3.1 Definition of inflation

Inflation is normally seen as an economic illness that attacks our material living standards. It refers to a rise in the general level of prices paid for goods and services over a period of time (usually between one year and the next). We do not talk of inflation simply because the price of one particular thing, such as icy poles, goes up. Instead, it describes a situation where price rises for a wide range of goods and services outweigh price falls. Hyperinflation is an extreme situation where prices rise very quickly, perhaps by more than 50 per cent a month. By contrast, deflation is a term describing generally falling prices. This too can undermine living standards.

Inflation is more likely to occur during a period of strong economic activity, especially when there is a boom. Here, there are widespread shortages of goods and services and the economy is running beyond its productive capacity. By contrast, deflation is normally associated with a severe recession or depression when the level of economic activity is very weak, unemployment is high, and there has generally been overproduction of goods and services.

Inflation is not something new. There are numerous examples of inflation stretching back at least to 400 BC during the Roman Empire, Medieval Europe in the 1500s and 1600s, the United States during the 1860s Civil War, Germany in 1923, Hungary in 1945–46. More recently, in Zimbabwe in 2008, inflation rose to 231 million per cent.
Inflation refers to generally rising prices charged for goods and services, which reduces the purchasing power of money. Hyperinflation still exists in some countries. Hyperinflation was experienced in Zimbabwe after the productive capacity of the country declined due to civil war and confiscation of white-owned farmland. This Zimbabwe note was worth fifty trillion dollars. In 2009, Zimbabwe abandoned its currency, instead using currency from other countries.

Here in Australia, the worst instances of inflation were in:
- 1918–19 after World War I
- 1950–52 during the Korean War boom
- 1973–77 following the first global oil crisis
- 1979–83 due to rapid wage rises and other pressures that pushed prices up
- 2000–01 when the GST was introduced, oil prices rose sharply and the A$ fell.

Fortunately, for most of the period between the 1990s and 2013–14, Australia’s inflation rate has been relatively slow.

The consumer price index (CPI) measures the average change in the retail price of a basket of local and imported consumer goods and services that represent a high proportion of expenditure by metropolitan households.

The regimen refers to the selection of items making up the ‘basket’ of goods and services included in the CPI.

Weighting of items in the CPI reflects the relative importance assigned to each particular good or service included in the ‘basket’ or regimen, reflecting the spending patterns of typical households.

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Try a report on an investigation 1, p. 126

3.2 Measurement of inflation

In Australia, the ABS calculates the inflation rate every quarter (i.e. every three months) by means of the consumer price index (CPI). The CPI measures the average change in the retail price of a basket of local and imported goods and services that represent a high proportion of expenditure by metropolitan households.

Features of the CPI as a measure of inflation

The CPI has several important features:
- **The regimen** or basket of goods and services surveyed. Only the important types of consumer goods and services are actually included in the basket or regimen surveyed by the ABS. This amounts to about 100,000 household items broken down into eleven major categories. These categories include:
  - food (e.g. fruit and vegetables, meat and other supplies purchased from supermarkets and other outlets)
  - clothing and footwear (e.g. shoes, jeans, tops)
  - housing (e.g. rental accommodation)
  - household contents and services (e.g. appliances, furniture, repairs)
  - transport (e.g. cars, petrol, fares on public transport)
  - recreation (e.g. sporting events, cinema tickets)
  - financial and insurance services (e.g. bank fees and charges)
  - communication (e.g. phone charges, internet costs)
  - alcohol and tobacco (e.g. beer, wine, spirits)
  - health (e.g. private health insurance)
  - education (school fees).
- **The prices surveyed.** The ABS surveys the prices for the items included in the regimen. It does this at a representative range of retail outlets (e.g. supermarkets, department stores, takeaway food outlets, chemists and providers of services including power, water and gas) located in Australia’s eight capital cities.
- **The weighting of items in the regimen.** Items that are included in the CPI regimen are weighted according to their relative importance in typical household budgets. The
weights reflect the cost of the item and its frequency of purchase. They are also revised, usually every five years, to allow for changes in the pattern of household spending.

- **The base year used for comparisons.** In order to establish whether the basket of retail prices is generally going up or down over a period of time, a starting or base year is selected against which other years can be compared. The total price of the weighted basket of items in this base year is given a value equal to 100 index points. For Australia, the current base year is 2011–12 (i.e. 2011–12 = 100 index points). Because of inflation, the CPI reached 102.8 points by June 2013 (the fourth quarter of the financial year 2012–13). Put another way, the selected basket of goods and services cost 2.8 per cent more in June 2013 than in the base year of 2011–12. Table 3.1 shows you how to calculate the annual inflation rate using the actual CPI.

The base year for the CPI is the year against which price or cost of the basket of consumer goods and services is compared.

**FIGURE 3.2** The CPI measures changes in the prices of a representative shopping ‘basket’ of consumer goods and services that is weighted according to the relative importance of items making up the regimen. Items include not just food, but also transport, housing, insurance, health, education, clothing and entertainment.

**TABLE 3.1** Using the CPI to calculate Australia’s annual inflation rate (June on June)

<table>
<thead>
<tr>
<th>Year (taken June on June)</th>
<th>CPI (at June each year. 2011–12 = base year = 100 index points)</th>
<th>Calculation of Australia’s annual inflation rate (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010–11</td>
<td>99.2</td>
<td>N.A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 2011–12                   | 100.4                                                         | Annual inflation rate = \[
|                           |                                                               | \frac{\text{Number of index points rise in the CPI for 2011–12 on the level in 2010–11} \times 100}{\text{CPI in 2010–11}}\] |
|                           |                                                               | = \frac{1.2 \times 100}{99.2}                                 |
|                           |                                                               | = \frac{120}{99.2}                                             |
|                           |                                                               | = 1.21%                                                       |
| 2012–13                   | 102.8                                                         | Annual inflation rate = \[
|                           |                                                               | \frac{\text{Number of index points rise in the CPI for 2012–13 on the level in 2011–12} \times 100}{\text{CPI in 2011–12}}\] |
|                           |                                                               | = \frac{2.4 \times 100}{100.4}                                |
|                           |                                                               | = \frac{240}{100.4}                                            |
|                           |                                                               | = 2.3%                                                        |

Source: Data for the June CPI was derived from ABS 6401.0, Table 1.
Limitations of the CPI as a measure of inflation

While the CPI is a useful indicator of the general direction of changes in retail prices, it does have some weaknesses. For instance:

- the regimen or basket does not measure changes in the price of all types of goods and services in all parts of Australia, only a sample of items in the eight capital cities, thereby ignoring price changes in other cities, towns and rural areas
- the problems caused by the need to alter the regimen as a result of some products in the basket becoming less relevant, new products becoming very popular (for example, computers) and by quality improvements (for example, cars with air bags and ABS brakes) that make goods more expensive, even when there has been no inflation
- the weighting process for each item in the regimen may not necessarily fully reflect the actual tastes or spending patterns of all households. The weighting of items within the regimen only reflects averages.

3.3 Inflation trends in Australia and overseas

One of the Australian government’s key economic aims is to achieve the goal of low inflation (also called stability of the currency). This is defined by the Reserve Bank of Australia (RBA) as a desirable situation where inflation is slow and general prices are rising by an average of around 2–3 per cent a year over the duration of the business cycle. Rates in excess of this government target would undermine various aspects of the economy’s performance (e.g. it could weaken equity in the distribution of income, undermine our international competitiveness in trade and ultimately erode our material living standards), while even lower inflation than this 2–3 per cent per year target could mean that the rate of economic growth is too slow, resources are lying idle and part of Australia’s productive capacity is being wasted.

General trends in Australia’s inflation

Although Australia’s inflation rate averaged 3.0 per cent a year between 2000–01 and 2013–14, figure 3.3 (below) indicates cyclical variations from year to year.

- Inflation strengthened in the late 1990s to peak in an inflationary spike in 2000–01. This corresponded with the introduction of the GST, the depreciation of the A$ and sharply rising oil prices.
- There was moderately slow inflation between 2001–02 and 2004–05, with rates within the RBA’s acceptable inflation goal of 2–3 per cent.
Between 2005–06 and 2007–08, inflation was generally higher and averaged over 3.5 per cent annually, just above the RBA target. Here, inflationary pressures generally reflected an economy that was operating near its productive capacity.

More recently since 2008–09, average inflation slowed to 2.8 per cent, due to the ongoing effects of the global financial crisis (GFC) and the ensuing slowdown. The ABS also provides other information about inflation. For instance, it reveals in which capital city (e.g. Perth or Melbourne) prices rose least and what categories of goods and services (e.g. food or transportation) rose most rapidly.

**International comparisons of inflation**

It is interesting to make international comparisons of inflation rates, both recently and in the past.

**Historical comparisons of inflation**

Some of the highest daily and monthly rates of inflation recorded in history are shown in table 3.2.

**TABLE 3.2** Historical examples of high inflation rates in selected countries

<table>
<thead>
<tr>
<th>Country (and month when inflation was highest)</th>
<th>Highest monthly inflation rate recorded (percentage)</th>
<th>Average daily inflation rate (percentage)</th>
<th>Average time (hours or days) taken for prices to double</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hungary (July 1946)</td>
<td>$1.30 \times 10^{16}$</td>
<td>195.0</td>
<td>15.6 hours</td>
</tr>
<tr>
<td>Zimbabwe (November 2008)</td>
<td>79 600 000 000</td>
<td>98.0</td>
<td>24.7 hours</td>
</tr>
<tr>
<td>Yugoslavia (January 1994)</td>
<td>313 000 000</td>
<td>64.6</td>
<td>1.4 days</td>
</tr>
<tr>
<td>Germany (October 1923)</td>
<td>29 500</td>
<td>20.9</td>
<td>3.7 days</td>
</tr>
<tr>
<td>Greece (November 1944)</td>
<td>11 300</td>
<td>17.1</td>
<td>4.5 days</td>
</tr>
<tr>
<td>China (May 1949)</td>
<td>4 210</td>
<td>13.4</td>
<td>5.6 days</td>
</tr>
</tbody>
</table>

Source: Data derived from article ‘RIP Zimbabwe Dollar’ by Steve H. Hanke, 5 February 2009, Cato Institute.

Hyperinflation, as shown in these examples, impacts badly on people’s wellbeing and living standards. Imagine what happens to the purchasing power of money and incomes in the space of just a few hours or days. How would you cope? Would money have any use and what would be the alternative? What would happen to living standards?

**Recent international comparisons of inflation**

Fortunately, in most countries, inflation is slower and under control. This is shown by figure 3.4 below.

**FIGURE 3.4** International comparisons of the change in inflation using the consumer price index (CPI)

Sources: Data derived from ABS 6401.0 Table 9.

Note: The annual rate of inflation is shown in brackets.
Notice that the base year or starting level of prices in figure 3.4 is 2011–12. Here, the CPIs in all countries equalled 100 index points. Clearly, Australia has been more successful than Indonesia in keeping inflation down, but has not done as well as the UK or US. As shown, Japan actually experienced a time of deflation (i.e. falling prices in 2012–13 where the CPI even dropped below 100 points on those in the base year, 2011–12), as has occurred in some other countries since the global financial crisis and recession in 2008–09.

As we shall soon see, it is important to maintain low inflation in Australia in order to protect the purchasing power of our incomes, and to strengthen our international competitiveness and trade by helping us keep the prices of our exports of goods and services below those for similar items overseas.

3.4 Causes or factors affecting Australia’s inflation rate

Figure 3.3 (p. 112) shows that there was considerable variation in Australia’s inflation rate between 2000–01 and 2012–13 due to both domestic (i.e. local within Australia) and international events. Indeed, there are two main types of factor that can affect Australia’s inflation rate.

1. Excessively strong demand-side conditions can cause demand inflation.
2. Less favourable supply-side developments can cause cost inflation.

Let us take a closer look at these factors.

Strong aggregate demand factors can cause demand inflation

Demand-side factors influence the level of AD in the economy. If these become excessively strong, there will be too much spending chasing too few Australian-made goods and services. Put another way, AD (i.e. C + I + G + X − M) will run ahead of productive capacity or aggregate supply (AS). When national spending runs ahead of production, widespread shortages of goods and services will appear as unsold stocks run out because firms cannot access extra resources in order to lift total output. As a result, the general price level will rise. This is called demand inflation. It is typical of a boom situation where the economy is stretched to its limit.

Thinking back to the five-sector circular flow model (see p. 69), strong demand-side factors can
cause AD to become excessive (i.e. flow 3) and create demand inflation. This could be the result of the following:

- greater consumer confidence about future income and employment causes households to reduce saving and increase spending
- stronger business confidence about rising sales and profits means that firms are keen to expand, and lift their investment in new plant and equipment
- a rapid growth in household income stimulates private consumption spending
- good economic conditions among our major trading partners in Asia, North America and Europe usually means that they purchase more of our exports
- relatively low interest rates on credit encourage more household and business borrowing that is used to finance private consumption and investment expenditure
- an expansionary budget (i.e. perhaps a budget deficit) involving lower tax rates and higher government spending that boosts overall expenditure.

Australia has often experienced bursts of demand inflation. For instance, demand inflation occurred during the Korean War boom (early 1950s), the late 1980s, between 2005 and mid-2008 and to a lesser extent, during 2010–11. By contrast, demand inflation will gradually disappear if demand-side conditions weaken and there is a period of slower growth in spending (e.g. 2008–09), or perhaps a recession (for example, 1990–93, 2008–09, 2010–11 and 2012–13). This is because the sudden collapse of expenditure and retail sales results in overproduction and rising stocks of unsold goods and services. In order to clear stock and excess output, firms discount or cut prices to attract extra buyers. Demand inflation disappears.

Less favourable aggregate supply factors can cause cost inflation

Even if there was no demand inflation, prices may still rise due to cost inflation. As illustrated in figure 3.7 below, cost inflation can occur when rising production costs cause firms to put up their final selling prices in order to protect their profit margins.

Cost inflation occurs when it costs firms more to produce goods and services. Higher production costs in wages or raw materials are often passed onto consumers as higher prices so that businesses can protect their profit margins.

The most common adverse supply-side factors that cause rising production costs or cost inflation include the following.

- Increased wages paid to workers (e.g. following a rise in the minimum wage as in 2013 and 2014 or perhaps under new enterprise wage agreements) add to cost pressures, accelerating inflation
- Reduced labour productivity or efficiency in production (e.g. due to outdated equipment, poor work practices, strikes, industrial unrest, lack of motivation, inadequate education or skills, and absence of the ‘work ethic’) adds to cost inflation
- Weak competition between producers of goods and services in a market (e.g. due to price fixing or collusion, tariff protection, existence of monopolies and oligopolies) reduces efficiency and thus adds to cost pressures
- Higher interest rates paid to banks on credit that was borrowed to finance the purchase of new plant and equipment (e.g. 2003–08, 2009–11) increase production costs for firms

Supply-side factors are influences affecting a firm’s level of efficiency, production costs, profitability and availability of resources. These factors might have either favourable or unfavourable impacts on levels of production and prices.
• **Rises in government taxes** (e.g. company tax, payroll tax on workers’ wages, indirect excise taxes on cigarettes for instance) and increased utilities and other charges (e.g. for water, property rates, superannuation contributions on behalf of workers) add to cost inflation pressures.

• **Increased cost of locally supplied raw materials**, equipment and services (e.g. power, telecommunications, transport, banking) make it more expensive to produce goods and services in Australia, adding to cost pressures.

• **Increased cost of imported raw materials** and equipment (e.g. following a weaker exchange rate for the A$ as in mid to late 2008, higher inflation rates overseas) can make local production costs dearer.

• **Severe climatic conditions** (e.g. drought 2004–10 and 2012–14 in Western Queensland, floods 2010–11 and 2013, and fires 2009–10) can cause higher production costs and prices, and limit the production or supply of fruit, vegetables and meat.

• **Rising oil or energy prices** (e.g. due to international conflict and tensions, strong global levels of economic activity) can make the production of goods and services and their transportation dearer, thereby adding to cost inflation pressures (e.g. 2007–08, 2012–13–14).

Unlike demand inflation (which can only occur when there is full employment and the economy is in a boom and extended beyond its productive capacity), elements of cost inflation can occur in any economic situation, even when there is high unemployment. Even so, cost inflation more often occurs in a boom, alongside demand inflation. This is because wages and the cost of other resources rise when there is very low unemployment and no unused productive capacity (e.g. in the boom-like conditions, 2007–08).

In recent years, cost inflation has been kept in check by some favourable supply-side factors including ongoing tariff cuts, reasonable worker productivity, a mostly stronger Australian dollar or exchange rate that makes imports cheaper, the promotion of strong competition in markets to keep prices down, and other microeconomic efficiency policies introduced by the Australian government. In addition, some cost inflation pressures temporarily eased following the onset of the global recession in 2008–09 due to slower rises in wages, lower interest rates on borrowed credit and cheaper raw materials. However, since then and during 2010–11 and 2013–14, some costs (e.g. imported goods, oil) have again started to rise.

### Check Your Understanding

1. Giving examples, define **aggregate demand-side factors**. How might these factors cause Australia’s inflation rate to rise?

2. What is demand inflation?

3. Giving examples, define **aggregate supply-side factors**. How might these factors cause Australia’s inflation rate to rise?

4. Define **cost inflation**.

---

### 3.5 The importance of avoiding rapid inflation

Inflation affects people differently. Although some individuals **benefit**, most people **suffer** when prices rise. The exact effects of high inflation especially depend on how inflation changes your purchasing power or **real income** (i.e. money income received in the hand after allowing for the effects of rising prices). If your disposable money income rises faster than prices or the inflation rate, you will enjoy greater purchasing power, higher real income and better material living standards. However, if money income rises more slowly than the inflation rate, real income falls along with living standards. Let us take a closer look why it is important for the Australian government to avoid high inflation and achieve a low inflation rate of perhaps around 2 to 3 per cent average rise per year.
How inflation affects the incomes and purchasing power of individuals and families

Generally, most low- and middle-income earners suffer when there is inflation. Their living standards fall. This is because, for many, rises in wages tend to lag behind rises in general prices. This applies to people whose incomes are fixed or fairly stable. Fixed income earners include some retirees who have invested their savings for a fixed term at a relatively low interest rate, members of weak unions who are in a poor bargaining position, workers in depressed industries where profits are low, some exporters who find they can no longer compete and, to an extent, welfare recipients whose cash benefits lag behind rising prices. Their purchasing power and material living standards are often reduced by rising prices. This is especially noticeable when it comes to buying assets, such as a house. Typically, real estate or property prices rise faster than other prices, making it even less affordable for ordinary families. In addition, when there is inflation, rising interest rates on home loans place home ownership out of the reach of many lower- and middle-income families. Overall, it is better for a nation to avoid inflation.

Of course, there are some individuals who actually gain from inflation. Often these people are speculators in shares or property who can make bigger capital gains by buying assets when they are cheap and selling them when they are dearer following price rises. Another group with the ability to protect themselves from inflation due to their bargaining position, are skilled workers in very efficient industries, or those industries dominated by monopolies and protected by high tariffs. Individuals who are members of a strong union operating in key industries may also be able to ensure that their wages and purchasing power keep pace with inflation.

How inflation affects businesses

As mentioned, inflation can have devastating effects on some businesses, eroding Australia’s material living standards. Exporters often find they become less competitive abroad. They have to pay rising production costs due to domestic inflation, yet the prices they are paid by foreign buyers often remain fairly steady. In addition, local import-competing firms can find it difficult to survive and earn good profits. They cannot lift their selling price due to competition from imports, yet rising production costs squeeze their profit margins. There are three main categories of business that may do better than others during periods of high inflation.

1. Those that import goods and services from low inflation countries find that their sales are strong (provided that the exchange rate does not fall too much, making imports more expensive).
2. Monopoly firms (i.e. one supplier who is a price maker) selling an essential product where there is weak competition from imports (i.e. due to tariff protection, geographic isolation) find that they can get away with large price rises.
3. Firms involved in shares and property often do well because their businesses boom, thanks to the activities of speculators.

How inflation affects the government

Government budgets or finances can both win and lose from inflation. They gain only because inflation tends to cause their tax revenue to grow faster. For instance, rising prices cause the revenue collected from indirect tax (i.e. taxes representing a certain proportion of the price of most goods or services) to increase. Also, inflation sometimes tends to boost company profits and, thus, firms may need to pay more in company tax. In addition, inflation often causes some people to earn higher incomes moving them into higher tax brackets. This is called bracket creep. This is another way that the government can collect more revenue during periods of inflation.

Despite these gains, governments find that inflation usually raises the cost of their budget outlays. Due to inflation, community goods and services purchased by the government (e.g. building roads, paying wages to public servants) become more expensive. In addition, many welfare benefits are adjusted or indexed so they are directly

Fixed income earners are those individuals whose incomes (e.g. wages, government welfare benefits, interest from some investments) remain steady and fail to keep up with rising prices so that their purchasing power decreases.

![Figure 3.9 Australia’s CPI inflation rate is affected by changes in the price of many items making up the basket or regimen of goods and services, including housing, fuel, medical, education, food and utility bills. When prices race ahead of the rise in wages, purchasing power is reduced and living standards depressed.](image)

**FIGURE 3.9** Australia’s CPI inflation rate is affected by changes in the price of many items making up the basket or regimen of goods and services, including housing, fuel, medical, education, food and utility bills. When prices race ahead of the rise in wages, purchasing power is reduced and living standards depressed.
linked to the rate of inflation. This means that rising prices tend to increase the cost of some areas of government outlays on welfare.

Demand inflation also causes the government to introduce policies that are designed to put the brakes on economic activity. Strategies such as higher interest rates and increases in tax rates relative to cuts in government outlays are called contractionary policies because they slow AD, GDP and employment. By contrast, different policies are needed if there is cost inflation. Here the government may use cost-cutting microeconomic efficiency reforms.

Other economic reasons for maintaining a low inflation environment

High inflation rates usually damage a nation’s economic performance, ultimately undermining our living standards. There are three reasons for this.

1. **Inflation tends to slow economic growth and cause unemployment.** Inflation can eventually slow national production and cause unemployment to rise. This is because it can undermine consumer and business confidence, eventually weakening private consumption and investment spending, and slowing AD. In turn, when AD slows, GDP and employment are likely to fall. In addition, because inflation often causes interest rates (i.e. the price or cost of credit) to rise, it can slow private consumption (C) and investment (I) spending or AD, GDP and employment. Again living standards are reduced.

2. **Inflation weakens our international trading position.** Inflation often weakens our international trade balance (i.e. the difference between the value of exports and the value of imports). It can make our exports more costly and less attractive to overseas buyers. This tends to lower export incomes. At the same time, cheaper imports become relatively more appealing to us here in Australia. The net effect of this is that Australia may end up with a trade deficit (i.e. the value of exports is less than the value of imports) and a weaker currency or exchange rate.

3. **Inflation leads to greater income inequality.** Inflation can cause income and wealth to be divided or shared more unevenly between individuals than before, since it causes some people to gain and others to lose purchasing power. Because inflation can cause so much damage to the economy, many economists believe that the goal of low inflation (i.e. keeping price rises to an average RBA target rate of around 2–3 per cent a year) is, perhaps, the most important economic goal for improving material living standards.

Try applied economic exercise 5, p. 125

3.6 Australian government policies to help achieve the goal of low inflation

As previously mentioned, one of the federal government’s (or, more precisely, the Reserve Bank’s) most important economic aims is the goal of low inflation because this improves material living standards. Nowadays, this means keeping inflation to an annual average of around 2–3 per cent over the duration of the economic or business cycle.

Let us briefly examine the **two main types of government economic policies** that may be used to help pursue the goal of low inflation.

1. **Aggregate demand policies** can be used to control demand inflation.
2. **Aggregate supply policies** can be used to control cost inflation.
Using aggregate demand policies to slow demand inflation

In cases where demand inflation becomes severe, the federal government might use concretionary monetary and budgetary measures as aggregate demand-side policies to help slow excess levels of spending or aggregate demand (AD).

Concretionary monetary policy involving higher interest rates

Monetary policy mainly involves the Reserve Bank of Australia (RBA) changing interest rates as a way of affecting the level of national spending or AD and economic activity. Interest rates are simply what banks pay on savings or charge on credit. Concretionary monetary policy uses higher interest rates to wind back excess spending (such as in 2002–08 and, to a lesser extent, 2009–10), remove shortages of goods and services, and slow demand inflation. In turn, higher credit costs on loans to households and businesses will discourage private consumption (C) and investment (I) spending, thereby slowing AD and economic activity. Furthermore, the attraction of higher interest rates may even encourage people to save more, again slowing spending, reducing widespread shortages of goods and services, and easing demand inflation.

Concretionary budgetary policy involving higher taxes and reduced government outlays

Budgetary policy involves annual changes by the treasurer in government receipts (revenue) relative to government outlays (expenses). When there is a switch in direction towards concretionary budget surpluses (e.g. 2002–08 or perhaps 2016–17), these help to slow spending by raising revenue collected from personal and company taxes (i.e. to reduce consumption and investment), and cutting government outlays and purchases. Such measures work to reduce demand inflation by slowing private consumption (C), investment (I), government spending (G) and hence AD. With weaker spending, unsold stocks start to rise, widespread shortages disappear and demand inflation stops.

Using aggregate supply policies to slow cost inflation

When inflationary pressures are caused by rising production costs, the government must use microeconomic or aggregate supply-side policies. These are cost-cutting, efficiency-promoting measures. They help Australia produce more output from the same or fewer resources or inputs, and might include the following policies.

Reducing tariff protection to help cut production costs

Critics of high tariffs claim that they cause business inefficiency by weakening the level of competition from imports. Adopting the idea of free trade and cutting the general rate of tariffs to only 5 per cent since 1996 has forced manufacturing firms to find ways of lowering their production costs through changing the way they organise their operations. Additionally, in 2000, 2003 and 2010, special tariff rates for the car, textile, clothing and footwear industries were reduced, with some further cuts planned for 2015. Lower tariffs encourage firms to accelerate structural change, lift efficiency and reduce their production costs. In addition, the cost of imports of some business equipment and materials becomes cheaper, again contributing to lower production costs for many local businesses, allowing them to sell profitably at lower prices. Australian consumers then also benefit from cheaper prices.

Reform of the labour market to help cut wage costs

Some economics commentators have noted that over the years, Australia’s centralised system for setting minimum wages has led to higher and more rapid rises in labour costs. This caused inflation to be faster than would otherwise occur in a more competitive or freer labour market. With this in mind, 1991 saw labour market reforms involving the introduction of enterprise bargaining or workplace agreements negotiated between employees and their boss on a firm-by-firm basis. The process has accelerated so that by 2012, over 85 per cent of Australia’s workers were covered by enterprise agreements. Unfortunately, this change has meant that Australian wage levels have become less uniform (since they are decentralised and set on a firm-by-firm basis). However, the big benefit of these workplace agreements is that wage rises are used as the incentive for workers to lift their productivity or efficiency. As shown by the aggregate demand-side policies, including budgetary and monetary policies, are government measures designed to slow or accelerate the levels of spending or aggregate demand and economic activity. They are often applied in a countercyclical way to improve economic stability. For example, policies are used to try to slow spending during an inflationary upswing so the economy does not overheat.

Concretionary monetary policy refers to rises in interest rates set by the RBA designed to help slow AD during an inflationary upswing or boom.

Government receipts are government income from various sources such as taxes. Being a leakage in the economy, these slow AD.

Government outlays are the expenses of the government or how the money raised from taxes is used to pay for welfare, education, defence and health. Being an injection in the economy, these add to AD.

Concretionary budget surplus is when the value of budget tax and other receipts exceeds the value of government budget spending and other outlays. This can be used to help slow AD during an inflationary upswing or boom.

Aggregate supply-side policies are government cost-cutting, efficiency-promoting measures used to slow cost inflation and increase a nation’s productive capacity.

Minimum wages are set by Fair Work Australia and represent the lowest legal level of pay.

Labour costs include wages paid to staff involved in the production of goods and services.

Labour market reforms are government changes to the wage system including the shift towards enterprise agreements. These are designed to help lift worker productivity.

Enterprise bargaining (or workplace agreements) is a system where wages and working conditions are negotiated between employees and their boss on a firm-by-firm basis.

Productivity relates to the level of efficiency or the output gained from a given quantity of inputs of resources including labour.
following example, if 2.5 per cent more output is produced per hour worked, modest wage rises of 2 per cent do not add to inflation since labour unit costs of production are actually 0.5 per cent lower. In this case, wage rises are non-inflationary.

The **immigration target** is set by the federal government and involves determining a desirable level of migrants that will be allowed into the country each year in various categories including skilled, family reunification and humanitarian. It is a central feature of our immigration policy.

![Figure 3.11](image)

**Figure 3.11** Wages are a major production cost for firms. Enterprise bargaining is a government policy that has been used to encourage staff to work harder and increase their level of efficiency per output per hour. This will help to reduce labour costs and ease inflationary pressures.

**National infrastructure** involves the provision of important roads, railways, power and water grids, port facilities and communication systems that are used by businesses to help produce other goods and services. It involves investment spending, usually by governments, but sometimes in partnership with private firms.

**Price fixing** refers to illegal collusion between supposedly rival firms, often involving strategies that increase prices above normal levels.

Indeed, as seen between 1992 and 2002, the use of enterprise bargaining seemed to greatly improve Australia’s labour efficiency and check cost inflation. However, during the period 2004–05 and 2010–11, average rises in labour productivity slowed, adding to inflationary pressures at that time.

### Encouraging skilled migration to help slow wage costs

Unfortunately, wage costs in Australia are generally high and, for many firms, represent around 70 per cent of overall production costs. To some extent, our high labour costs (especially for skilled workers) are the result of shortages or limited supply of labour. Over recent decades, this lack of labour has been caused by two things: our ageing population (where there is a larger percentage of the population that is retired and in older age groups) and a relatively low birth rate. One way to solve labour shortages fairly quickly is to encourage immigration. Indeed, in recent years to 2014, the federal government’s **immigration target** has averaged around 190,000 per year, of whom around 70 per cent were regarded as skilled migrants. What this means is that our labour shortages are reduced and the skills of the labour force increased. Overall, this policy tends to slow wage costs and may help ease inflationary pressures.

### Encouraging education and training to lift efficiency and reduce costs

Skilled and educated workers are more productive and efficient than those who are unskilled. In turn, higher efficiency or GDP produced per hour worked, helps to lower labour costs and relieve inflationary pressures. With this in mind, recent federal governments to 2013–14 have increased budget outlays on workplace training and education through the schools building program and the ‘education revolution’, increased funding for vocational education and training (VET), and provided financial encouragement for young people to take up apprenticeships and for employers to take on apprentices.

### National infrastructure projects to help reduce production costs

**National infrastructure** involves the construction of important roads, railways, power and water grids, port facilities and communication systems that are used by businesses to help produce other goods and services. In the last five to ten years, the federal government (sometimes in partnership with private firms) has announced many new infrastructure projects including key rail links, national highways and, of course, the National Broadband Network (NBN). Improved rail and road transport infrastructure will help to lift efficiency, reduce travel times and lower production costs for firms, while the NBN should also help to improve the speed of telecommunications and hopefully reduce cost pressures. By slowing cost pressures, a low inflation environment should be promoted.

### Competition policy to lower production costs

There are many monopolies and oligopolies operating in some Australian industries. This means there is only weak competition between firms in the setting of prices. In addition, *collusion* or *price fixing* between companies reduces competition and efficiency, and adds to cost inflation. However, concern about this has caused the government to rely on the **Australian Competition and Consumer Commission (ACCC)** to try to promote greater competition. The **Competition and Consumer Act 2010** (Cwlth) makes price fixing and price collusion between firms illegal. Punishments for such practices have been toughened.

```

<table>
<thead>
<tr>
<th>Hypothetical example of how greater labour efficiency using performance-based enterprise agreements can mean higher wages and yet lower production costs and inflation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual increase in production per worker per hour (encouraged by offers of higher pay) = 2.5%</td>
</tr>
<tr>
<td>Annual rise in the wage paid = 2.0%</td>
</tr>
<tr>
<td>Annual change in wage costs per unit produced (as a production cost) = –0.5%</td>
</tr>
</tbody>
</table>

```

Indeed, as seen between 1992 and 2002, the use of enterprise bargaining seemed to greatly improve Australia’s labour efficiency and check cost inflation. However, during the period 2004–05 and 2010–11, average rises in labour productivity slowed, adding to inflationary pressures at that time.
and a close watch is kept on price rises in industries where competition is weak, through price surveillance. Company takeovers and mergers are also closely monitored to ensure that they do not limit rivalry between firms. Fiercer competition between businesses (such as pure competition, referred to on p. 18 of chapter 1) should check greed and help to reduce the prices charged by sellers of goods and services.

**Reducing the rate of company tax to help lower production costs**

Taxes are a production cost for business and cause firms to charge more for their products than would otherwise be the case. Prior to microeconomic reforms in the early 2000s, company tax rates were set at a high 36 per cent on every dollar of profit. Such rates added to cost inflation. However, following reforms in 2000–02, the government cut company tax to 30 per cent. Furthermore, in 2009–10, the Henry review of taxation pointed out that the average rate of company tax in major OECD nations was around 28 per cent. With this in mind, the Australian government announced further tax reform involving cutting the rate of company tax for small businesses from 30 to 29 per cent. Unfortunately, this has not yet been implemented. During the 2013 election, Mr. Abbott announced that he would cut the rate to 28.5 per cent from July 2015. However, although not yet implemented, lower tax rates should lead to better after-tax profits, allowing firms to sell their goods and services more cheaply, easing inflationary pressures and helping to help make local firms even more competitive internationally.

**Summary of policies to help slow inflationary pressures**

The federal government’s economic policies that are used to help slow demand and cost inflation are summarised in figure 3.12 below.

---

**Government policies to promote the goal of low inflation**

(i.e. the Australian Government, through the RBA, tries to keep the average inflation rate to around 2–3 per cent over the duration of the economic cycle, since this is beneficial for living standards).

**Contractionary macroeconomic or aggregate demand-side policies to control demand inflation**

These policies try to reduce excess AD so that there are no longer widespread shortages of goods and services.

- Contractionary policy involves higher RBA interest rates to slow spending.
- Contractionary budgetary policy involves tax rises and less government spending.
- Reduced protection and lower tariffs stimulate competition and efficiency.
- Deregulate the labour market--promote greater competition and efficiency and keep wage costs down.

**Microeconomic efficiency reforms or aggregate supply policies to control cost inflation**

These policies try to reduce production costs, lift efficiency and grow the economy’s productive capacity or aggregate supply.

- Tax reform--lower company tax rates to cut business costs, lift after-tax profits and increase investment in new equipment should help lower cost inflation.
- Encouraging immigration helps ease labour shortages and slows wage costs.
- Competition policy helps to keep prices down by reducing collusion between rival firms.
- National infrastructure, projects help cut production costs through increased efficiency.
- Encouraging education and training helps lift worker productivity and slow cost pressures.

---

**Tax reform** involves cutting the rate of various taxes to help increase the incentive to work hard, invest and expand business. This should lift efficiency and ease cost pressures.
In order to satisfactorily complete VCE Economics Unit 1, Part 2, the teacher must decide whether the student has demonstrated the general achievement of the set of outcomes specified for the unit, including key knowledge and key skills for outcome 2. The teacher’s decision should reflect results from a selection of school-based assessment tasks. Generally, this assessment should take place as part of the normal teaching and learning program. In addition, most assessment will be completed in class under a limited time frame. With this in mind, teachers may select from an appropriate range of tasks provided on the following pages.

Multiple-choice test questions

Using the multiple-choice answer grid below, select the letter (A, B, C, D) that represents the most appropriate answer for each question by marking it with a tick (✓).

Answer grid

<table>
<thead>
<tr>
<th>Question</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>16</td>
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</tr>
</tbody>
</table>

Question 1
Concerning inflation, which statement is correct?
A Inflation is said to occur when the price of a particular good or service goes up.
B Inflation is said to occur only if the prices of all goods and services rise.
C Inflation is said to occur when most prices of goods and services rise in a representative sample or basket.
D Inflation occurs when there is a widespread surplus of goods and services.

Question 2
Which of the following best defines the consumer price index (CPI)?
A An index that measures changes in the price of all goods and services purchased by households over a period of time.
B An index that measures the price change of exported goods and services against imports.
C An index that measures the average change in the prices of a weighted and representative sample of locally-made goods and services purchased by households.
D An index that measures the average change in a weighted and representative sample of locally-made and foreign-made goods and services purchased by metropolitan households, measured over a period of time.

Question 3
Regarding the data shown in table 3.3 about Australia’s inflation rate for 2010–11, 2011–12 and 2012–13 as measured by the CPI, which statement is most correct? You may use a calculator if you wish.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual CPI (2011–12 = 100 index points)</td>
<td>97.7</td>
<td>100.0</td>
<td>102.3</td>
</tr>
</tbody>
</table>

Source: Data derived from ABS 6401.0, Table 1.

A In 2011–12, the CPI rose by around 3.2 per cent.
B In 2012–13, the CPI rose by around 2.3 per cent.
C Since 1989–90, the CPI rose by 102.3 per cent.
D The annual CPI rise for 2012–13 cannot be calculated from the above data.

Question 4
Which of the following is not the title of one of the 11 major categories of item in the CPI regimen?
A Food
B Recreation
C Transportation
D Cost of holidays

Question 5
Concerning the CPI, which statement is false?
A Items that are important or frequently purchased are weighted more heavily in the index.
B The CPI in the base year is always equal to 100 index points.
C If the CPI was 110 points in one year and 120 the next year, then the CPI rose by exactly 10 per cent.
D The ABS surveys consumer prices at a representative range of retail outlets in capital cities.

Question 6
Examine the CPI data in table 3.4 (below) by capital city for 2011–12 (the base year) and 2012–13, before answering the question.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sydney</th>
<th>Melbourne</th>
<th>Brisbane</th>
<th>Adelaide</th>
<th>Perth</th>
<th>Hobart</th>
<th>Canberra</th>
<th>Darwin</th>
<th>Average (8 capitals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011–12</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>2012–13</td>
<td>102.6</td>
<td>102.2</td>
<td>102.0</td>
<td>102.1</td>
<td>102.2</td>
<td>101.2</td>
<td>101.9</td>
<td>103.1</td>
<td>102.3</td>
</tr>
</tbody>
</table>

Source: Data derived from ABS 6401.0, Table 1.
Concerning the data, which statement is false?
A. Over the period, general consumer prices went up fastest in Darwin.
B. Over the period, general consumer prices went up least in Hobart.
C. Over the period, prices in Canberra went up faster than for the average of the eight capital cities.
D. Over the period, Melbourne's inflation rate was 2.2 per cent.

**Question 7**
Which of the following is not a limitation to the accuracy of the CPI as a measure of inflation?
A. Not all prices and items purchased by households are included and measured in the regimen.
B. The weights assigned to particular items may not be representative of the importance of specific items for some households.
C. Only the prices of locally-made goods and services are measured and the price changes of foreign goods are excluded.
D. Increases and decreases in the quality of included items in the regimen may not always be reflected by changes in prices.

**Question 8**
From your knowledge, which statement about Australia's inflation rate over the past 10 or so years is incorrect?
A. Inflation was fastest when employment was lowest.
B. Inflation slowed in the near recession of 2008–09 following the GFC.
C. Inflation was within the government's goal for low inflation in most years.
D. Inflation tended to rise and fall with the level of economic activity in Australia.

**Question 9**
Concerning demand inflation, which of the following is generally false?
A. Demand inflation cannot occur in a recession.
B. Demand inflation rises quickly, even when the economy has unemployment and unused productive capacity.
C. Demand inflation is a sign that there are general shortages of goods and services caused by too much spending on too few locally-made goods and services.
D. Demand inflation may be caused by excessively strong demand-side conditions.

**Question 10**
Which of the following would tend to have an effect on the level of demand inflation that is different from that of the other three factors?
A. Consumer confidence falls.
B. Incomes of households rise.
C. The government lifts personal tax rates.
D. There is a recession overseas among our major trading partners, the United States and Japan.

**Question 11**
Concerning cost inflation, which statement is false?
A. Cost inflation can occur either during booms or recessions.
B. Cost inflation results from rising production costs that force firms to lift prices to avoid a drop in profits.
C. Higher interest rates and dearer imports will not cause cost inflation.
D. Cost inflation is worsened by increased inefficiency in production and reduced worker productivity.

**Question 12**
Which of the following statements has an effect on the rate of cost inflation that is different from the other three factors?
A. Worker productivity falls and wages remain steady.
B. Tariffs are reduced to promote greater competition in local markets for goods.
C. The government cuts the rate of company tax.
D. Higher savings result in lower interest rates for bank credit lent to business firms.

**Question 13**
Which statement is most correct? Inflation will not normally be worsened by:
A. Rises in wages equal to 10 per cent when worker productivity rises at 12 per cent over the same period.
B. Cuts in personal tax.
C. A fall or depreciation in the exchange rate for the A$ against the US$.
D. Stopping government supply-side policies or microeconomic reforms.

**Question 14**
Who would normally be hurt least by rapid inflation in Australia?
A. Exporters selling swimwear in the United States
B. Importers buying cars from South Korea
C. Retired people on fixed incomes gained from their investments and savings
D. Workers in industries where efficiency and profit margins are lowest.

**Question 15**
Which of the following government economic policies would not help to lower demand inflation?
A. Rises in interest rates by the RBA
B. Reductions in the rates of personal income tax
C. Lower tariffs on imports
D. Government encouragement of national savings and superannuation contributions by workers for their retirement

**Question 16**
Which of the following would not help lower cost inflation in Australia?
A. Encouragement of enterprise bargaining and further labour market reforms
B. Higher rates of company tax
C. Strengthening the powers of the ACCC to help promote greater competition between firms in the setting of prices
D. Allowing more foreign banks to compete in the financial sector to depress interest rates on credit lent to firms for expansion and the purchase of new equipment

**Terminology revision**

Briefly and accurately write out definitions for each of the terms listed in table 3.5. OR Why not try to construct your own crossword, word search or another puzzle, using terminology and facts relevant to income distribution?

<table>
<thead>
<tr>
<th>TABLE 3.5 Economics terms used in chapter 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australian Competition and Consumer Commission (ACCC)</strong></td>
</tr>
<tr>
<td><strong>base year</strong></td>
</tr>
<tr>
<td><strong>consumer price index (CPI)</strong></td>
</tr>
<tr>
<td><strong>cost inflation</strong></td>
</tr>
<tr>
<td><strong>costs of production</strong></td>
</tr>
<tr>
<td><strong>competition policy</strong></td>
</tr>
<tr>
<td><strong>contractionary budgetary policy</strong></td>
</tr>
<tr>
<td><strong>contractionary monetary policy</strong></td>
</tr>
<tr>
<td><strong>deflation</strong></td>
</tr>
<tr>
<td><strong>demand inflation</strong></td>
</tr>
</tbody>
</table>
Applied economic exercises

**Question 1**
A Explain the difference between inflation and deflation.
B What is hyperinflation? Giving examples, explain how it would affect material living standards.

**Question 2**
A Complete the definitional sentence — the consumer price index (CPI) measures... 
B Why are the price changes of some goods and services not measured in the CPI? 
C Why are items making up the CPI basket weighted? 
D Which three of the 11 item categories contributed most to Australia’s level of inflation between 2007–08 and 2012–13? Explain.

**Question 3**
A Explain two important differences between demand inflation and cost inflation. 
B How might very optimistic levels of consumer and business confidence in Australia cause inflation to increase under certain economic conditions?
C If wages rise without at least an equal increase in worker productivity or efficiency, why might this accelerate inflation?
D Why might weak levels of competition from imports and the existence of local monopolies and oligopolies in industry cause inflation to be higher than otherwise?

**Question 4**
For each of the events listed in table 3.7, explain the likely effect on the level of inflation, noting the type of inflation that is affected by the event.

**TABLE 3.6** Annual percentage change in prices for the eleven categories of items making up Australia’s CPI

<table>
<thead>
<tr>
<th>Year</th>
<th>Food &amp; non-alcoholic beverages (%)</th>
<th>Clothing and footwear (%)</th>
<th>Housing (%)</th>
<th>Furnishings, household equipment &amp; services (%)</th>
<th>Transportation (%)</th>
<th>Tobacco and alcohol (%)</th>
<th>Health (%)</th>
<th>Education (%)</th>
<th>Recreation (%)</th>
<th>Communication (%)</th>
<th>Financial and insurance (%)</th>
<th>All groups (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007–08</td>
<td>3.1</td>
<td>0.8</td>
<td>5.2</td>
<td>–1</td>
<td>4.6</td>
<td>3.8</td>
<td>4.5</td>
<td>4.2</td>
<td>1.4</td>
<td>0.4</td>
<td>6.2</td>
<td>3.4</td>
</tr>
<tr>
<td>2008–09</td>
<td>4.9</td>
<td>0.8</td>
<td>6</td>
<td>1.4</td>
<td>–0.9</td>
<td>5.5</td>
<td>5.1</td>
<td>4.9</td>
<td>1</td>
<td>0.7</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>2009–10</td>
<td>1.6</td>
<td>–0.3</td>
<td>5.8</td>
<td>2.3</td>
<td>0.7</td>
<td>4.9</td>
<td>4.8</td>
<td>5.6</td>
<td>0.4</td>
<td>0.3</td>
<td>–2.1</td>
<td>2.4</td>
</tr>
<tr>
<td>2010–11</td>
<td>3.7</td>
<td>–2</td>
<td>4.9</td>
<td>–0.1</td>
<td>2.2</td>
<td>9.8</td>
<td>4.7</td>
<td>5.8</td>
<td>–1.1</td>
<td>–0.1</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>2011–12</td>
<td>0.7</td>
<td>1.4</td>
<td>3.7</td>
<td>0.3</td>
<td>3.2</td>
<td>3.4</td>
<td>3.7</td>
<td>5.9</td>
<td>–0.5</td>
<td>1.1</td>
<td>4.2</td>
<td>2.4</td>
</tr>
<tr>
<td>2012–13</td>
<td>0.5</td>
<td>–0.5</td>
<td>4.9</td>
<td>0.8</td>
<td>1.1</td>
<td>3.9</td>
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<td>–0.9</td>
<td>1.7</td>
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<td>2013–14</td>
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<td>2014–15</td>
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</tbody>
</table>

**Source:** Data derived from ABS, 6401.0 (table 4).

**TABLE 3.7** Events affecting Australia’s inflation rate

<table>
<thead>
<tr>
<th>Event affecting Australia’s inflation rate</th>
<th>Explanation of the effect of the event on inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Low paid workers succeed in gaining a 4 per cent rise in minimum wage.</td>
<td></td>
</tr>
<tr>
<td>2. Oil prices more than double between their lowest point during the global recession, and early 2014.</td>
<td></td>
</tr>
<tr>
<td>3. The economy has full employment (around 4.5 to 5 per cent unemployment) and households get a tax cut (e.g. 2007–08).</td>
<td></td>
</tr>
<tr>
<td>4. Consumer confidence collapses in the US, Japan and Europe (e.g. as in 2008–09–10–11).</td>
<td></td>
</tr>
<tr>
<td>5. The government continues to cut tariffs on cars and clothing (e.g. proposed for 2015).</td>
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<tr>
<td>6. There is a boom in China, dramatically lifting our exports when our unemployment rate reached monthly lows of 4.9 per cent (e.g. 2010–11).</td>
<td></td>
</tr>
<tr>
<td>7. The exchange rate for the A$ fell 16 per cent against the US$ (e.g. February 2013 and 2014).</td>
<td></td>
</tr>
<tr>
<td>8. Interest rates charged on bank loans to business rise from 8.8 to 10.7 per cent per annum (e.g. 2008–09 and mid-2011).</td>
<td></td>
</tr>
<tr>
<td>9. Local councils increase their property rates for businesses by 20 per cent.</td>
<td></td>
</tr>
<tr>
<td>10. There is a fall in the number of industries operating in markets controlled by oligopolies and monopolies.</td>
<td></td>
</tr>
</tbody>
</table>
**Question 5**

Explain the effects on the purchasing power of incomes (and material living standards) for each of the individuals listed in table 3.8, if there was a 5 per cent annual inflation rate in Australia, compared with a rate of only 2 per cent overseas.

**TABLE 3.8 How inflation affects the purchasing power of different individuals**

<table>
<thead>
<tr>
<th>Individuals</th>
<th>Explanation of the effects of inflation on the individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dave earns most of his income as an exporter, selling 90 per cent of his wool overseas in Japan and China.</td>
<td></td>
</tr>
<tr>
<td>2. Georgia runs a fashion boutique that sells imported skirts and swimwear.</td>
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</tr>
<tr>
<td>3. Ho Chi and Jill are just married and borrow $200,000 to buy their first home.</td>
<td></td>
</tr>
<tr>
<td>4. Dian works in the local textile mill making skirts for the local market.</td>
<td></td>
</tr>
<tr>
<td>5. Darrel runs an international tourist hotel in Surfers Paradise, Queensland.</td>
<td></td>
</tr>
<tr>
<td>6. Tan lent Alison $1000 interest free for one month in order for her to pay the rent.</td>
<td></td>
</tr>
<tr>
<td>7. Michelle and Ringo have four young children, are unemployed and on government welfare benefits.</td>
<td></td>
</tr>
<tr>
<td>8. Jenny’s occupations include real estate, antiques and share trading.</td>
<td></td>
</tr>
<tr>
<td>9. John is 80 years old and retired, but not eligible for the age pension because of his $590,000 in assets.</td>
<td></td>
</tr>
<tr>
<td>10. Belinda, a taxpayer, recently received a 10 per cent pay rise for the year.</td>
<td></td>
</tr>
</tbody>
</table>

**Question 6**

A Define what is meant by the government’s economic goal of low inflation.

B In general terms, explain clearly how the government may use its various policies to help slow demand and cost inflation.

C Explain how the government policies listed in table 3.9 are likely to affect Australia’s inflation rate, noting whether they are more successful in slowing demand inflation or cost inflation.

**TABLE 3.9 The effects of Australian government economic policies on the inflation rate**

<table>
<thead>
<tr>
<th>Australian government economic policy</th>
<th>Explanation of how the policy is likely to affect inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The federal government reduces the growth of government spending in the budget (e.g. 2010–14).</td>
<td></td>
</tr>
<tr>
<td>2. The RBA lifts interest rates from 4.25 to 7.25 per cent per annum (e.g. 2002–08).</td>
<td></td>
</tr>
<tr>
<td>3. The rate of company tax is cut from 30 to 28.5 per cent (e.g. originally proposed for July 2015).</td>
<td></td>
</tr>
<tr>
<td>4. The government encourages household saving through rises in compulsory superannuation and tax concessions for savers (e.g. 1992–2014).</td>
<td></td>
</tr>
<tr>
<td>5. Enterprise bargaining is encouraged, where wages rise only occur if there are increases in worker efficiency (e.g. 1991–2014).</td>
<td></td>
</tr>
<tr>
<td>6. Tax concessions are available for firms who invest in new plant and equipment and who undertake R&amp;D (e.g. 2000–14).</td>
<td></td>
</tr>
<tr>
<td>7. The government introduces a 10 per cent GST on the sale of most goods and services (e.g. July 2000).</td>
<td></td>
</tr>
<tr>
<td>8. The government deregulates the financial sector and encourages foreign banks to operate and compete in Australia (e.g. especially 1982–99).</td>
<td></td>
</tr>
<tr>
<td>10. The government further reduces tariffs on imports (e.g. proposed for textiles in 2015).</td>
<td></td>
</tr>
</tbody>
</table>

**Analysis of statistical evidence**

Examine table 3.10 below showing the CPI for four countries, including Australia.

A Which country had the most rapid inflation rate over the period 2009–10 to 2012–13? Which country kept inflation lowest over the period 2009–10 to 2012–13?

B Calculate the average annual inflation rate (percentage) for each country for the period 2010–11 to 2012–13.

C Suggest two important economic theoretical reasons why the inflation rates for countries differ.

**TABLE 3.10 Inflation in different countries (CPI)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>95.9</td>
<td>98.3</td>
<td>100</td>
<td>101.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>94.2</td>
<td>96.8</td>
<td>100</td>
<td>101.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>99.9</td>
<td>99.9</td>
<td>100</td>
<td>99.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>90</td>
<td>95</td>
<td>100</td>
<td>103.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>89.6</td>
<td>95.7</td>
<td>100</td>
<td>104.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data derived from ABS 6401.0 (Tables 9 and 10).
An essay

Your task is to prepare a 400-word essay about one of the following topics:
1. Examine the causes of inflation.
2. Outline the four best ways whereby the government can reduce both cost and demand inflation.

A class debate

After dividing into teams (one for the affirmative and one for the negative), work with others to prepare a debate about the following topic: ‘That inflation is now as dead as the dodo or the dinosaur’.

Economic simulation activity — role play and multimedia presentation

Background
Fairly regularly, the Board of Australia’s Reserve Bank meets to consider whether interest rates should be changed. Typically, rates are increased if the RBA thinks that inflation will start to exceed the RBA’s 2–3 per cent target for low inflation, and reduced if inflation is not a threat.

In making its decision, an inflation checklist of recent trends in statistical indicators is examined. This list includes:
- changes in the latest quarterly inflation rate using the CPI
- changes in private consumption and investment spending, along with AD
- changes in the growth rate of wages
- changes in the level of overseas economic activity (for example China, US and Japan).

The roles to play

Pretend that there is going to be a meeting of the RBA Board (of which you are a member) to consider whether there is a need to increase interest rates in the economy in order to combat recent changes in the inflation rate. Divide the class into pairs of students, who will then need to conduct research about the latest trends in the above checklist of indicators. The task for each pair is to prepare a persuasive talk of around 3–4 minutes which will be presented at the round table meeting of the Board. Your presentation will argue either in favour of or against an immediate rise in interest rates. You may be able to use information technology to prepare a set of PowerPoint slides, or perhaps you may create some Excel graphs and place these on a display board to illustrate your speech.

A report on an investigation

Question 1: Inflation investigation

The task
You are asked to research the topic of inflation using a variety of references, other than your textbook. In particular, you may like to find out something about the following areas:
- the history of inflation (e.g. at various times in Germany, Hungary, Zimbabwe or South America)
- how different economists (e.g. Milton Friedman) have tried to explain the causes of inflation
- the effects of hyperinflation on households and businesses
- what the policy cures for inflation are, as suggested by some economists.

References
A good place to start your research is on the internet or in your school or local library.
- Try using internet search engines (e.g. Google) to look up relevant and approved websites containing information about inflation.
- Look up the Reserve Bank of Australia website for the latest statement about monetary policy or the Australian government’s recent budget papers.
- Use reference textbooks about economic theories explaining the causes of inflation.

Presentation of your research
There are many ways you could present your work:
- a wall chart
- a report
- a presentation (e.g. PowerPoint slides, DVD)
- an essay
- a class talk.

Question 2: Tuckshop price index

This exercise involves calculating a simple tuckshop price index measured over a two-year period. All the statistical data for completion is set out in table 3.11 (p. 127). You will notice that this table has three parts that need completion and covers two years. In addition, the tuckshop price index might use 2011 as the base year, has a regimen containing only four items and the weights given to each item remain the same over the two years.

Follow the step-by-step instructions to complete table 3.11.

Step 1. To complete part 1 of table 3.11, calculate the weighted value of spending on each item in the regimen for each of the two years (e.g. 2014 and 2015). To provide an example only, the weighted value of a meat pie (i.e. the first item in the regimen) in both years has been done for you, but using a hypothetical price. The actual prices to be used in these calculations for the two-year period need to be researched by you at your tuckshop.

\[
\text{Weighted value of a pie in each year} = \text{price per pie for that year} \times \text{the weighting given to pies}
\]

When you have completed calculating the weighted value of each item in each of the two years on the table, you then need to add up the total weighted value of the whole basket of tuckshop items for each of the years.

Step 2. Convert the total weighted value of the basket for each of the two years into an index whose value is not measured in terms of dollars and cents, but in terms of so many index points. To do this, the first year (e.g. 2014) is selected as the base year. In other words, the total weighted value of the basket in the starting year measured in dollars and cents is equal to 100 index points. This acts as a yardstick to allow us to compare the weighted values of the basket in the following year. In order to calculate the level of the index the year after the base year (e.g. for 2015), the following approach is used:

\[
\text{Tuckshop price index, e.g. 2015} = \frac{\text{Total weighted value} ($) \text{ of the basket in (e.g. 2015)}}{\text{Total weighted value} ($) \text{ of the basket in the base year (2014)}} \times 100
\]

**FIGURE 3.13 Calculation for CPI**
Step 3. Using the price index you calculated in step 2 above, calculate the **annual percentage increase** in the tuckshop price index, e.g. between 2014 and 2015. The **annual percentage rise** in the price index is always equal to the increase in the index over and above the level of prices that existed in the base year — i.e. the increased level of the index, in 2015 against that in 2014. Try using the following approach.

\[
\text{Annual percentage rise in the tuckshop price index (e.g. for 2015)} = \frac{\text{Number of index points increase in index between two consecutive years (e.g. 2015 minus 2014)}}{\text{Level of index in the first of the two years selected (e.g. 2014)}} \times 100
\]

**FIGURE 3.14** Calculating the increase in the index

Give two sound statistical reasons why this tuckshop price index may be a poor guide to the change in prices paid by students in Victorian schools over the two-year period (e.g. between 2014 and 2015).

### A folio of annotated media commentaries using print or electronic materials

Collect any two newspaper articles about the issue of inflation. For instance, they may report:
- the latest trends
- the causes of recent trends
- the effects of inflation
- government policies to reduce inflation.

Annotate these articles where you identify, expand and discuss these major ideas. These extracts may come from various sources including print (i.e. newspapers and magazines) or the internet. Be sure to clearly indicate or footnote the source of this information.

### View a DVD or program

To help strengthen your understanding of inflation, view some of the following programs:

### Table 3.11 The tuckshop price index for completion — e.g. 2014 to 2015

<table>
<thead>
<tr>
<th>Part of the table</th>
<th>Regimen</th>
<th>The weight given to item in regimen</th>
<th>Price per unit or item ($)</th>
<th>Weighted value ($)</th>
<th>Price per unit ($)</th>
<th>Weighted value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pie and sauce</td>
<td>5</td>
<td>3.00</td>
<td>15.00</td>
<td>3.50</td>
<td>17.50</td>
</tr>
<tr>
<td></td>
<td>Can of Coke</td>
<td>6</td>
<td>.......</td>
<td>.......</td>
<td>.......</td>
<td>.......</td>
</tr>
<tr>
<td></td>
<td>Twisties</td>
<td>3</td>
<td>.......</td>
<td>.......</td>
<td>.......</td>
<td>.......</td>
</tr>
<tr>
<td></td>
<td>Cherry Ripe</td>
<td>2</td>
<td>.......</td>
<td>.......</td>
<td>.......</td>
<td>.......</td>
</tr>
<tr>
<td></td>
<td>Total weighted value of spending on the regimen</td>
<td></td>
<td>Total weighted cost of basket in e.g. 2011 = $........</td>
<td></td>
<td>Total weighted cost of basket in e.g. 2012 = $........</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tuckshop price index (show your working)</td>
<td></td>
<td>Base year = 100 index points (i.e. because this is the base year for the index and always equals 100)</td>
<td></td>
<td>Cost of basket in e.g. 2015 × 100 = ....... Index points</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cost of basket in e.g. 2014 × 100 = ....... Index points</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Annual percentage rise in the tuckshop price index between 2014 and 2015</td>
<td></td>
<td>Base year — not applicable (i.e. because this is the base or first year — there is no year against which to compare the data)</td>
<td></td>
<td>Points increase in index 100 × 100 = ....... % rise</td>
<td></td>
</tr>
</tbody>
</table>

To help strengthen your understanding of inflation, view some of the following programs:
SUMMARY

Definition of inflation

- Inflation generally erodes our living standards. It refers to a situation where most prices for goods and services are rising.
- Hyperinflation is where prices rise very quickly, out of control.
- Deflation is when prices are generally falling. Inflation is not a new problem (e.g. American Civil War, Germany 1923, Hungary 1946 and Zimbabwe 2008).

Measurement of inflation

- Inflation is measured quarterly by the ABS using the consumer price index (CPI).
- The CPI indicates the average change in the retail prices of a wide range of locally-made and imported goods and services purchased by metropolitan households.
- The CPI comprises a regimen or basket where items are weighted. Comparisons of price changes are made against prices of the basket of items in the base year (currently 1989–90).

Recent trends in Australia’s inflation

- The Australian government strives to achieve the goal of low inflation where general prices increase by an average of around 2–3 per cent a year over the business cycle.
- Achieving this goal helps to strengthen material living standards.
- Overall between 2000–01 and 2013–14, prices were fairly stable, rising by just over 3 per cent a year despite accelerating inflation in 2000–01, 2005–08 (prior to the global recession 2008–09), and again in 2009–10–11.
- Due to quite strong economic growth and limited spare productive capacity until late 2008, and again in 2010–11, Australia’s inflation was higher than in some of our overseas competitors.

Factors affecting or causes of Australia’s inflation

- Inflation has two main causes.
  1. Demand inflation. During a boom, demand-side factors or conditions are strong (e.g. high levels of consumer and business confidence, rises in disposable income, booming economic conditions overseas, tax cuts, lower interest rates, or rises in government spending). These can cause excessive levels of AD or spending on locally-made production, resulting in widespread shortages of goods and services if there is little unused productive capacity (so production cannot grow). These shortages can lead to demand inflation (e.g. late 1980s, 2005–08 and to a lesser extent between 2009 and 2011).
  2. Cost inflation. Cost inflation can occur at any time, in booms and even in recessions. It can result from rising production costs or adverse supply-side conditions (e.g. higher wages, rises in interest rates and taxes, lower worker efficiency and a weaker A$, drought and increased oil prices). Higher costs force firms to charge more for what they produce, to protect their profit margins (e.g. the 1980s generally, 2006–08 and to a lesser extent in 2010–11).

Impacts and effects of inflation

- Inflation impacts on people differently depending on how their purchasing power is affected by rising prices — some may benefit but most suffer reduced living standards.
- For instance, speculators, importers and local firms with a monopoly producing essential goods and services often gain.
- By contrast exporters, fixed income earners, ordinary families and workers in industries facing strong competition lose because they often find that general prices rise faster than wages so their real income falls.

Government policies to reduce inflation

- The government (and the RBA) seeks to achieve the target or goal of low inflation, where the CPI rises by an average of 2–3 per cent over the duration of the business cycle. Ultimately, this helps improve our material living standards.
The government may use two types of policies to help pursue the goal of low inflation:

1. **Aggregate demand policies to slow demand inflation.**
   - If there is demand inflation involving excess spending and general shortages of goods and services, the government needs to apply the brakes and slow economic activity by contractionary macroeconomic budgetary policies (i.e. higher taxes and lower government spending) and/or contractionary RBA monetary policies (i.e. higher interest rates on savings and loans to firms and households) to slow AD.
   - Lower spending removes widespread shortages of goods and services in the economy, easing demand inflation pressures.

2. **Aggregate supply policies to slow cost inflation.**
   - If there is cost inflation caused by rising production costs and adverse supply-side conditions, the government needs aggregate supply or microeconomic policies to raise efficiency in production and cut costs.
   - Aggregate supply or microeconomic efficiency policies might include lower tariffs, improved efficiency in government businesses through privatisation or corporatisation, labour market deregulation involving enterprise agreements linking wages to efficiency, financial sector deregulation to stiffen competition and lower interest rates, cuts in company and other tax rates, competition policy involving the *Competition and Consumer Act 2010* (Cwlth), prices surveillance and the ACCC, encouragement of national savings, and promotion of investment and business R&D.
Australia’s inflation as a contemporary economic issue

**Inflation as an economic issue**
- Inflation is an economic problem or illness that hurts our living standards.
- Inflation means generally rising prices.
- Deflation is when prices generally fall.
- Hyperinflation is when price rises are out of control.

**Inflation is measured using the consumer price index (CPI).**
- Change in retail prices of local and foreign made goods and services purchased by metropolitan households.
- A regimen of consumer goods and services is selected.
- Items are weighted according to their relative importance in typical household budgets.
- Prices surveyed are a cross-section of retail outlets.
- Prices are compared against a base year which equals 100 index points.

**Trends in Australian and international inflation**
- Inflation changes in a cyclical pattern with the level of economic growth or activity.
- Accelerating inflation in the late 1990s rose to a 6 per cent peak in 2000–01.
- Steadier inflation rates of 2–3 per cent existed between 2001–02 and 2004–05.
- Increased inflation in 2005–08 and 2009–10–11 was due to strong economic activity and a lack of unused capacity.
- Australia’s inflation rate has been faster than some overseas competitors like the UK and Japan.

**Factors affecting or causes of inflation**
- Demand inflation only occurs in booms:
  - Excessively strong demand-side factors include consumer and business optimism, boom conditions overseas, excessive cuts in taxes or interest rates, and a falling A$.
  - Excess AD in an economy that is near its productive capacity can lead to widespread shortages of goods and services and thus demand inflation (e.g. 2005–08 and perhaps 2010–11).
- Cost inflation occurs at any time:
  - Less favourable supply-side factors that add to costs might include drought, rising oil prices, higher wages, increased interest rates on business borrowing, a weaker A$ and poor labour productivity and efficiency.
  - Higher production costs force firms to pass on these on to consumers as higher prices in order to protect their profit margins, leading to cost inflation (e.g. 2005–08 and 2010–11).

**Government policies used to promote the goal of low inflation**
(i.e. an average increase in general prices of around 2–3 per cent a year over the economic cycle)
- Macroeconomic or aggregate demand policies:
  - These policies need to be applied in a contractionary way to slow AD and help neutralise or counteract the inflationary boom. Weaker AD removes shortages of goods and services, ending demand inflation.
  - Contractionary monetary policies to slow AD and economic activity, involve the RBA increasing interest rates to encourage saving and discourage C + I spending based on borrowed credit (e.g. 2009–11).
  - Contractionary budgetary policies to slow AD involve the Treasurer increasing tax revenues in the budget relative to the level of government spending on outlays (e.g. 2006–08, perhaps 2012–13).
- Microeconomic or aggregate supply policies:
  - These policies involve microeconomic cost-cutting, efficiency-promoting reforms that boost productive capacity and AS (i.e. more output can be produced from same resources). If costs are reduced, firms can lower their selling prices against competitors and still make good profits, ending cost inflation.
  - Aggregate supply policies might include:
    - cutting tariffs to lift efficiency (e.g. 2010)
    - labour market reforms to lift efficiency (e.g. 2010 and 2012)
    - cutting rates of company (e.g. promised for 2015) and personal (2010, 2012) tax to improve incentives and efficiency
    - promoting stiffer competition between rival firms through the ACCC
    - government spending on education and training
    - increase in immigration to ease labour shortages
    - increased spending on infrastructure.