In the long-run, provided expectations are permanently shifted, the SRPC shifts inwards

Thus the opposite of stagflation – falling inflation and falling unemployment – is possible, but only through what may be a painful adjustment of consumer and business expectations. Chapter 3 will explore other ways in which the ‘holy grail’ of economists – low-inflationary growth – can be achieved.

Types of unemployment

Both the Keynesian and Monetarist models agree that even in a stable economy there may be some unemployment. For the economists this may be due to a degree of demand-deficiency, perhaps because the government is controlling aggregate demand to control inflation, but also due to frictional and structural factors.

Frictional unemployment is also called **search unemployment**, and arises when workers are between jobs. Frictional unemployment will always exist in an active labour market as redundancies occur, people take career breaks to travel or have a family, and as students leave education and try to enter the workforce. Furthermore, it is desirable that scarce labour resources are moving from shrinking to growing sectors. It may be the case that frictional unemployment will rise if economic growth is lower: the fewer job opportunities available, the longer it takes for workers to find a job at an acceptable wage.

Structural unemployment, on the other hand, presents a more intractable problem. This occurs when there is a mismatch between skills and vacancies; the labour market is creating jobs but they are not suitable for the workers who have seen their jobs disappear. Structural unemployment is a major problem in periods of deindustrialisation or when there is a major shift in the global pattern of production and demand.

Monetarists also stress the phenomenon of **real wage** or **classical unemployment**. The main difference between the Classical model (and its updated version, Monetarism) and the Keynesian model is the degree to which wages will adjust to soak up excess demand or supply of labour. In the case of recession, if wages

are suitably flexible they should fall as the unemployed bid down the wages of the employed: microeconomic theory tells us that wherever there is excess supply for a good, price will fall. Thus unemployment effectively cures itself by forcing down the wages of all workers and increasing the employability of labour. Similarly, when demand is high and the economy is booming, this will create a labour shortage and drive wages upwards. Therefore any worker who remains without a job in the long-run is choosing to not work at the prevailing wage rate and is therefore voluntarily unemployed.

Keynes disagreed with this analysis. He proposed that labour markets did not work this simply and the ‘downwards stickiness’ of wages led to involuntary unemployment which could persist in the long-run.

The level of unemployment at U_1 on both Figures 2.10 and 2.11 is called the **natural rate of unemployment (NRU)** or the **non-accelerating inflation rate of unemployment (NAIRU)**.

Figure 2.10: NAIRU – Monetarist view

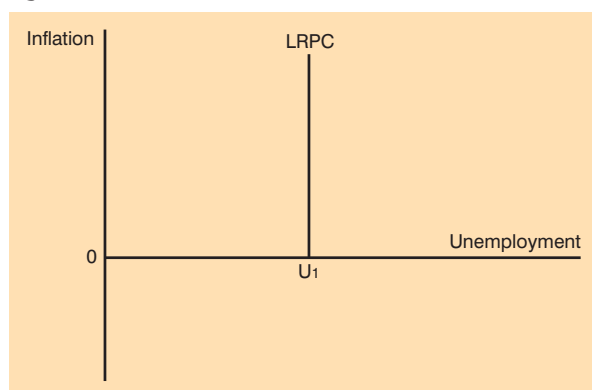
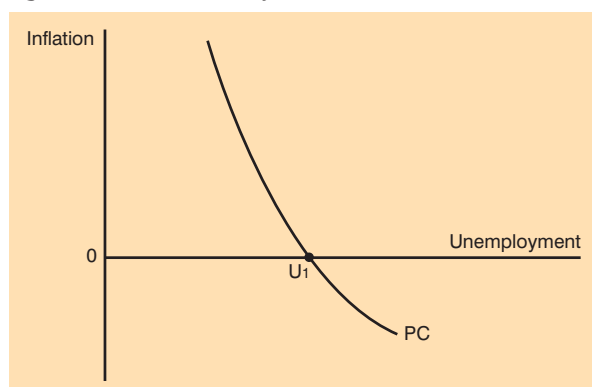


Figure 2.11: NAIRU – Keynesian view





There are various technical differences between these two measures, but at this level it is satisfactory to attribute the unemployment at both points to a combination of frictional, structural and real wage factors. The degree to which labour markets fail to clear, in either the short-run or long-run, therefore determines the natural rate of unemployment.

Types of inflation

Figure 2.12: Cost-push inflation

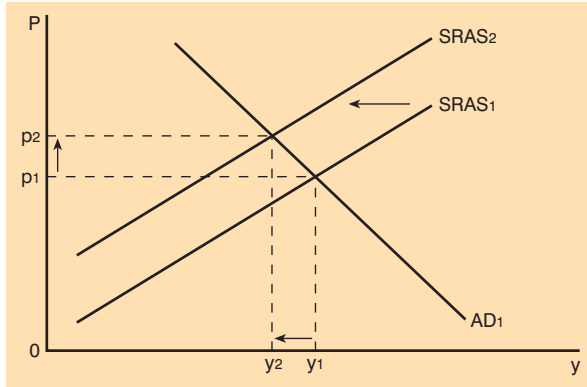
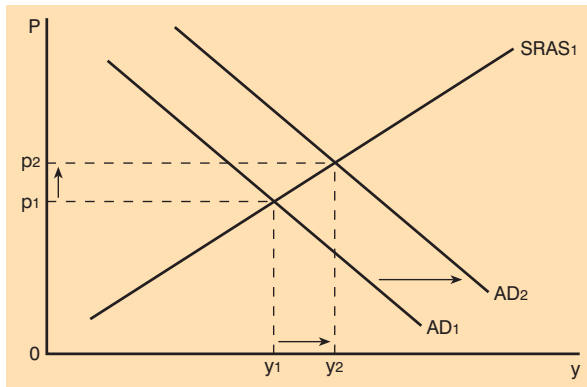


Figure 2.13: Demand-pull inflation

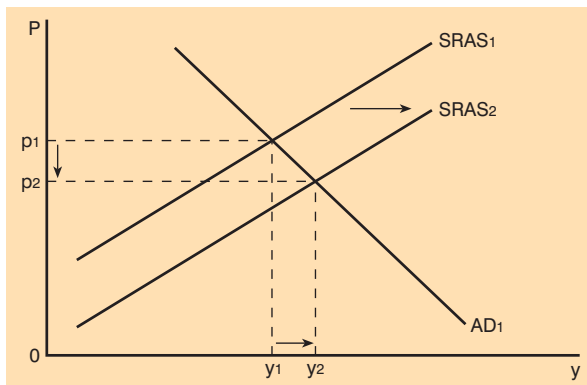


The causes of inflation can be divided into two types: cost-push and demand-pull. These are illustrated in Figures 2.12 and 2.13.

Inflation is a sustained increase in the general level of prices and this is measured using a price index. This index reflects the cost of living in the economy: the total prices of necessity goods (fuel, housing, food and clothing) and luxuries (e.g. cars, books about economics, music and holidays). These prices are weighted to produce a typical 'basket of goods' and in the UK are collected via the Family Expenditure Survey. RPI (Retail Price Index) and CPI (Consumer Price Index) monitor the total price of a 'basket of goods' over time; this basket reflects the typical expenditure of an average household. The basket is updated to reflect changes in tastes and the CPI is particularly sophisticated in the way it makes substitution decisions where the price of one good has risen or fallen. For example, if the price of air travel rises the weight used for flights will fall slightly and a substitute, such as rail travel, will see a slight rise in its weighting.

Price deflation arises when the sum total price of the basket of goods falls. Falling prices in individual markets is not uncommon; the price of a laptop computer, for example, has declined over the past 10 years despite the fact that the newer models are of significantly higher quality. However, it is rare for the price of the whole basket to fall such as it did by 0.1% in the UK in April 2016. Deflation, when it does arise, can be the result of firms producing the basket of goods more cost effectively or it can be because firms

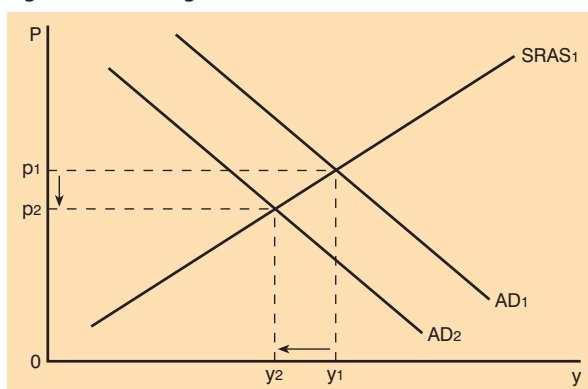
Figure 2.14: Benign ('good') deflation



are forced to drop prices in a bid to attract custom at a time of falling incomes and weak aggregate demand. If households are spending less it can be a very worrying sign that an economy is about to experience a rapid downturn or recession.

Deflation can therefore be seen as either benign (higher supply due to competition or technological breakthrough leading to falling prices and higher output levels – see Figure 2.14) or malign (falling demand due to falling incomes and confidence leading to falling

Figure 2.15: Malign ('bad') deflation



prices and lower output levels – see Figure 2.15).

The role of expectations is important in determining the degree of inflationary pressure in the economy. In the 1970s when inflation was very high, workers reacted to increases in the cost of living by demanding high wage increases to attempt to maintain (at the minimum) constant real incomes. This increased the costs of employers and prices rose as firms tried to pass some of these higher costs onto consumers. Thus demand-

pull and cost-push factors combined to create a **wage-price spiral**. Figure 2.9 earlier in the chapter shows the deflationary policies necessary in such circumstances to bring such extreme levels of inflation under control.

Summary questions

1. What does the conventional Phillips curve show?
2. To what extent does stagflation appear to break down the Phillips curve relationship?
3. What insight does the Phillips curve offer in terms of designing suitable policy responses to problems in the macroeconomy? Should different types of inflation and unemployment be treated differently?
4. What are the weaknesses and dangers of using a price index to model inflationary experiences in the economy? Why may different groups (such as pensioners, students) be vulnerable to microeconomic changes which may be averaged out for the economy as a whole?
5. Distinguish between 'good' deflation and 'bad' deflation. How would we know which type of deflation the economy is experiencing?
6. How does the Phillips curve show the possible advantages of market-based supply side policies? Are there any other policy conflicts created by policies such as privatisation and deregulation?

Extension questions

- A. Why may the Classical school of thought have believed that wages could adjust perfectly in the long-run? Could this be linked to the nature of the UK and other European economies in the 18th and 19th Centuries?
- B. In light of your answer to Question 1 above, how might the attempts of the Monetarist economists in the UK and USA be linked to the assumptions made by Classical economists before the 1930s?
- C. The rational expectations school can be seen as an adaption and extension of Monetarist theory. This model proposes that any increase in AD, or the money supply, will only create inflation and there will be no increase in real output or fall in unemployment – even in the short-run. Find out more about the rational expectations model and see how it fits into the ideas discussed in this chapter.