the loans. If firms and consumers are pessimistic about future economic conditions, they may avoid taking out new loans, and may even reduce their investment and consumer spending, in which case aggregate demand will not increase (it may even decrease), and monetary policy will be unable to pull the economy out of recession. This is not something that happens often; however, it appears to have occurred during the Great Depression of the 1930s, in Japan in the late 1990s and early 2000s, and in the global recession that began in the autumn of 2008.

- **Conflict between government objectives.** Manipulation of interest rates affects not only variables in the domestic economy (consumption and investment spending, inflation, unemployment) but also variables in the foreign sector of the economy, such as exchange rates. The pursuit of domestic objectives may conflict with the pursuit of objectives in the foreign sector (see Chapter 14).
- **Inability to deal with stagflation**. Monetary policy is a *demand-side policy*, and is therefore unable to deal effectively with supply-side causes of instability, just like fiscal policy (see page 329 for a full discussion).

Test your understanding 12.6

1. Explain why both fiscal and monetary policies are not very well suited to dealing with instabilities caused by decreases in *SRAS*.
2. **(a)** What is inflation targeting? **(b)** Explain some of the strengths and weaknesses of this type of monetary policy.
3. Explain some strengths and weaknesses of monetary policy.

12.4 Supply-side policies

Objectives of supply-side policies

- Explain that supply-side policies aim at positively affecting the production side of an economy by improving the institutional framework and the capacity to produce (that is, by changing the quantity and/or quality of factors of production).
- State that supply-side policies may be market-based or interventionist, and that in either case they aim to shift the *LRAS* curve to the right, achieving growth in potential output.

Supply-side policies focus on the production and supply side of the economy, and specifically on factors aimed at shifting the long-run aggregate supply (*LRAS*) or Keynesian *AS* curves to the right, to increase potential output and achieve long-term economic growth (see Figure 9.14, page 255). They do not attempt to stabilise the economy by reducing the severity of the business cycle. Instead, they focus on increasing the quantity and quality of factors of production, as well as on institutional changes intended to improve the productive capacity of the economy.

There are two major categories of supply-side policies: **interventionist** and **market-based**. Interventionist policies rely on government intervention to achieve growth in potential output, and are usually favoured by economists influenced by Keynesian economic thinking. Market-based policies emphasise the importance of well-functioning competitive markets in achieving growth in potential output, and are usually favoured by monetarist/new classical economists.

Interventionist supply-side policies

Interventionist supply-side policies presuppose that the free market economy cannot by itself achieve the desired results in terms of increasing potential output, and argue that government intervention in specific areas is required. Earlier in this chapter we discussed some of the measures involved under the heading 'Fiscal policy and long-term economic growth' (page 326). Here we will see that these policies form part of interventionist supply-side policies.

Investment in human capital: education and health services

- Investment in human capital: Explain how investment in education and training will raise the levels of human capital and have a short-term impact on aggregate demand, but more importantly will increase *LRAS*.

Investment in human capital can take the following important forms:

- **Training and education.** More and better training and education lead to an improvement in the quality of labour resources, increasing the productivity of labour, which is one of the key causes of economic growth (see page 297). Education, you may also remember, has numerous positive externalities, thereby justifying government intervention. Public training and education programmes can assist workers to become more employable, thus reducing the natural rate of unemployment. Specific measures include setting up retraining programmes for structurally unemployed workers to obtain skills in

greater demand; assisting young people to pursue training and education through grants or low interest loans; direct government hiring and provision of on-the-job training; providing grants to firms that offer on-the-job training; offering subsidies to firms that hire structurally unemployed workers; assisting workers to relocate to geographical areas where there is a greater demand for labour through grants and subsidies (such as provision of low-cost housing); providing information on job availability in various geographical areas; establishing government projects in the depressed areas that result in new employment creation.

- **Improved health care services and access to these.** When workers (and the general population) have access to good quality health care services, they become healthier and more productive. Improved health care services and access to these by the working population is therefore another factor leading to improvements in the quality of labour resources, increasing the economy's potential output. Health care also has many positive externalities, justifying government intervention. (See Chapter 17, page 463, for a full discussion of the positive externalities of education and health.)

Investments in human capital result in an increase in aggregate demand over the short term, and over the longer term lead to increases in potential output, by shifting the *LRAS* or Keynesian *AS* curves to the right.

Investment in new technology

- Investment in new technology: Explain how policies that encourage research and development will have a short-term impact on aggregate demand, but more importantly will result in new technologies and will increase *LRAS*.

Research and development (R&D) is the fundamental activity behind the development of new technologies, resulting in new or improved capital goods (physical capital), which is another important cause of increases in potential output and economic growth (see page 297). R&D also has positive externalities, thereby justifying government intervention (see page 113).

Governments in many countries around the world are therefore heavily involved in R&D. In addition, governments often provide incentives to private sector firms to engage in R&D activities; these usually take the form of tax incentives, as well as the granting of patents for the protection of inventions.

Government spending in support of new technology development leads to increases in aggregate demand over the short term and increases in potential output over the longer term shifting the *LRAS* or Keynesian *AS* curves to the right.

Investment in infrastructure

- Investment in infrastructure: Explain how increased and improved infrastructure will have a short-term impact on aggregate demand, but more importantly will increase *LRAS*.

Infrastructure is a type of physical capital, and therefore results from investment; it includes power, telecommunications, roads, dams, urban transport, ports airports, irrigation systems, etc. Many types of infrastructure qualify as merit goods or public goods, thereby justifying government intervention. More and better infrastructure increases efficiencies in production as it lowers costs. Good road, railway and other transport systems, for example, save time and effort spent in transporting goods and services, allowing more output to be transported and costs to be lowered. The availability of effective telecommunications permits faster and easier communications, enabling economic activities to be carried out more efficiently. More and better infrastructure improves labour productivity. Investments in infrastructure therefore work to increase aggregate demand over the short term, but they also contribute to increases in potential output and *AS* increases over the longer term.

Industrial policies

- Industrial policies: Explain that targeting specific industries through policies including tax cuts, tax allowances and subsidised lending promotes growth in key areas of the economy and will have a short-term impact on aggregate demand but, more importantly, will increase *LRAS*.

Industrial policies are government policies designed to support the growth of the industrial sector of an economy. All policies considered above, government investments in human capital, new technologies and infrastructure are industrial policies. Further measures that fall under industrial policy include the following:

- **Support for small and medium-sized enterprises or firms (SMEs).** Governments can provide support to small and medium-sized firms, which may take the form of tax exemptions, grants, low-interest loans and business guidance. This provides support for the private sector, promoting efficiency, more capital formation, more employment possibilities and therefore increases aggregate demand as well as potential output.
- **Support for 'infant industries'.** 'Infant industries' are newly emerging industries in developing countries, which sometimes receive

government support in the form of grants, subsidies, tax exemptions, and tariffs or other forms of protection against exports (we will study these in Chapter 14). This also provides support for growth of the private sector and increases in aggregate demand and growth in potential output.

Market-based supply-side policies

In the early 1980s, some highly influential monetarist/new classical economists in the United Kingdom and the United States began to emphasise the view that growth in real GDP depends on the supply side of the economy. This view was adopted by the government headed by Margaret Thatcher in the United Kingdom, and by the government under Ronald Reagan in the United States. Since then, many governments throughout the world have pursued policies influenced by market-based supply-side thinking. In this view, the economy's real GDP tends automatically towards long-run full employment equilibrium and potential GDP (see page 249). The focus of government policies should therefore be less on stabilisation, and more on creating conditions that allow market forces to work well.

This perspective suggests that an economy pursuing supply-side policies will be able to achieve rapid growth, price stability and full employment all at the same time. These advantages are seen to arise because as the economy tends towards full employment equilibrium, it automatically eliminates recessionary and inflationary gaps, thus eliminating the problem of unemployment in recessionary gaps, and the problem of inflation in inflationary gaps. This can be seen in Figure 9.15(a) (page 256). If increases in aggregate supply match increases in aggregate demand so that the *LRAS* and *SRAS* curves shift by the same amount as the *AD* curve, there need not be any price level increases.

Market-based supply-side policies can be grouped under three headings:

1. Encouraging competition
2. Labour market reforms
3. Incentive-related policies.

Encouraging competition

- Policies to encourage competition: Explain how factors including deregulation, privatisation, trade liberalisation and anti-monopoly regulation are used to encourage competition.

Greater competition among firms forces them to reduce costs, contributing to greater efficiency in production and improving the allocation of resources, with the possible added benefit of improving the quality of goods and services. These benefits amount to releasing resources that were being used unproductively and putting them to use in more productive activities, thus allowing potential output to increase and the *LRAS* curve to shift to the right.

- **Privatisation. Privatisation**, involving a transfer of ownership of a firm from the public to the private sector, can increase efficiency due to improved management and operation of the privatised firm. This is based on the argument that government enterprises are often inefficient as they have bureaucratic procedures, high administrative costs and unproductive workers, because they do not face incentives to lower costs and maximise profits. The private sector may therefore be more efficient than the public sector.
- **Deregulation. Deregulation** involves the elimination or reduction of government regulation of private sector activities, and is based on the argument that government regulation stifles competition and increases inefficiency. There are two main types of regulation (and deregulation): economic and social. 'Economic regulation' involves government control of prices, output, and other activities of firms, offering them protection *against competition*. In the last two to three decades, many countries have moved toward removal of government regulations, and hence economic deregulation. A main form of deregulation has been to allow new, private firms to enter into monopolistic or oligopolistic industries, thus forcing existing firms to face competition. The objective has been to increase efficiency, lower costs and improve quality. Industries affected include transport, airlines, television broadcasting, telecommunications, natural gas, electricity, financial services and others. 'Social regulation' involves protecting consumers against undesirable effects of private sector activities (many of these involve negative externalities) in numerous areas, including food, pharmaceutical and other product safety, worker protection against injuries, and pollution control. In contrast to economic regulation, social regulation is being strengthened in many countries in the interests of public safety. Some economists, however, argue that social regulation is excessive, giving rise to costly and inefficient bureaucratic procedures, paperwork and unnecessary government interference, and should therefore be reduced.
- **Private financing of public sector projects.** Historically, public sector projects (such as building roads, harbours, airports, schools, hospitals and other infrastructure) have been financed out of the

government budget (tax revenues). In more recent years, a number of countries have introduced private financing of public projects, called *private financing initiatives*, where a private firm builds, finances and operates public services. The capital and services are owned by the private company, and the government buys the services from the private firm. Such initiatives increase competition, because private sector firms compete with each other to be selected by the government to take on the project; the government selects the private firm that offers to build and run the service at the lowest cost and provide the best quality.

- **Contracting out to the private sector (outsourcing).** Here, public services are provided by private firms based on a contractual agreement between the government and the private service provider. Examples include information technology, human resources management and accounting services. These result in increased competition as private firms compete with each other to get contracts with the government, thereby resulting in improved efficiency, lower costs of production and improved quality.
- **Restricting monopoly power.** Increased competition can result from restricting monopoly power of firms by enforcing anti-monopoly legislation, by breaking up large firms that have been found to engage in monopolistic practices into smaller units that will behave more competitively, and by preventing mergers between firms that might result in too much monopoly power. Greater scope for the forces of supply and demand may result in increased efficiency, lower costs and improved quality.
- **Trade liberalisation.** International trade between countries has become freer in recent decades due to reductions in trade barriers. This topic will become clearer after you read Chapter 14, where you will discover that according to economic theory, free or freer trade increases competition between firms both domestically and globally, resulting in greater efficiency in production and an improved allocation of resources. We will study trade liberalisation in detail in Chapter 17.

Labour market reforms

- Labour market reforms: Explain how factors including reducing the power of labour unions, reducing unemployment benefits and abolishing minimum wages are used to make the labour market more flexible (more responsive to supply and demand).

Labour market reforms are sometimes referred to as 'increasing **labour market flexibility**', or reducing labour market 'rigidities'. These reforms are intended to make labour markets more competitive, to make wages respond to the forces of supply and demand, to lower labour costs and increase employment by lowering the natural rate of unemployment (labour market rigidities were discussed in Chapter 10 as one cause of structural unemployment, which is the most important part of natural unemployment; see page 269). Lower costs of production can lead to increased profits, and this in turn may result in greater investment by firms, increased R&D, increased capital goods production, and therefore increases in potential output (economic growth).

- **Abolishing minimum wage legislation.** Elimination or reduction of the legal minimum it is argued, reduces unemployment by allowing the equilibrium wage to fall. The benefits of increased wage flexibility (in the downward direction) would include lower unemployment, since firms can hire more labour at the lower wage; greater firm profits, as wage costs would be lowered; more investment and economic growth.
- **Weakening the power of labour (trade) unions.** Unionised labour frequently succeeds in securing high wage increases; if labour unions are weakened, wages will be more responsive to the forces of supply and demand, and will therefore be more likely to fall in the event that there is unemployment. This would also lead to increased wage flexibility with the same benefits as in the case of abolishing minimum wage legislation.
- **Reducing unemployment benefits.** Unemployment benefits are payments to workers who have lost their jobs, and are meant to provide some income to the unemployed during the period of time they are searching for a new job. It is argued that unemployment benefits have the unintended effect of reducing the incentive to search for a new job, causing some unemployed workers to remain unemployed for longer periods than necessary. Therefore, reducing unemployment benefits is expected to lower unemployment, as it would encourage the unemployed to look for work. This could work to reduce the natural rate of unemployment.
- **Reducing job security.** Many countries have laws that protect workers against being fired, making it costly for firms to fire workers because of high levels of compensation that must be paid to the worker being laid off. It is argued that reducing workers' job security by making it easier and less costly for firms to let go workers has the effect of increasing employment, because firms are more likely to hire new workers if they know they can fire them easily and without cost if they are no longer needed. In

addition, reducing job security would decrease firms' labour costs because of the lower costs of firing, and would therefore increase profits, investment and economic growth.

Incentive-related policies

- Incentive-related policies: Explain how factors including personal income tax cuts are used to increase the incentive to work, and how cuts in business tax and capital gains tax are used to increase the incentive to invest.

Incentive-related policies involve cutting various types of taxes, which are expected to change the incentives faced by taxpayers, whether firms or consumers.

- **Lowering personal income taxes.** As we know, the government can change personal income taxes as part of fiscal policy, thereby changing the level of aggregate demand. Supply-side economists argue that changes in personal income taxes have an even greater impact on aggregate supply. Cuts in personal income taxes lead to higher after-tax incomes, creating an incentive for people to provide more work: this can happen through an increase in the number of hours worked per week; an increase in the number of people interested in finding work (who were formerly not interested in working); an increase in the number of years worked, as people may decide to retire later; a decrease in unemployment as unemployed workers choose to shorten the duration of their unemployment. All these factors may work to shift the *LRAS* curve to the right, increasing potential output.
- **Lowering taxes on capital gains and interest income.** In many countries, people must pay taxes on 'capital gains', which are profits from financial investments (such as stocks and bonds) or from buying and selling real estate. In addition, they may have to pay taxes on income from interest on savings deposits. If the taxes they must pay on these sources of income are reduced, they may be more motivated to save, thus increasing the amount of savings available for investment. More investment means a greater production of capital goods and an increase in potential output.
- **Lowering business taxes.** Lower taxes on business profits can work to increase aggregate demand by increasing investment spending. Supply-side economists argue that cutting taxes on firms' profits is a supply-side measure because increases in the level of after-tax profits mean that firms have greater financial resources for investment and for pursuing technological innovations through more R&D. Both these effects give rise to greater potential output.

Test your understanding 12.7

1. **(a)** Explain the objectives of supply-side policies. **(b)** What are the two categories of supply-side policies, and how do they differ in their general focus?
2. Using an appropriate diagram based on the *AD-AS* model, illustrate and explain the expected impacts of supply-side policies on real GDP, the price level and unemployment. (You may use the Keynesian or neoclassical model to illustrate.)
3. **(a)** Provide some examples of interventionist supply-side policies. **(b)** Using a diagram, explain how these policies affect aggregate demand over the short term and also increase *LRAS*. **(c)** How would you show these effects using the Keynesian *AD-AS* model?
4. Why do supporters of market-based supply-side policies argue that by focusing on the supply side of the economy, it is possible to address the policy goals of economic growth, price stability and unemployment all at the same time?
5. What advantages over demand-side policies might supply-side policies have in the event that an economy is experiencing stagflation (simultaneous inflation and unemployment with recession)?
6. Provide some examples of supply-side policies that aim to achieve each of the following objectives: **(a)** increase competition, **(b)** improve incentives, and **(c)** make the labour market more responsive to supply and demand.

Evaluating supply-side policies

- Evaluate the effectiveness of supply-side policies through consideration of factors including time lags, the ability to create employment, the ability to reduce inflationary pressure, the impact on economic growth, the impact on the government budget, the effect on equity, and the effect on the environment.

We turn to an evaluation of the effectiveness of supply-side policies by considering several factors.

Time lags

Most supply-side policies, both interventionist and market-based, work after significant time lags, making their effects on *the supply side* of the economy (aggregate supply) over the longer term. This is because the activities set into motion (increased competition, labour market reforms, changing incentives, investments, new human and physical capital, R&D, and so on), need time to materialise and affect potential output. However, interventionist policies also have an effect on aggregate demand over the short term. Therefore, in a recession, such policies could have the added advantage that they can help close a recessionary gap. Yet, if an economy is experiencing inflation, they could contribute to destabilising the economy by adding to inflationary pressures.

Impact on economic growth

Increases in potential output

You may recall from Chapter 9 and Chapter 10 that long-term economic growth is caused by investments in various forms of capital and new technologies, resulting in increased productivity of labour. In addition, economic growth is encouraged by the development of institutions involving incentives and the promotion of the market system and the freer working of supply and demand, allowing the private sector to work well. We have seen how a variety of supply-side policies seek to achieve these outcomes. Economists generally agree that supply-side policies play a very important role in increasing potential output.

Arguments favouring interventionist policies

However, economists disagree on whether interventionist or market-based polices are more effective in increasing potential output. Supporters of interventionist policies argue in terms of the major advantages of targeted government support in areas such as investment, R&D, training and education, provision of credit on favourable terms (low interest rates, long repayment periods), and so on; they argue that the market is unlikely to provide them as needed. Moreover, industrial policies allow the government to support particular industries that are held to offer the greatest possibilities for growth in the future. They point to the experiences of a group of Asian countries (the 'Asian Tigers'; see Chapter 17, page 484), which achieved very high rates of growth by use of highly interventionist policies focusing on investments in human capital and industrial policies. They also point to the questionable growth performance of many developing countries that adopted market-based supply-side policies in the 1980s (see Chapter 17, pages 485–86).

Arguments favouring market-based policies

Supporters of market-based policies argue that government interference in the market may lead to inefficiencies and resource misallocation, whereas reliance on the market can achieve long-term growth while avoiding these disadvantages. A major argument against government intervention and industrial policies involves the idea of government failure (see page 137), according to which government interference may result in less efficient outcomes because of the influence of political pressures, lack of necessary information and unintended and unwanted consequences of government actions. It is argued that governments may lack the ability to choose the right industries to support, and incorrect choices will lead to a poor allocation of resources.

In addition, supporters of market-based policies note that interventionist policies rely heavily on government spending, and use resources that might have better alternative uses elsewhere (opportunity costs). Governments require substantial amounts of tax revenues to be able to provide the support services, which means high taxes and a large government sector. High taxes act as disincentives to work, and a large government sector promotes inefficiencies.

The debate over incentive-related policies

Tax cuts (incentive-related policies) are among the more controversial market-based policies, because of their questionable effects on work, saving and growth of potential output. Tax cuts, as we know, have both demand-side and supply-side effects. Some economists question the strength of the supply-side effects, believing these to be small compared to the impact on aggregate demand. For example, increases in disposable income due to cuts in personal income taxes may result in the decision to work less if people prefer to use their extra (after-tax) income to increase their time for leisure. Also, workers may decide to use their higher after-tax income to consume more rather than save, in which case the tax cuts may not significantly affect saving and investment. In the United States, for example, whereas there have been a series of tax cuts, savings are at their lowest point in the past 80 years. In countries where tax cuts were implemented as supply-side policies (such as in the United Kingdom and the United States), economists disagree on whether or not these have worked to

increase potential output. The reason is that whatever growth has occurred has been the result of both demand-side and supply-side effects of demand-side and supply-side policies, and it is very difficult to detect which particular policy has been responsible for each particular effect.

Ability to create employment (reduce unemployment)

One of the objectives of supply-side policies, we have seen, is to create employment. This does not refer to a reduction of cyclical unemployment, arising from business cycle fluctuations and requiring demand-side policies for its correction. It refers to a reduction of the natural rate of unemployment (structural, frictional, seasonal).

Interventionist policies involving investments in education and training can make a direct impact on a reduction of unemployment by:

- enabling workers to acquire the skills, training and retraining necessary to meet the needs of employers (structural unemployment)
- providing assistance to workers to relocate (structural unemployment)
- providing information that reduces unemployment when workers are between jobs (frictional unemployment) or between seasons (seasonal unemployment).

In addition, a focus on education and training of the general population can contribute to employment creation because better-educated and trained people are more employable.

Market-based policies involving labour market reforms may also contribute to reducing the natural rate of unemployment by focusing on making the labour market more responsive to supply and demand (lower wages and production costs, easier hiring and firing, etc.).[9]

Market-based policies that focus on encouraging competition, on the other hand, may well *increase* unemployment, at least over the short term. In the case of privatisation, as privatised firms try to make their operations more efficient, they often try to cut costs by firing workers. Contracting out to the private sector leads to government job losses, and job losses for the country as a whole if projects are contracted out to firms in other lower cost countries, as is sometimes the case. In addition, economic deregulation has frequently led to increased unemployment, due to increased competitive pressures that cause firms to fire workers in order to lower their costs. It is possible that increased unemployment on account of these policies may be short term, and may be reversed over the longer term as the economy begins to benefit from the broader effects of supply-side policies.

Ability to reduce inflationary pressure

Supply-side policies, whether interventionist or market-based, are likely to reduce inflationary pressures over the longer term. The reason is that these policies are intended to increase potential output, shifting the *LRAS* curve to the right. As an economy grows, if increases in aggregate demand are matched by increases in aggregate supply, there will be little or no upward pressure on the price level. This can be seen in Figure 9.15 (page 256).

The ability of supply-side policies to reduce inflationary pressures can also be understood in terms of the focus on keeping firms' costs of production down through increases in efficiency (due to increased competition) and lower wage costs (due to increased labour market flexibility).

Impact on the government budget

Interventionist policies and incentive-related market-based policies have negative effects on the government budget, though for entirely different reasons. Interventionist policies are heavily based on government spending, and therefore are a burden on the budget. Incentive-related policies involve tax cuts, and therefore reduced government revenues. Both these policies can create a budget deficit (or can increase the size of the deficit if there was one to begin with).

Effects on equity

In keeping with our earlier discussion on equity (Chapter 11), this is interpreted to mean greater income equality. Supply-side policies have mixed effects on equity.

Interventionist policies that focus on investments in human capital that are broadly distributed throughout the population are likely to have positive effects on equity over the longer term. The reason is that educated, skilled and healthy

[9] It should be noted, however, that there is some question over whether reducing minimum wages will actually result in increased employment. Some economists argue that paying workers a higher than equilibrium wage encourages them to work harder, increasing their productivity (the output produced per worker). Increased labour productivity causes firms to increase their demand for labour, which has the impact of increasing employment and justifying the higher wages. If this argument is correct, there would be little benefit for firms if governments cut the minimum wage.

workers are more likely to be employed and be an active and productive part of society, with the result that income is likely to be relatively more equally distributed. In addition, interventionist policies that lower the natural rate of unemployment reduce inequality by providing incomes to previously unemployed workers.

Market-based policies tend to have negative effects on equity. Greater competition may have a negative effect if it results in some unemployment, which involves a loss of income. Labour market reforms involve changes in legislation and institutions that provide protection for workers with very low incomes and with income uncertainties (minimum wage legislation, protection against being fired, unemployment benefits). Reducing protection results in lower incomes for some workers and increased job insecurity, and contributes to increasing income inequalities. Minimum wage legislation, for example, is intended to protect unskilled workers on very low incomes. Unemployment benefits and job security are especially important to people on very low incomes who have nothing to fall back on if they are left unemployed.[10]

In the case of incentive-related policies, tax cuts intended to create incentives to work, save and invest may also worsen income distribution. The argument that high taxes create disincentives to work and save applies mainly to higher income groups who face higher average tax rates; therefore, to reverse this problem, tax cuts must be designed to affect the after-tax incomes of higher income groups. Yet this would make the tax system less progressive, thus reducing the redistributive effects of personal income taxes and making income distribution less equal (see page 314). In addition, since it is the wealthy who enjoy capital gains and earn most of the interest income and business profits, tax cuts in these areas will affect wealthy people by increasing their after-tax incomes more than they will affect lower income groups of the population.

Another point concerns the prices of products sold by privatised firms. If private firms have a degree of market power, they are likely to raise their prices over what the government used to charge (as well as restrict the quantity of output produced), with the result that their products become less affordable. This may have damaging consequences for lower income groups, particularly if the privatised firms provide necessities or merit goods, such as utilities, including power, water supplies, sewage systems, etc. Subsidised provision of merit goods is a mechanism used to redistribute income in favour of greater income equality (see page 310), and this is reduced if prices increase due to privatisation. Similar considerations apply to private financing of public sector projects, which sometimes results in higher prices than when the government is the provider. (This is a particularly pronounced problem in many less developed countries, where privatisation of services has made these unaffordable for very poor people.)

Effects on the environment

It is possible that market-based policies to increase competition (privatisation, dergulation) may have negative effects on the environment because of the increased scope for activities leading to negative externalities affecting the environment. On the other hand, the government could limit these by taking the appropriate measures to correct or reduce the external costs of private sector activities.

Concluding comments

It is unlikely that any policy can yield positive results without some negative consequences. Most economists believe that interventionist and market-based policies should complement each other, and the particular mix of policies that should be used will likely be different according to each country's particular economic and social conditions.

Test your understanding 12.8

1 Explain advantages and disadvantages of interventionist supply-side policies, including **(a)** investment in human capital, **(b)** investment in human capital, **(c)** investment in infrastructure, and **(d)** industrial policies.

2 Explain advantages and disadvantages of market-based supply-side policies, including **(a)** policies to encourage competition, **(b)** labour market reforms, and **(c)** incentive-related policies.

[10] It should also be remembered that unemployment benefits can play an important role in a recession. As firms cut back on output and unemployment increases, unemployed workers suffer a loss of income, which puts a downward pressure on consumer spending. If unemployment benefits are high, they compensate for the loss of income of the unemployed, thus helping maintain the level of consumption spending (see page 325). In the autumn of 2008, when it was apparent that the United States was in recession, some economists called for increases in unemployment benefits.

'Flexicurity' in Denmark

The people of Denmark appear to have achieved a combination of things that many economists would consider impossible. The Danish economy has been one of the best performing in the world; GNI *per capita* in ($PPP) ranks eighth in the world; the poverty rate is the third lowest in the world; the unemployment rate is the lowest in the European Union; it has the second most equal distribution of income in the world; and according to the 'World Map of Happiness', the Danes are the happiest people in the world; all this while also paying the highest taxes in the world.

Government officials from Europe and the United States have been travelling to Denmark to discover the secret of its success, which lies partly in the unique practice of 'flexicurity', derived from 'flexibility' and 'security'.

The flexibility part of 'flexicurity' is based on Denmark's highly flexible labour market. Workers can be easily fired with little prior notice, meaning they can also be easily hired (because there is little or no cost involved in firing). There is a very large turnover in the labour market, with 30% of the labour force switching jobs each year. Most of these switches are not due to lay-offs, but moving on to better jobs. Though this gives rise to a high rate of frictional unemployment, Denmark has achieved the lowest unemployment rate in the European Union.

The security part of 'flexicurity' is based on Denmark's extensive social protection system. Once a worker is fired, s/he is entitled to very generous unemployment benefits, amounting to 90% of the wage. However, unemployment benefits are extended for only four years over a lifetime of work. This provides workers with the incentive to find a new job soon after they have been laid off.*

One condition of receiving unemployment benefits is that workers must be available to take on a job that is offered to them through government job centres after 12 months of unemployment. In addition, the government provides free education and training to unemployed workers to help them easily find new jobs. Most workers belong to labour unions that work very closely with businesses to discover what skills and education employers require. This helps reduce the level of structural unemployment in the economy. Denmark has a highly skilled and educated labour force.

The security part of 'flexicurity' is also based on public provision of free education from kindergarten through university, free health care and hospitals, retirement pensions at 87% of workers' income, housing subsidies for low-income earners, and numerous other social benefits.

An additional possible explanation for Denmark's economic success is its strongly market-oriented economy, based on free trade, competition, and limited government ownership or intervention in business. It is also considered to be the country with the least amount of bureaucracy and the shortest amount of start-up time for new firms in the European Union.

Denmark also has the highest income tax rates in the world, with incomes taxed at nearly 50% on average. Personal income taxes are strongly progressive, and this contributes to the high degree of income equality. Also, it has a very high value added tax (an indirect tax), at 24%. High taxes are necessary to pay for the very generous unemployment benefits, free education and health care, and other merit goods provided by the government. On the other hand, business taxes are comparable with most other European countries.

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*At the time of writing, there was some discussion about reducing this to two years, on account of difficulties created by the global financial crisis.

Source: Jeffrey Stinson, 'Denmark a unique mix of welfare, economic growth' in *USA Today*, 8 March 2007; 'Flexicurity model turning heads' in *The Copenhagen Post*, 14 February 2007.

Applying your skills

1 What policies in Denmark are useful for maintaining low rates of **(a)** frictional unemployment, and **(b)** structural unemployment?

2 How does a highly progressive tax system contribute to greater equality in income distribution? (See Chapter 11, page 313.)

3 It is often argued that highly flexible labour markets lead to greater income inequality (page 344). What policies does Denmark use to ensure this does not occur?

4 Denmark has combined high economic growth rates together with the highest taxes in the world. What does this suggest about possible disincentive effects of very high taxes?

5 Denmark's unemployment benefits are among the most generous in the world, yet it has very low unemployment rates. What policies are used to avoid possible disincentive effects of unemployment benefits toward work?

6 What does the Danish experience of high economic growth rates together with one of the most equal income distributions in the world suggest about the possible conflict between equity (in the sense of income equality) and efficiency?

7 Denmark has a unique mixture of interventionist and market-oriented supply-side policies that appear to contribute to its success. Explain what these are.

12.5 Evaluating government policies to deal with unemployment and inflation

Having studied demand-side and supply-side policies, we are in a position to evaluate policies to deal with inflation and unemployment (see Chapter 10, pages 272 and 281).

Unemployment policies

- Evaluate government policies to deal with the different types of unemployment.

Different types of unemployment (explained in Chapter 9) require different kinds of policies for their solution. The main distinction is between cyclical (demand-deficient) unemployment and natural unemployment.

Cyclical unemployment

Since cyclical unemployment is caused by low or falling aggregate demand, measures to correct it involve expansionary demand-side policies, or fiscal and monetary policies. The intended effects of such policies are shown in Figure 12.1 (a) and (b), where the economy is initially in a recessionary gap producing output Y_{rec}. Efforts by the government or central bank to shift AD from AD_1 to AD_2 are intended to increase real GDP Y_p representing potential output. As AD shifts to the right, the recessionary gap shrinks, and cyclical unemployment falls until it is eliminated at Y_p.

The strengths and weaknesses of demand-side policies in bringing an economy out of recession apply equally to their ability to deal with cyclical unemployment (see pages 327 and 336). In summary form, they include the following.

Strengths of fiscal policy

- Pulling an economy out of deep recession, which is likely also to involve a high rate of cyclical unemployment.
- Direct impact of government spending on aggregate demand.

Weaknesses of fiscal policy

- Time lags.
- Political constraints.
- Crowding out.
- Tax cuts not as effective as government spending.
- Inability to fine-tune the economy.

The influence of automatic stabilisers

In a recession, the presence of progressive income taxes and/or unemployment benefits make the recession less severe, and therefore cyclical unemployment not as high as it would have been if these stabilisers were not present.

Strengths of monetary policy

- Quick implementation and incremental adjustment of interest rates.
- Central bank independence and no political constraints.
- No crowding out.

Weaknesses of monetary policy

- Time lags.
- Possible ineffectiveness in a deep recession.
- Conflict among government objectives. A recession and cyclical unemployment require lower interest rates, but this may lower the exchange rate (depreciation), which may result in imported inflation (this will be explained in Chapter 14).

An evaluation should also consider the relative merits of fiscal versus monetary policies. For example, unless the economy is facing a deep recession, it is likely that most economists would prefer monetary policy to deal with recession and cyclical unemployment, because of its relative advantages over fiscal policy.

Note that supply-side policies cannot be used to deal with cyclical unemployment.

Natural unemployment

Structural unemployment is the most serious part of natural unemployment, and most economic policies intended to lower the natural rate of unemployment focus on this.

Natural unemployment can be addressed mainly by supply-side policies. Of demand-side policies, monetary policy is ineffective in dealing with it. Fiscal policy, as a *stabilisation tool*, is also ineffective. To see why, suppose that an economy is producing at the level of potential output, with unemployment equal to the natural rate. If aggregate demand is increased through fiscal or monetary policy, the natural rate of unemployment will fall temporarily; however, this will cause inflation (you can see this by using either the monetarist/new classical or Keynesian models). Policy-makers would therefore reduce aggregate demand to lower the rate of inflation and unemployment falls once again to its natural rate.

However, fiscal policy can have important effects on natural unemployment because of its *supply-side effects*. These kinds of fiscal policy measures are included within interventionist supply-side policies.

This section summarises the relevant points made earlier in the evaluation of supply-side policies.

Interventionist supply-side measures

Measures to reduce structural unemployment include setting up retraining programmes; support for re-training through grants and low interest loans; direct government hiring and provision of on-the-job training; grants to firms offering on-the-job training; subsidies to firms hiring structurally unemployed workers; grants and subsidies to assist relocation; information on job availability in various geographical areas; government projects in the depressed areas for employment creation.

Measures to reduce frictional unemployment aim at improving information flows between employers and job seekers, reducing the time a worker spends searching for a job. Improved information can result from the establishment of job centres, employment agencies and other methods of facilitating information exchanges such as job websites.

Measures to reduce seasonal unemployment include provision of information to workers on jobs available during off-peak seasons in other industries.

The advantages of such policies are that they have a direct positive impact on employment creation, without contributing to increased income inequalities and loss of job security. Disadvantages include the negative impacts on the government budget and opportunity costs of government spending.

Market-based supply-side measures

Market-based measures to deal with unemployment include labour market reforms that increase labour market flexibility. As we know, reducing the minimum wage could potentially reduce unemployment by lowering wages of unskilled workers; weaker labour unions reduce the upward pressure on wages making it easier for firms to hire because of lower costs; reducing job security makes it easier for firms to hire because they can more easily fire; and reduction of unemployment benefits increase workers' incentives to find work.

These measures are aimed at structural, frictional and seasonal unemployment. The advantages of these policies are that they can reduce the natural rate of unemployment without negative effects on the government budget. The major disadvantages are that they contribute to income inequality and loss of protection for low-income workers.

Inflation policies

- Evaluate government policies to deal with the different types of inflation.

It is important to bear in mind the distinction between demand-pull and cost-push inflation (explained on pages 280–81), as this determines the types of policies appropriate to deal with each one.

Demand-pull inflation

Demand-pull inflation is caused by increases in aggregate demand that create an inflationary gap. Therefore, appropriate policies to deal with it are contractionary demand-side policies, or fiscal and monetary policies that attempt to bring about a decrease in aggregate demand, so that AD_2 shifts toward AD_1 in Figure 12.2 (a) and (b) to bring the economy back to potential output Y_p.

The strengths and weaknesses of demand-side policies in bringing an economy out of an inflationary gap apply equally to their ability to deal with demand-pull inflation (see pages 327 and 336). In summary form, they include the following.

Strengths of fiscal policy

- Dealing with rapid and escalating inflation.
- Direct impact of government spending on aggregate demand.

Weaknesses of fiscal policy

- Time lags.
- Political constraints.
- Inability to fine-tune the economy.

Strengths of monetary policy

- Quick implementation and incremental adjustment of interest rates.
- Central bank independence and no political constraints.

Weaknesses of monetary policy

- Time lags.
- Conflict among government objectives. Inflation requires higher interest rates, but this may increase the exchange rate (appreciation), which

will make imports cheaper and exports more expensive to foreigners. If the country has a trade deficit (more imports than exports), a currency appreciation may work to increase the size of the trade deficit, which is not desirable (see Chapter 14).

An evaluation should also consider the relative merits of fiscal versus monetary policies. Most economists would prefer monetary policy to deal with an inflationary gap, because of its relative advantages over fiscal policy.

Note that supply-side policies cannot be used to deal with demand-pull inflation over short periods of time, because demand-pull inflation has causes lying on the demand-side, and supply-side policies work with a long time lag. However, over long periods, supply-side policies do have the tendency to reduce inflationary pressures that might have demand-side causes, because they shift the *LRAS* or Keynesian *AS* curves to the right.

Cost-push inflation

Cost-push inflation is caused by an increase in costs of production or supply-side shocks, causing a leftward shift in the *SRAS* curve, and results not only in a higher price level but also a fall in real output and a rise in unemployment. When this occurs, demand-side policies are not appropriate, because whereas the problem of inflation requires a decrease in aggregate demand, the problem of unemployment requires an increase in aggregate demand.

There are no general solutions to the problem of cost-push inflation. Sometimes, governments committed to a low rate of inflation use contractionary monetary policy (raising interest rates) to lower aggregate demand. However, this comes at the cost of more recession and therefore increased cyclical unemployment.

Other than this, policies that can be pursued depend very much on the specific cause of the increase in costs. For example, if cost-push inflation is due to increases in wages, the appropriate solution may lie in supply-side policies that attempt to stop or reverse the wage increases. These could involve labour market measures such as lowering the minimum wage, or reducing the power of labour unions so that these are unable to negotiate high wage increases with employers.

If the increase in costs is due to an increase in the price of an imported input, then the solution is less obvious. An imported cause of cost-push inflation around the world over the past 40 years has involved increases in the price of oil, an input that is heavily used as energy in most lines of production in both industry and agriculture. There are no easy solutions to this type of cost-push inflation. Since the early 1970s, when the price of oil began to increase, many countries have attempted to address the problem through efforts to develop alternative forms of energy, as well as by encouraging users to economise on the use of products that depend on oil as an input. Note that these are not supply-side or demand-side policies, but rather focus on reducing the *demand for oil*, so as to lower its price. If the price of oil falls, there results a rightward shift of the *SRAS* curve due to lower costs of production. However, this is a policy that takes a long time to take effect.

Another type of cost-push inflation may arise if firms with substantial monopoly power (such as oligopolies) increase their profits by increasing the prices they charge to consumers. In this case, policies pursued may be to break up the monopoly power of firms, and encourage competition (market-based supply-side policies).

Another type of cost-push inflation may occur if a country's currency falls in value, resulting in an increase in the prices it has to pay for imported goods (this will be explained in Chapter 14). Firms that are heavy users of imported inputs and raw materials experience an increase in their costs of production and cost-push inflation will result. One possible solution to this problem is to implement policies that aim to reduce dependence on imports ('expenditure switching' policies). However these policies come with their own problems, which we will discover in Chapter 14.

Inflation targeting

Inflation targeting, you may remember from page 335, is a special type of *monetary policy* that tries to keep inflation at a targeted rate. Inflation targeting does not make a distinction between cost-push and demand-pull inflation. It targets an inflation rate regardless of its causes. The advantages and disadvantages of inflation targeting were discussed on pages 335–36. Briefly, this policy has been quite successful at maintaining low and stable rates of inflation,. However, this may come at the cost of losing the ability to pursue other important objectives, such as low unemployment, or being able to respond to supply-side shocks. For example, if is an oil price shock causing cost-push inflation and stagflation, commitment to maintaining the low, target rate of inflation may mean accepting a deeper and more long-lasting recession together with a higher rate of cyclical unemployment.