3.1 Introduction

National economic objectives are the aims or targets which Australia seeks to achieve. These aims reflect the values or beliefs that most people feel are important. Essentially, there are two main categories of aims. For instance, in Australia as in some other countries, most think it is important to allow much economic freedom, private ownership of property, self-interest, private enterprise and consumer sovereignty. These are some of the individual values underlying our economic system. Additionally, since the mid 1940s, there are six important collective economic objectives which have also been actively pursued by the Australian Government. Here we think of the following national economic goals:
We will now examine each of these in turn by looking at their definition, measurement, trends, evaluation of performance against criteria, relationships with other objectives, and their impact on our living standards. In addition to these aspects, it is really important to understand and be able to analyse the impact of changing demand-side and supply-side factors on each of the government’s six economic objectives.

With this in mind, you will find the need to constantly refer to table 3.1. This information should be regularly updated and revised as new statistical data are released. The two most useful sources of information for this purpose are *Australian Economic Indicators* (ABS 1350.0) and the *Reserve Bank Monthly Bulletin*.

Let us now take a closer look at each of the federal government’s economic objectives. A discussion of the objective of price stability commences on page 68.

### Table 3.1
**Australian economic indicators**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rate of economic growth (% Chain vol. GDP) (Reference year 2004–05)</td>
<td>3.8</td>
<td>4.5</td>
<td>5.2</td>
<td>4.0</td>
<td>1.9</td>
<td>3.8</td>
<td>3.2</td>
<td>4.1</td>
<td>2.7</td>
<td>2.8</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>2. Rate of inflation (% CPI)</td>
<td>1.3</td>
<td>0.0</td>
<td>1.2</td>
<td>2.4</td>
<td>6.0</td>
<td>2.8</td>
<td>2.7</td>
<td>2.8</td>
<td>2.5</td>
<td>4.0</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>3. Rate of unemployment (% unemployed)</td>
<td>8.3</td>
<td>8.0</td>
<td>7.4</td>
<td>6.6</td>
<td>6.4</td>
<td>6.7</td>
<td>6.1</td>
<td>5.8</td>
<td>5.3</td>
<td>5.1</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>4. External stability (CAD in $ billions)</td>
<td>17.6</td>
<td>22.8</td>
<td>33.6</td>
<td>32.6</td>
<td>18.1</td>
<td>20.7</td>
<td>40.2</td>
<td>46.8</td>
<td>57.6</td>
<td>54.4</td>
<td>34.4</td>
<td></td>
</tr>
<tr>
<td>5. External stability (CAD/GDP ratio %)</td>
<td>3.3</td>
<td>4.1</td>
<td>5.7</td>
<td>5.1</td>
<td>2.7</td>
<td>3.1</td>
<td>5.1</td>
<td>5.5</td>
<td>6.2</td>
<td>5.5</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>6. Productivity growth (GDP per hr worked)</td>
<td>3.4</td>
<td>3.1</td>
<td>4.0</td>
<td>0.6</td>
<td>1.5</td>
<td>3.7</td>
<td>0.5</td>
<td>2.3</td>
<td>0.3</td>
<td>0.9</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>7. Gini coefficient for market income</td>
<td>0.538</td>
<td>NA</td>
<td>NA</td>
<td>0.570</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>—</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>8. Gini coefficient of equivalised household disposable income</td>
<td>0.292</td>
<td>0.303</td>
<td>NA</td>
<td>0.310</td>
<td>0.311</td>
<td>NA</td>
<td>0.309</td>
<td>0.294</td>
<td>NA</td>
<td>NA</td>
<td>0.30</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Business confidence index — average of quarterly (NAB net balance)</td>
<td>10.4</td>
<td>9.3</td>
<td>1.6</td>
<td>6.2</td>
<td>2.7</td>
<td>13.4</td>
<td>7.1</td>
<td>11.1</td>
<td>6.7</td>
<td>7.1</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>3. Annual change (% a year) gross disposable income</td>
<td>5.0</td>
<td>3.4</td>
<td>5.6</td>
<td>5.3</td>
<td>9.3</td>
<td>4.3</td>
<td>3.2</td>
<td>6.6</td>
<td>6.4</td>
<td>7.0</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>4. Total annual credit growth (% a year)</td>
<td>10.0</td>
<td>11.0</td>
<td>9.4</td>
<td>9.9</td>
<td>9.7</td>
<td>11.5</td>
<td>11.8</td>
<td>8.2</td>
<td>11.8</td>
<td>13.7</td>
<td>10.7</td>
<td></td>
</tr>
<tr>
<td>5. Official interest rates (% at June)</td>
<td>5.50</td>
<td>5.00</td>
<td>4.75</td>
<td>6.00</td>
<td>5.00</td>
<td>4.50</td>
<td>5.25</td>
<td>5.25</td>
<td>5.50</td>
<td>5.75</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>6. Underlying budget outcome ($ billion)</td>
<td>−4.9</td>
<td>+1.2</td>
<td>+5.6</td>
<td>+12.7</td>
<td>+5.6</td>
<td>−1.3</td>
<td>+7.5</td>
<td>+8.0</td>
<td>+13.6</td>
<td>+15.8</td>
<td>13.6</td>
<td>6.4 (Note only 2 deficits)</td>
</tr>
</tbody>
</table>

**Note:** Only 2 deficits
### DEMAND-SIDE FACTORS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7. US growth in GDP (%) a year</td>
<td>4.3</td>
<td>4.4</td>
<td>4.2</td>
<td>4.5</td>
<td>2.0</td>
<td>0.7</td>
<td>1.9</td>
<td>3.9</td>
<td>3.3</td>
<td>3.4</td>
<td>3.4</td>
<td>3.3</td>
</tr>
<tr>
<td>8. Japan growth in GDP (%) a year</td>
<td>3.2</td>
<td>-0.4</td>
<td>-0.4</td>
<td>0.9</td>
<td>2.2</td>
<td>-1.4</td>
<td>1.1</td>
<td>2.6</td>
<td>1.6</td>
<td>2.5</td>
<td>2.5</td>
<td>1.2</td>
</tr>
<tr>
<td>9. Exchange rate (TWI — 1970=100) — June (RBA)</td>
<td>56.7</td>
<td>57.9</td>
<td>58.4</td>
<td>53.3</td>
<td>49.7</td>
<td>52.3</td>
<td>59.4</td>
<td>59.1</td>
<td>64.5</td>
<td>62.2</td>
<td>57.0</td>
<td></td>
</tr>
<tr>
<td>10. Terms of trade index (2002–03 = 100 points) RBA</td>
<td>96.3</td>
<td>96.3</td>
<td>91.1</td>
<td>94.9</td>
<td>98.1</td>
<td>98.0</td>
<td>100.0</td>
<td>108.0</td>
<td>103.0</td>
<td>116.0</td>
<td>100.2</td>
<td></td>
</tr>
<tr>
<td>11. Rate of company tax (% of profits)</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>34</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>32.8</td>
</tr>
<tr>
<td>12. Population growth rate (%)</td>
<td>1.2</td>
<td>1.1</td>
<td>1.2</td>
<td>1.2</td>
<td>1.3</td>
<td>1.4</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.3</td>
<td>1.3</td>
<td>1.25</td>
</tr>
</tbody>
</table>

### SUPPLY-SIDE FACTORS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Productivity (% GDP per hour worked)</td>
<td>3.4</td>
<td>3.1</td>
<td>4.0</td>
<td>0.6</td>
<td>1.5</td>
<td>3.7</td>
<td>0.5</td>
<td>2.3</td>
<td>0.3</td>
<td>0.9</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>2. Interest rate (variable % at June) — overdraft rate for large businesses</td>
<td>9.00</td>
<td>8.05</td>
<td>7.95</td>
<td>9.30</td>
<td>8.50</td>
<td>8.35</td>
<td>8.35</td>
<td>8.85</td>
<td>9.10</td>
<td>9.35</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>3. Gross profit (% growth in private non-financial corporations operating surplus)</td>
<td>7.3</td>
<td>8.1</td>
<td>5.9</td>
<td>7.2</td>
<td>8.2</td>
<td>7.4</td>
<td>10.4</td>
<td>11.1</td>
<td>7.8</td>
<td>13.9</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>4. RULC (average real annual % change, non-farm sector)</td>
<td>0.3</td>
<td>-1.4</td>
<td>0.4</td>
<td>-0.8</td>
<td>0.4</td>
<td>-1.2</td>
<td>-1.0</td>
<td>-1.7</td>
<td>-0.4</td>
<td>-0.6</td>
<td>-0.6</td>
<td></td>
</tr>
<tr>
<td>5. New federal enterprise agreements (total % of annual wage)</td>
<td>4.7</td>
<td>4.0</td>
<td>3.8</td>
<td>3.4</td>
<td>3.9</td>
<td>3.7</td>
<td>4.0</td>
<td>4.0</td>
<td>4.1</td>
<td>4.2</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>6. Exchange rate (TWI at June 1970 = 100)</td>
<td>56.7</td>
<td>57.9</td>
<td>58.4</td>
<td>53.3</td>
<td>49.7</td>
<td>52.3</td>
<td>59.4</td>
<td>59.1</td>
<td>64.5</td>
<td>62.2</td>
<td>57.0</td>
<td></td>
</tr>
<tr>
<td>7. Labour force participation rate (%)</td>
<td>63.5</td>
<td>63.2</td>
<td>63.2</td>
<td>63.4</td>
<td>63.4</td>
<td>63.4</td>
<td>63.7</td>
<td>63.5</td>
<td>64.0</td>
<td>64.5</td>
<td>64.5</td>
<td></td>
</tr>
<tr>
<td>8. Labour force growth rate (%)</td>
<td>1.2</td>
<td>1.0</td>
<td>1.5</td>
<td>1.9</td>
<td>1.9</td>
<td>1.4</td>
<td>1.9</td>
<td>1.3</td>
<td>2.4</td>
<td>2.1</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>9. Number of strikes (average working days lost per 1000 employees)</td>
<td>90.0</td>
<td>82.1</td>
<td>55.8</td>
<td>105.3</td>
<td>45.1</td>
<td>41.9</td>
<td>30.2</td>
<td>66.9</td>
<td>28.8</td>
<td>21.5</td>
<td>56.7</td>
<td></td>
</tr>
<tr>
<td>10. Farm production volume index (1997–98 = 100 points)</td>
<td>99</td>
<td>100</td>
<td>106</td>
<td>112</td>
<td>113</td>
<td>115</td>
<td>94</td>
<td>112</td>
<td>112</td>
<td>116</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>11. Prices of materials used in manufacturing (% change a year)</td>
<td>-3.7</td>
<td>0.9</td>
<td>-1.0</td>
<td>9.3</td>
<td>14.4</td>
<td>0.0</td>
<td>-0.4</td>
<td>-4.5</td>
<td>8.9</td>
<td>18.1</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>12. Rate of company tax (% of profits)</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>34</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>32.8</td>
</tr>
</tbody>
</table>

* Budget estimates

**Sources:** Data derived from ABS 1350.0, 5204.0, 6523.0 and the RBA Bulletin (various editions).
3.2 The objective of price stability

DEFINITION OF ‘PRICE STABILITY’

Inflation occurs when the prices of most goods and services are rising (as opposed to the opposite situation, deflation, when prices are mostly falling). With inflation, things generally become dearer to buy and money gradually loses its purchasing power. Most people see inflation as something to be avoided. For this reason, one of the government’s central economic goals is the objective of price stability.

The government’s objective of price stability is achieved when general prices for goods and services are increasing fairly slowly, and at a rate less than that of our trading competitors. Here, an acceptable inflation rate is where prices are rising within the target range of 2–3 per cent per year average, over the duration of an economic cycle (often lasting around 4–7 years). Indeed, the Reserve Bank of Australia’s (RBA) main responsibility is to keep inflation within this range. What this means is that in some years, inflation might even be a bit above the target, while in others, perhaps a bit lower. It’s the average that counts.

Price stability certainly does not mean that, in all years, inflation should be zero. The reason is simple. Zero inflation would be inconsistent with the achievement of other economic objectives. For example, low inflation would require a really slow level of economic activity leading to weak economic growth and high cyclical unemployment. In addition, high unemployment also reduces equity in the distribution of personal incomes. By contrast, setting a higher inflation target than 2–3 per cent per year would also undermine the achievement of other government economic objectives. Because price stability helps to create general conditions where other government goals are more likely to be achieved, perhaps you can see why many economists regard it as the most important economic objective.

THE EFFECTS OF INFLATION

As mentioned already, inflation is generally seen as a nasty thing because it generally has adverse effects on other government objectives.

Inflation expectations can set in

Inflation, or rising prices, steals the purchasing power of money incomes. Unless people’s incomes (i.e. from wages, rent, interest, dividends, profits, welfare) rise at least as fast as prices, they are worse off. Persistent inflation can lead to the onset of inflationary expectations. Here we come to expect that inflation will continue in the future, so we take steps to protect our incomes from its effects. Workers might push harder and with success for a pay rise. Lenders of money want higher interest rates so that their percentage returns stay ahead of the rate of inflation. Firms may re-price their stock and blame others for doing so. So often this expectation of inflation becomes a self-fulfilling prediction. Once inflationary expectations take hold, it is a tough job keeping inflation down. To avoid this, the RBA relentlessly attacks inflation at every opportunity, raising interest rates as required, to help stamp it out.

Local producers are at a competitive disadvantage with those overseas

Inflation really hurts Australian producers by undermining their international competitiveness. For example, firms producing items for the local and export markets, are unable to maintain or expand their sales and market share. In turn, this depresses profits, slowing business expansion. This can even cause business closures and structural unemployment. Inflation also slows our exports and encourages imports of cheaper goods and services from overseas. Often this leads to a larger international trade deficit.

Undermines economic growth

Continued growth in economic activity depends partly on consumer and business optimism about the future. When inflation occurs, this confidence is eroded, partly because experience often shows that booms are followed by recessions. In addition, interest rates usually go up when there is inflation. This is partly due to a tightening of monetary policy by the RBA that is designed to help check inflation by increasing savings and reducing borrowing and spending. However, these higher interest rates can also undermine confidence and slow household consumption and business investment expenditure that are needed for production to expand.

Undermines efficiency in resource allocation

Owners of resources allocate them to try and maximise their incomes and returns. When there is inflation, the prices of shares, property and some other assets tend to rise faster than the general inflation rate. This often provides investors with good opportunities to make large capital gains. Hence, inflation tends to cause resources to be sucked out of more productive uses like the expansion of business investment in plant and equipment, and redirected into more speculative investments. This undermines efficiency in resource allocation and eventually slows the long-term rate of economic growth.

Affects income distribution in arbitrary ways

Inflation has different effects on various groups of individuals. As a result, some people will gain increased purchasing power and incomes, while others will suffer:

- On the one hand, self-funded retirees whose incomes often depend on fixed interest rates (i.e. one group of fixed income earners), find that they become poorer because their incomes do not keep up with rising prices. However, those whose incomes are upwardly flexible like speculators, or who are in a strong bargaining position, can end up with rising incomes.
- Exporters become less internationally competitive, so their sales and incomes fall, while importers may gain due to stronger sales and higher incomes.
Those ordinary families who have taken out a variable mortgage or home loan find that their housing affordability declines as rising interest payments take up a higher proportion of their family incomes. However, lenders of money at variable or market interest rates find that their incomes rise.

Those who have become unemployed due to inflation causing business closures, face greatly reduced incomes and purchasing power on cash welfare benefits. However, those employed in industries subject to speculation, may find there are even more jobs and higher incomes.

Given all these negative effects of inflation, it is no wonder that the Australian Government tries hard to pursue the objective of price stability.

MEASUREMENT OF INFLATION

Inflation is measured by the Australian Bureau of Statistics (ABS). The most common indicator of the inflation rate is the consumer price index (CPI).

The Consumer Price Index (CPI)

The CPI has several important features.

**Definition**
The CPI measures quarterly changes in the retail prices of locally made and foreign goods and services that represent a high proportion of the expenditure of metropolitan households (e.g. employee, pensioner, unemployed, employer) in the capital cities.

**Regimen**
The regimen refers to the range of goods and services that are included in the basket whose prices are to be measured. The CPI measures the price changes of 100,000 individual items that are subdivided into 11 categories including food, clothing and footwear, housing, household furnishings, supplies and services, transport, tobacco and alcohol, health, recreation, education, communication and miscellaneous. From time to time, the ABS reviews the composition of the regimen. For instance, in 1998 and again in 2000 and 2005, the revised regimen excluded previously included items like home mortgage costs, but the basket of items was modified to also include house prices (but not land), bank fees, home computers and software, and tertiary education fees.

**Prices surveyed**
The quarterly price survey is carried out in a representative range of metropolitan retail outlets spanning both the private sector (e.g. Coles, Myer, K-Mart) and public sectors (e.g. local council property rates).

**Weighting of items**
Each item in the regimen is weighted according to its relative importance in overall household expenditure. Things that are expensive or frequently purchased have a greater bearing on index trends (e.g. food, housing and transport) than items of less significance (e.g. education, alcohol and tobacco). Weights are reviewed every 5 years.

**Base year**
Price changes over a period of time are compared against the price or cost of the regimen in a representative starting or base year. Currently the base year is 1989–90. For this year, the index was given a value equal to 100 index points. For instance, in 2005–06 the CPI was measured at 134.3 points as against 148.4 the previous year in June 2004–05. On this basis, there was a 4.0 per cent inflation rate between 2004–05 and 2005–06. This was calculated as follows:

\[
\text{Annual CPI rise (\% for 2005–06)} = \frac{\text{Value of CPI in first year} \times 100}{\text{Number of points increase in CPI}}
\]

\[
= \frac{5.9}{148.4} \times \frac{100}{1} = 3.975\%
\]

Other indicators of inflation

Apart from the ordinary CPI, there are two other measures of inflation that are occasionally quoted.

1. **The Treasury’s underlying index of inflation**

   Although less popular these days, sometimes one comes across a measure called the Treasury’s underlying indicator of inflation. While very similar to the CPI (especially since the modifications to the CPI made in 1998, 2000, 2005), the underlying index excludes from its regimen most one-off volatile items. For instance, the price of some fresh fruit and vegetables is affected greatly by seasonal conditions each year and prices may increase also as a result of unusual events such as floods or droughts. Additionally, the prices of many goods and services would be affected by changes in the rate of indirect tax and other government policies. Hence, by excluding these volatile types of goods and services from the measure, the underlying figure for inflation may shed light on whether or not there are fundamental or on-going inflationary pressures in the economy that justify a change in government policy designed to slow inflation. For example, if the ongoing or underlying inflation rate was within the 2–3 per cent target, but the CPI was recording a higher figure, it may be that there is little cause for alarm. However, if only the Treasury’s underlying rate was above the target, fundamental inflationary pressures would exist, clearly justifying stronger anti-inflationary policies by the government.

2. **The chain price index**

   Since 1998, the ABS has published chain price indexes. These indexes measure the change in the prices of different types of goods and services (e.g. prices of household consumer items, private investment or capital goods, items of government expenditure, and items exported and imported) making up expenditure on our GDP. These inflation indexes use a moving reference or base year as the basis of comparison of prices, and this base advances by one year every year. Hence, the base year is the year immediately before the current year and this is given a value equal to 100 index points. For example, the base year for 2005–06 chain price indexes is 2004–05, but in 2007–08 it will be 2006–07. Chain price indexes are used to remove, statistically, the effects of price variations on the value of GDP, so that it can be determined whether or not there has been a rise or fall in the actual volume of goods and services produced between one year and the next (called chain volume GDP).
Limitations of the CPI statistics

The CPI data provide a guide to general retail price trends in the Australian economy. However, the accuracy of the published inflation rate depends on several factors.

Lack of representativeness of the regimen

Only 100,000 selected consumer items appropriate for metropolitan households are included in the CPI. Hence, inflation figures may not be fully applicable for people who do not live in capital cities.

Weighting limitations

For some categories of households, the weighting of items in the regimen may be inappropriate and unreflective of the actual pattern of expenditure.

Other limitations

There could also be doubts as to the appropriateness of the base year that has been selected. Unless this year is representative, figures could appear relatively more or less favourable. Moreover, are the retail outlets being surveyed fully indicative of prices generally?

TRENDS IN AUSTRALIA’S INFLATION RATE

Figure 3.1 shows that during the 10-year period to 2005–06, Australia enjoyed a quite low inflation rate averaging around 2.6 per cent a year.

![Graph showing inflation rates from 1996-97 to 2008-09](image)

The government’s objective of price stability = average inflation rate of 2–3%/year

Figure 3.1 Australia’s inflation rate (annual percentage change in CPI)

Source: Data derived from ABS 1350.0.

However, inflation fluctuated between a minimum rate of zero per cent in 1997–98 and a maximum of 6 per cent in 2000–01. The graph shows that basically, there were four main phases or periods of inflation:

- Phase 1, 1996–97 to 1997–98: Inflation was slow and falling inflation averaging only 0.65 per cent a year.
- Phase 2, 1998–99 to 2000–01: There was a rapid acceleration and peak in the inflation rate averaging 3.2 per cent a year.
- Phase 3, 2001–02 to 2004–05: Inflation was fairly stable and again slowed to average 2.7 per cent a year.
- Phase 4, 2005–06: There was increased inflation reaching 4.0 per cent for the year.

CAUSES OR TYPES OF INFLATION

There are two main causes or types of inflation that can occur in an economy:

1. Very strong demand-side conditions can sometimes cause excess AD in an economy that has no unused capacity. This leads to widespread shortages and demand inflation.
2. Rising production costs and other adverse supply-side conditions can limit AS, and cause cost inflation.

Demand-side conditions can cause demand inflation

The levels of economic activity and inflation often move up and down in a cyclical fashion. Too much spending (i.e. AD + C + I + G + X − M) in an economy can result in widespread shortages of goods and services leading to demand inflation. Spending becomes excessive when the economy has no unused productive capacity (i.e. an unemployment rate <5 per cent) and where aggregate supply has reached its physical limit. Hence, demand inflation occurs only during a boom or strong peak in the business cycle where there is full employment. After the cyclical peak has passed and spending and economic activity again slow, the widespread shortages of goods and services disappear and demand inflation evaporates. Additionally, with weak levels of spending, some firms may even be forced to cut or discount their prices to clear excess stock that has not been purchased. This price discounting also slows demand inflation.

Given the absence of unused productive capacity, there are many demand-side factors that may cause excess AD (i.e. C + I + G + X – M) and lead to widespread shortages of goods and services. Let us consider just a few of the more important ones.

Consumer confidence

Household optimism about future employment and incomes usually lowers savings and increases private consumption spending (C). Because C is the largest and most influential component of AD, consumer confidence can bring on shortages and demand inflation when AD runs ahead of productive capacity or AS.

Rising disposable incomes

Rapidly rising household disposable incomes (following pay rises or tax cuts) could also cause C to grow too strongly if the economy is at its capacity. Again demand inflation could occur.

Business confidence

If firms are optimistic about future profits and sales, they may decide to expand the business by increasing investment spending (I) on new plant and equipment. This, too, adds to the level of AD and may sometimes contribute to shortages of goods and services, and demand inflation.
Cheap credit and low interest rates
Falling or low interest rates on credit borrowed by households and businesses to finance their C and I, can sometimes fuel expenditure, cause shortages and inflation. Normally, the Reserve Bank of Australia (RBA) would raise interest rates before spending gets out of hand.

Strong or rising economic activity abroad
When our trading partners overseas experience an inflationary boom or strong levels of economic activity, this can lead to increased inflation in Australia. One way that this can occur is through increased spending on our exports (X). This might also contribute to excessive levels of AD, shortages and demand inflation.

A falling exchange rate for the A$  
When the A$ falls, it makes our exports more attractive to those overseas. This can lead to a rise in the value of export spending (X), while at the same time reducing our spending on overseas imports (M). This combination of effects lifts AD, perhaps adding to domestic inflation if the economy is at its capacity.

The developments of demand inflation or boom can be illustrated on an AD–AS diagram. Figure 3.2 shows that if strong demand-side conditions cause the level of expenditure on Australian-made goods and services to become excessive (i.e. an increase from AD1 to AD2) and rise beyond the economy’s productive capacity (i.e. at GDF1 or 2), then general prices will rise due to shortages. This is known as demand inflation.

Supply-side conditions can cause cost inflation
Another cause of inflation is rising costs of production. This is called cost inflation. If businesses have to pay more for the resources they use to make or supply goods and services, firms are often forced to pass on their cost rises to the consumer in the form of higher prices. Failure to do so could otherwise mean squeezed profit margins or even bankruptcy! By contrast to this, if costs fall or are fairly steady, cost inflation should slow.

Rising costs for firms generally reflect unfavourable supply-side conditions that limit productive capacity and reduce the level of aggregate supply. Here one thinks of the following factors as causes of cost inflation.

Lower worker productivity and rising wage costs
A worker’s output per hour greatly affects production costs (given that wages represent around 60–80 per cent of the price of the things we buy). While rising, current productivity levels in Australia are only around 80 per cent of US levels yet our workers are paid almost as much on an hourly basis. When pay rates increase (e.g. due to a rise in the minimum wage) faster than productivity, real unit labour costs (RULCs) rise. This can force firms to increase prices to protect their profits, leading to cost inflation.

Higher cost for materials and equipment used in manufacture
To make cars, jeans or mobile phones, firms have to purchase materials like plastics, steel, copper, gold, cotton and chemicals, as well as machinery. When these inputs become dearer, sooner or later manufacturers will need to increase the price they charge their customers, or suffer reduced profit margins.

Higher interest rates charged on businesses overdrafts
Most businesses need to borrow bank credit to finance their operations and expansion. When interest rates on business overdrafts increase, suddenly firms face higher production costs, maybe again leading to inflation.

Rises in the cost of utilities
For some firms (e.g. aluminum smelters, lift companies making artificial snow, rice farmers, or car companies running machinery), the cost of water, electricity and gas are important influences on the prices they have to charge in order to make a profit.

Higher rates of company tax paid
High rates of tax on companies reduce their after-tax profits. This puts upward pressure on the prices they have to charge their customers, perhaps adding to inflation.
A fall in the Australian dollar
When the exchange rate for the A$ falls, local firms that have to import equipment and materials from overseas, face higher production costs, contributing to inflationary pressures.

The onset of higher inflationary expectations
If higher inflation takes hold in an economy and people get used to the idea of seeing prices going up, this leads to the expectation that it will continue in the future. To protect themselves from this perceived threat, workers seek bigger pay rises, lenders of credit expect higher returns pushing up interest rates, and retailers re-price their stock upwards. Unfortunately, these actions by suppliers of goods and services to protect themselves, eventually make their expectations a reality.

A slowdown in government microeconomic policy
The pace of government microeconomic efficiency reforms (e.g. tariff cuts, labour market deregulation, privatisation of government businesses, cuts in tax rates) can also affect production costs (e.g. imported materials, wages, and utilities) and the inflation rate.

Supply-side shocks
Supply-side shocks or one-off special events like a drought, cyclone, fire, war, terrorism or a sudden hike in oil prices, can impact greatly on business costs and the prices charged by firms.

The AD–AS diagram can also be used to illustrate the onset of cost inflation. Figure 3.3 shows that the development of unfavourable supply-side conditions that cut productive capacity or aggregate supply and move the AS line inwards from AS₁ to AS₂, can also cause cost inflation (i.e. prices rise from P₁ to P₂) and reduce national output (i.e. from GDP₁ to GDP₂).

Excessively strong demand-side conditions and economic activity
To some extent, Australia’s inflation rate has fluctuated with the cyclical ups and downs in the level of economic activity. During an upswing, and especially when the economy approaches its productive capacity or speed limit, general shortages of goods and services and boom conditions can lead to demand inflation. In the past 10 years to 2007, Australia has not had a boom. Indeed, the last real boom was in 1989–90. Even so, during 2005–06–7 (and perhaps to a lesser extent in 1999–2000), there was very little unused productive capacity. This was indicated by unemployment rates down as low as 4.6 per cent in October 2006. So, in recent years, what specific local and overseas demand-side factors had been driving up AD (i.e. C + I + G + X – M), economic activity and inflation rates?

Rising consumer confidence and disposable incomes
Consumer confidence (i.e. levels of household optimism about future employment prospects and income levels) can affect the inflation rate by altering the levels of private consumption spending, retail sales, AD and stocks held by firms. If stock shortages start to appear, due to spending outstripping current production, demand inflation occurs. There were some signs that this situation was developing between 1998 and early 2000, and again in 2005–06. It was driven by household optimism and rapidly rising disposable income (i.e. the amount of spendable income after receiving welfare and the payment of tax).

Rising overseas economic activity and the terms of trade
Very strong economic activity overseas among Australia’s major trading partners (e.g. US, Japan and China) can accelerate our export sales, AD and if there is limited unused capacity remaining, perhaps lead to general shortages of goods and services, and higher inflation. This situation tended to occur in 2004–05–06–07. Rapid economic growth in the US, China and India at this time, led to strong rises in Australia’s exports of minerals and other commodities. This also caused a rise in our terms of trade index (i.e. we received higher export prices relative to the prices we paid for imports), and in so doing, also helped to stimulate the value of our exports, AD, economic activity and inflation.

Low interest rates and the policies of the Reserve Bank of Australia (RBA)
Interest rates (i.e. the cost of credit) have an effect on Australia’s inflation rate by altering the levels of saving, borrowing (used to finance household consumption and business investment spending), expenditure and economic activity. Low interest rates lead to less saving, more borrowing and higher levels of AD. If rising expenditure causes the economy to get too close to its productive capacity and shortages start to appear, demand inflation accelerates (e.g. 2005–06 when unemployment reached as low as 4.6 per cent). In response to this, the RBA’s monetary policy is likely to involve increased interest rates.

Government budgets, taxes and outlays
Inflation rates can be affected by the government’s budgetary policy stance. The stance relates to the value of budget revenues relative to the value of its outlays. For instance, when the total value of revenue drained from the economy is more than total...
outlays pumped back into the economy, the budget surplus tends to slow AD, economic activity and inflation (e.g. 2001–02 to 2006–07). By contrast, cuts in taxes (T) relative to higher government expenditure (G) can lead to an expansionary budget deficit (e.g. 2001–02), more spending, higher economic activity and perhaps increased demand inflation (if the economy is close to its capacity).

**Rising costs and other adverse supply-side factors**

In the past 10 years to 2007, cost inflation was the main cause of higher prices. This was especially the case in 2000–01 and perhaps during 2005–06–07, when adverse supply-side conditions pushed up production costs for local firms. Because it cost local firms more to make things (see table 3.2 below), they were often forced to charge customers higher prices (or suffer lower profit margins).

These supply-side cost pressures came from both local and international developments.

**Rising oil prices**

Oil affects the cost of producing many things in our economy, including transport of all goods, the cost of services, paints, bitumen, petrochemicals, synthetic fibres used in clothing and carpets, agricultural produce (e.g. grains, meat and milk), and packaging. In both 2000–01 and especially in 2004–05–06, there was a spectacular rise in oil prices (at times US$80 per barrel in 2006 as against less than $20 in the earlier 1990s). These rises were due to the impact of almost daily events like war in the Middle East, fears about terrorism, cyclones in the Gulf of Mexico’s oil-producing region, rapid depletion of reserves due to strong demand (e.g. partly from China and India’s booming economies) outstripping supply and reduced production quotas set by OPEC (the cartel that includes the world’s most important oil producing countries).

A falling exchange rate

The exchange rate is a supply-side factor (as well as a demand-side factor) that can affect the inflation rate by altering production costs for firms. When the Australian dollar fell in 1999–2000 to 2000–01, for example, this increased the cost of necessary imports of materials and equipment used by local firms.

**Weak productivity or efficiency**

Productivity means producing more output with fewer inputs. Strong productivity cuts production costs for local firms. However, falling efficiency means higher costs. In 1999–2000 to 2000–01 and in 2004–05 to 2005–06, productivity was either very weak or negative, allowing cost pressures to build up.

**Rising wage costs**

For most firms, the payment of wages represents 60–80 per cent of total production costs. Wage rises can cause cost inflation, unless they are matched by rises in labour productivity. Until the early 1990s, most wage rises had little to do with worker efficiency. This was one of the great weaknesses of the system of minimum wages originally set by the Australian Industrial Relations Commission (AIRC) until 2005. However, since late 2006, the role of setting minimum wages has been taken over by the Australian Fair Pay Commission (AFPC). Among other things, this organisation will take the impact of labour costs and unemployment rates into account when making its decisions. In addition, since the early 1990s, a new deregulated, performance-based system was introduced for deciding pay rises and working conditions on a firm-by-firm basis. This system has been very successful in slowing rises in real unit labour costs (RULCs) over the past 15 years.

**Rising taxes and taxation rates**

High taxes are an adverse supply-side factor. Hence, rises in tariffs on imports and taxes levied on company profits and capital gains, for example, either raise costs or lower after-tax profits. Other taxes, like the Goods and Services Tax (GST) or excise tax on fuel, tobacco and alcohol, usually make items dearer. For instance, in 2000, the 10 cent GST was introduced (that also taxed most services that were previously untaxed). This contributed significantly to the one-off 6 per cent spike in the inflation rate that year.

---

**Table 3.2 Changes in selected costs of production for Australian firms, 1996–97 to 2005–06**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual rise (%) in the CPI — Australia</td>
<td>1.3</td>
<td>0.0</td>
<td>1.2</td>
<td>2.4</td>
<td>6.0</td>
<td>2.8</td>
<td>2.7</td>
<td>2.8</td>
<td>2.5</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest rate (variable % at June) — overdraft for large businesses</td>
<td>9.00</td>
<td>8.05</td>
<td>7.95</td>
<td>9.30</td>
<td>8.50</td>
<td>8.35</td>
<td>8.35</td>
<td>8.85</td>
<td>9.10</td>
<td>9.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil prices (US$ barrel)</td>
<td>23</td>
<td>24</td>
<td>20</td>
<td>25</td>
<td>37</td>
<td>35</td>
<td>20</td>
<td>28</td>
<td>31</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RULC (average real annual % change, non-farm sector)</td>
<td>0.3</td>
<td>–1.4</td>
<td>0.4</td>
<td>–0.8</td>
<td>0.4</td>
<td>–1.2</td>
<td>–1</td>
<td>–1.7</td>
<td>–0.4</td>
<td>–0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prices of materials used in manufacturing (% change/year)</td>
<td>–3.7</td>
<td>0.9</td>
<td>–1.0</td>
<td>9.3</td>
<td>14.4</td>
<td>0.0</td>
<td>–0.4</td>
<td>–4.5</td>
<td>8.9</td>
<td>18.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productivity (% GDP/hour worked)</td>
<td>3.4</td>
<td>3.1</td>
<td>4.0</td>
<td>0.6</td>
<td>1.5</td>
<td>3.7</td>
<td>0.5</td>
<td>2.3</td>
<td>0.3</td>
<td>0.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: The shaded areas represent stand-out years causing higher cost inflation.
Higher costs of materials used in manufacturing
The cost of materials used in manufacturing (e.g. steel, copper, gold, plastics) clearly affects the prices charged by firms. In both 1998–99–2000 and 2004–05–06, these costs rose sharply by between 9–18 per cent per year.

Rising interest rate levels
Interest rates are a supply-side cost factor (as well as a demand-side factor affecting consumption and investment spending). Because many firms borrow credit from banks to finance their operations, higher interest rates add to costs, undermine profits and push prices up. Between 1998 and 2000 and again in 2002–06, the RBA increased interest rates to slow demand inflation and inflationary expectations. However, this action also added to cost inflation pressures (although this impact was partly offset by the lifting effect on the exchange rate caused by higher domestic interest rates relative to overseas rates). When our rates go up relative to overseas, this attracts international investors looking for better rates of return. Capital inflow rises causing a stronger demand for the A$ in the foreign exchange market, strengthening the exchange rate. This slows cost and demand inflation (lowers the CPI) and makes the cost of imports cheaper for both firms and households.

Adverse climatic conditions for farmers
Adverse climatic conditions including drought, cyclones, floods and fires affecting primary producers, have a noticeable cost or supply-side effect on our inflation rate. The drought and a series of dry seasons in many parts of Australia as in 2004–07, for example, combined with a cyclone in Queensland’s sugar and banana producing coastal areas in 2006, contributed to higher costs and prices for meat, fruit and vegetables.

HAS THE GOVERNMENT ACHIEVED ‘PRICE STABILITY’?
Debate exists about the Australian Government’s success in achieving the objective of price stability during the past 10 years to 2007.

Some strengths of recent performances
On the one hand, supporters of the federal government note the following:
- Price stability was well achieved over this period, since inflation averaged only 2.6 per cent per year, well within the official RBA target rate of 2–3 per cent average over the duration of the economic cycle (see figure 3.1, p. 70).
- The inflation rate oscillated above and below the target. For instance, it was only above the 2–3 per cent range in two of these ten years (often due to one-off events like the introduction of the 10 per cent Goods and Services Tax (GST) in 2000, the effects of the drought and rise in oil prices), while in three other years, it was below the target. This variation is seen as quite acceptable under the RBA’s definition, since the target is expressed as an average that is to be achieved over the business cycle as a whole.
- Price stability was better attained during this recent ten-year period (average 2.6 per cent per year), than in some earlier decades. For example, the 1970s rate was a rapid 10.2 per cent per year, and that for the 1980s was not much better at 8.2 per cent per year.
- The achievement of price stability has helped to create an economic climate where other government goals (e.g. including sustainable economic growth, full employment, external stability, efficiency in resource allocation and equity in the distribution of income and wealth) have also been better achieved.

Some weaknesses of recent performances
While acknowledging some success, critical commentators point to areas of possible weakness. For instance, they often highlight that Australia’s inflation rate was generally above that for nations with whom we trade, especially NZ, Japan, Singapore, Canada, China, US and Germany. This puts Australian firms at a competitive disadvantage and tends to undermine our exchange rate.

3.3 The objective of sustainable economic growth

DEFINITION OF ‘SUSTAINABLE ECONOMIC GROWTH’
Economic growth occurs when there is an increase in the level of national production of goods and services between one year and the next. The rate of economic growth is measured by the annual percentage rise in gross domestic product (GDP). A growing economy is usually seen as a good thing because it can help improve material living standards and make people better off. It is also important because it creates jobs and incomes for a growing population. For these reasons, the Australian government pursues the objective of sustainable economic growth.

The objective of sustainable economic growth is defined as the fastest rate of increase in GDP that is consistent with achieving other government economic goals. The current target is to have GDP growing fairly steadily by an average of about 4 per cent per year. Even so, because of the business cycle, we cannot expect to reach this target every single year. Furthermore, over...
a period of time, the target may need to be varied to reflect current economic realities.

The other feature of this growth target (i.e. an average rise of 4 per cent a year), is that it is believed to be fairly consistent with the achievement of other important government economic objectives, especially price stability, full employment, external stability and equity in income distribution. If Australia tried to sustain economic growth at a faster rate than 4 per cent a year (e.g. perhaps 5 per cent), there would soon be severe economic problems. For one thing, the pace of the economy would be pressed beyond its speed limit or growth rate in its productive capacity. Supply or production would not be able to keep up with demand or expenditure. This would cause cost and demand inflation due to general shortages of resources, and finished goods and services. It would also cause spending on imports to grow quickly, leading to a bigger current account deficit (CAD). Importantly too, there would be massive environmental damage and negative externalities or costs associated with excessive rates of economic growth.

However, at the other extreme, if Australia could only sustain economic growth at a slow 2–3 per cent a year, government economic objectives would also be endangered. The unemployment rate would soon rise since there would not be enough jobs and incomes created for a growing labour force (especially when productivity is rising). Higher unemployment would then lead to poverty, falling living standards and reduced equity in the distribution of personal incomes.

EFFECTS OF ECONOMIC GROWTH

The discussion that follows outlines some of the costs and benefits of economic growth.

Higher incomes and material living standards

As mentioned already, perhaps the main reason for wanting strong economic growth (i.e. where the economy increases its production of goods and services at a rate faster than the rise in our population size), is so that more of our material needs and wants can be satisfied. Indeed, since the early 1990s, 15 years of sustained and fairly rapid growth in output has allowed most Australians to enjoy things that previous generations could only dream about — computers, mp3 players, cars, hospitals, art galleries, education to high levels, a wide choice of foods, better medical procedures, leisure time and holidays. These luxuries are not possible for most living in Third World, low-income economies where there is little or no economic growth.

The creation of jobs

An expanding economy helps to create jobs. To lift output, firms often need to purchase more resources including labour. Indeed, without economic growth of at least 2–3 per cent a year, the unemployment rate will rise, especially if the labour force is growing due to increased population or higher participation rates. Because of steady economic growth in the past 15 years to 2006, Australia was able to cut its unemployment rate from 11 per cent to a 30-year low of just 4.6 per cent (October 2006). Low unemployment does not just mean that resources are used more efficiently and incomes are higher, but having work is usually good for self-esteem, personal health and expanding friendships.

Increased inflation and trade deficits

A growing economy usually requires strong rises in expenditure and the full use of labour and other resources. This can result in both demand and cost pressures that can lead to higher inflation. In addition, inflation reduces the competitiveness of local firms both here and overseas, causing our level of exports to fall and spending on imports to rise. With higher exports and lower imports, often we find there is a trade deficit or negative balance.

Resource depletion and negative externalities or costs

The world has limited resources including oil, water, clean air and oceans, forests and minerals. Unfortunately, the rush to grow output and expand our GDP depletes these environmental and natural resources. Rivers stop flowing and oceans are transformed into cesspools; native forest and wildlife species become extinct; picturesque beauty spots succumb to high-rise concrete jungles. Consumers, caught up in materialism, promoted partly by seductive advertising of often sense-
less gimmicks, find they are working (sometimes with two jobs and on weekends and public holidays) just to enjoy the fruits of affluence. Noise levels and airborne pollution drown out nature, and obesity, caused by over-eating and under-exercise creates severe health problems. So, although economic growth can provide us with many more things (some of them actually improve the quality of our lives), there are also costs that are often referred to as, negative externalities. These are not taken into account by most measures of economic growth and welfare including those based on GDP.

MEASUREMENT OF ECONOMIC GROWTH

Calculating gross domestic product (GDP)

Economic growth occurs when there is a rise in the real value (i.e. volume) of finished goods and services produced in Australia between one year and the next. Nowadays, the most common indicator of the growth rate in national production is the percentage change in GDP (Gross Domestic Product). Here, GDP estimates the annual value of goods and services produced or sold by a nation, after an adjustment is made to statistically remove the effects that changes in prices have on the value of production (discussed below). GDP figures are prepared by the ABS every quarter (three month intervals), and the four quarters may be combined to produce the annual rate of economic growth.

Thinking back to the circular flow model of the Australian economy, it is possible to see that the value of goods and services produced or GDP (flow no. 4) can be estimated in three ways. This is because the model assumes that the three flows of total expenditure on production (flow no. 3 or AD), total incomes paid to those selling resources (flow no. 2) and total production (flow no. 4 or GDP), are all exactly equal in value. This being the case, estimates of GDP can be made using three different approaches.

1. GDP(E)

GDP should be equal to the total annual market value of expenditure (also called aggregate demand) on final goods and services produced in Australia. Here, expenditure on GDP consists of the annual sum of private consumption spending (C), plus private investment spending (I), plus government consumption spending (G), plus government investment spending (G'), plus any change in unsold stocks, plus overseas spending on our exports (X) minus our spending on imports (M).

2. GDP(I)

GDP should also be equal to the total market value of incomes paid to those selling the resources needed for production. Incomes here include wages plus salaries plus supplements plus the gross operating surplus or profits of firms.

3. GDP(P)

Additionally, GDP should be equal to the total market value of final goods and services produced each year. This is equal to the value added in production by all firms each year. Here, value added in production refers to the total market value of sales minus the cost of all inputs purchased by firms. Additionally, in special cases the annual value of production needs to be imputed or estimated because the output has not actually been marketed or sold. Here we think of the value of accommodation provided by houses occupied by their owners, the value of farm output not sold, but consumed on the farm, and the cost of providing some government services that are not actually sold to consumers for a market price. Even then, it is impossible to include all forms of production in GDP. That would be just too complicated. Hence, some things are excluded from the GDP estimates such as the value of illegal black market production, home duties including parenting, backyard do-it-yourself activities and non-traceable production involving the ‘cash economy’.

Calculating chain volume gross domestic product

Inflation and deflation affect the growth rate in the market value of national production. These circumstances lead to misleading impression of the actual size of the change in the volume or real value of goods and services produced each year. Inflation would exaggerate the rise in the marketed value of goods and services produced and sold, while deflation would cause the market value of output to be underestimated.

If nothing was done to compensate for this problem, our GDP figures would be almost meaningless, especially in times when general prices were rising or falling. Hence in recent years, the ABS statistically removes the impact that annual price changes would have on the value of production measured at current or market prices, by using a measure called chain volume GDP.

Chain volume GDP takes account of the annual market value of expenditure on GDP and then uses special chain price indexes to deflate the figures (if there has been inflation) or inflate them (if there has been price deflation). These chain price indexes measure the average change in the prices of goods and services relevant to expenditure on GDP for the most recent year, against the prices that existed in a selected base year or reference year, where the price index is always equal to 100 points. Unlike past ABS practice in adjusting GDP for price variations by having a base year that was seldom altered, the current approach is to use a changing reference year, that is the year immediately before the current year. This reference year advances by one year every year. Hence, in calculating chain volume GDP for 2005–06, the reference year for prices (i.e. measured by the chain price indexes) was 2004–05, while for GDP in 2006–07, the prices used were those that existed in 2005–06. One consequence of this is that there needs to be annual revisions of previous GDP figures. While this seems a bit complicated, all that the ABS is attempting to do is to try to expose how the real value (in volume terms) of goods and services produced in Australia has changed between one year and the next.

Figure 3.4 provides a simplified example of how this statistical adjustment process is applied to convert GDP at market prices, to estimate chain volume GDP.
Limitations of GDP statistics

Data relating to GDP are only an estimation or guesstimation of the annual value of a nation’s output. While the statistics can provide a general indication of changes in economic growth, they are by no means totally accurate and there are great limitations to what they actually tell us about the economy. There are several reasons for this.

Excluded production
The value of some types of non-market production is excluded from the figures because its value is too difficult to calculate. Examples here include illegal production as part of the black economy, production involved with the cash economy along with household or non-market activity such as home repairs, gardening, housekeeping and do-it-yourself work done by family members.

Imputed production
The value of some production that needs to be included in GDP must be estimated or imputed because it is not actually marketed or sold in the normal way. For instance, this process applies to the value of farm output that is consumed on the farm, the net rental value of accommodation provided by houses to their owners and the cost of providing government services that are subsidised or provided free of charge to the community.

Quality changes
Quality changes in the goods and services produced between one year and the next are not always fully reflected in the changes in the value of GDP. In some cases, quality can increase and yet the price paid or value of production actually comes down (e.g. some cars, air tickets, computers).

Using the chain price indexes
GDP at market prices needs to be statistically adjusted to remove the exaggerations to the market value of national production caused by inflation, or the underestimation caused by deflation. This process of converting GDP at current prices to GDP at constant prices in terms of a reference year requires the construction of an accurate chain price index. However, it is difficult to calculate such indexes so they accurately fully reflect changes in the prices of all goods and services entering GDP. There are several index number problems that arise.

Distribution of the costs and benefits
Not everyone shares evenly in the benefits (or costs) that result from economic growth. Some groups of people gain more than others if the growth rate was, say, 4 per cent, while others lose more if the growth rate was only 2 per cent. GDP tells nothing about this vital distributional aspect.

International comparisons
There are some variations in the statistical accuracy and approach to calculating GDP in different countries. This makes international comparisons imprecise and hazardous.

Living standards
It is commonly asserted that it is a good thing for a country to have a bigger GDP. It is true that if real national output grows faster than our population, this can lead to higher average per capita incomes and consumption. Additionally, rising GDps are usually associated with better employment opportunities, an increased life expectancy, greater consumer choice, improved provision of welfare assistance and better health and education. However, it is also important not to conclude that economic growth necessarily means better living standards. For instance, as seen in recent years, economic growth may sometimes result from the labour force working longer hours. This reduces the amount of leisure time and perhaps the quality of family life. There are also many instances where economic growth has come at great cost in terms of pollution and environmental damage, resources depletion, stress, urban problems, overcrowding and the corruption of society’s moral values by the
relentless and seductive invasion of advertising and materialism. These are some of the negative externalities or costs associated with economic growth.

TRENDS IN AUSTRALIA’S ECONOMIC GROWTH

Most importantly, figure 3.5 and other data show that the Australian economy has enjoyed the benefits of at least 15 consecutive years of solid economic growth to 2006 where GDP was getting bigger between one year and the next. This is an enviable record and one probably unparalleled in our history.

Figure 3.5 Australia’s rate of economic growth (annual percentage change in chain volume GDP)

Source: Data derived from ABS 1350.0 and 5206.0.

Even so, between 1996–97 and 2005–06, Australia’s economic growth rate was uneven, fluctuating between a low of 1.9 per cent in 2000–01 to a high of 5.2 per cent in 1998–99. In addition, figure 3.5 shows that economic growth went through four main cyclical phases:

- Phase 1, 1996–97 to 1998–99: The rate of economic growth accelerated, averaging 4.5 per cent a year.
- Phase 2, 1999–2000 to 2000–01: Economic growth was weaker and averaged only 2.0 per cent a year.
- Phase 2, 2001–02 to 2003–04: There was again stronger economic growth of 3.7 per cent a year.
- Phase 4, 2004–05 to 2005–06: Growth was slower, averaging 2.7 per cent a year.

However, despite the unevenness of economic growth from year to year, overall, the total size of the Australian economy grew impressively by more than 40 per cent in the 10-year period to 2005–06 and averaged 3.6 per cent per year. This generated about 2 million more jobs, a 60 per cent reduction in the unemployment rate, rising average per capita disposable incomes by 25 per cent, extra tax revenues for the government to provide community services and welfare, and unfortunately, many negative externalities including environmental damage.

CAUSES OF ECONOMIC GROWTH

The rate of economic growth is affected by a combination of two main sets of factors:

1. Changing demand-side conditions can affect the short-term cyclical rate of economic growth.
2. Supply-side conditions can alter the rate of economic growth by influencing the economy’s productive capacity and its long-term or sustainable speed limit.

Demand-side cyclical determinants of economic growth

The rate of economic growth in Australia rises and falls in a cyclical way during the short to medium-terms, because of changes in the level of aggregate demand (i.e. AD = C + I + G + X – M). In turn, AD is affected by changing demand-side conditions.

Hence, stronger demand-side conditions that lift AD will also accelerate the rate of economic growth (i.e. raise GDP), providing there is some unused productive capacity. Here, increases in AD or sales of goods and services, will cause an unexpected drop in unsold stocks held by firms and a rise in new orders from customers. In response, businesses try to increase production, thereby accelerating activity and economic growth. Of course, if there was a rise in expenditure and the economy was already at its productive capacity or speed limit, the volume of goods and services produced (AS) could not grow any further, resulting in shortages and demand inflation. Currently, Australia’s productive capacity can increase, perhaps by an average of around 4 per cent per year. This means that in order to maximise the rate of economic growth without jeopardising domestic economic stability, ideally, AD must also grow by about 4 per cent a year.

By contrast, a sudden cyclical drop in AD caused by persistently weak demand-side conditions, will slow the rate of economic growth in GDP. This is because firms will generally cut output to avoid overproduction or excess stocks.

There are numerous demand-side factors that can affect the cyclical level of AD (i.e. made up of C + I + G + X – M) and determine whether the rate of economic growth rises or falls. We will review just a few of these.

Consumer confidence and disposable income

The level of household optimism about future employment and income greatly influences whether AD rises or falls. Increasing pessimism causes an increase in savings (S) and a drop in private consumption spending (C), thereby putting the brakes on national expenditure. Business stocks rise and firms are forced to cut production, slowing economic growth. However, greater optimism and increased disposable income tend to accelerate the rate of economic growth (assuming there is still unused productive capacity).

Business confidence

When firms are feeling optimistic about future sales and profits, they are keen to expand their businesses by higher levels of investment spending (I) on plant and equipment. This adds to the level of AD, lowers stocks of unsold goods and service, and causes other firms to step up their production. In reverse, business pessimism slows investment, AD and the rate of economic growth.

Overseas economic activity

When the rate of economic activity slows in China, US and Japan, for example, this also creates a more sluggish rate of economic growth in our economy. This is because people
overseas reduce their spending on our exports (X). This slows AD, causes stocks to rise and production to be cut. However, a boom overseas can mean we sell more exports. Therefore, AD rises, stocks fall and firms will try to lift production.

The value of the A$  
A rising exchange rate for the A$ has a slowing effect on our exports because they become dearer to overseas buyers. At the same time our spending on imports (M) rises because they are cheaper to us. With falling net exports and AD, firms start to slow production. By contrast, a weaker A$ boosts net exports and accelerates economic growth (providing there is unused productive capacity).

The terms of trade  
The terms of trade relates to the ratio of export prices we receive relative to the import price we pay in international trade. A rise in the terms of trade usually means relatively higher export prices (perhaps due to strong global demand for our commodities). This causes the value of our exports to increase, stimulating AD. As a result, stocks decline, and this prompts firms to expand their production. In reverse, a drop in the terms of trade slows AD and the rate of economic growth.

Government macroeconomic policies  
Government macroeconomic budgetary policy (i.e. relating to the levels of receipts relative to government outlays) and monetary policy (i.e. RBA measures mainly affecting interest rates and the A$) are often used to deliberately alter the rate of economic growth. When AD is growing too quickly and there is little unused productive capacity, these policies become contractionary (e.g. higher interest rates, rises in taxes and cuts in government spending), slowing AD and the rate of economic growth. However, when national production is below its capacity, these policies become more expansionary (e.g. cuts in interest rates and taxes) to push up AD and economic growth.

We can use the AD–AS diagram to illustrate the influence of changes in the level of AD, on Australia’s rate of economic growth. Referring to figure 3.6, the optimum rate of economic growth occurs when AD is sufficient to cross the AS line at the elbow. This level of expenditure corresponds with AD₁. Notice that GDP₁ is close to its potential. However, if demand-side conditions are too weak, falling expenditure to AD₂, causes firms to cut output to GDP₂, slowing the rate of economic growth and resulting in a recession (i.e. at least two consecutive, three-monthly periods of falling GDP). By contrast, if expenditure grows too sharply and reaches AD₃, excessively strong demand-side conditions cause the economy to be stretched beyond its ability to supply. Here, extra spending is not translated into increased economic growth. Instead, excessive expenditure only causes widespread shortages and demand inflation, as seen by the rise in the general price level rises to P₃.

The supply-side structural determinants of economic growth  
Supply-side structural factors influence Australia’s long-term rate of economic growth. They do this by affecting the ability and willingness of firms to produce goods and services. In so doing, supply-side structural factors alter the economy’s productive capacity or speed limit at which it can grow.

So what are some of the main supply-side structural factors that can affect the economy’s growth rate?

The quantity and quality of resources available, including access to new technology  
We know that countries with access to more natural, labour and capital resources have a bigger production possibility frontier and could potentially produce a larger GDP. Obviously, the quantity of labour resources could be expanded as a result of immigration or in the long-term, through a higher birthrate. Although the quantity of natural resources is fixed, known deposits of minerals can grow through exploration. In addition, the stock of capital resources can also be increased through greater investment spending on plant and equipment. However,
if existing resources are used more efficiently, an even bigger level of national output can be gained from the same or fewer inputs. It is rises in productivity that are especially important in deciding how fast an economy can grow. Labour can become more efficient and innovative through better education (i.e. the development of human capital), and natural resources like land can become more productive from soil and pasture improvement, better farming practices, and the use of fertiliser and irrigation. But, perhaps new capital resources (incorporating the latest cutting-edge technology) add most to the productive capacity of both labour and natural resources.

**Government microeconomic policy**

The government uses microeconomic efficiency reforms (e.g. labour market reforms including productivity-based workplace agreements, tariff cuts, privatisation of some government enterprises, and measures to lift national savings to keep interest rates down), to help promote a faster sustainable rate of economic growth.

**Production costs and business profitability**

In Australia’s capitalist economy, healthy profits are needed for business expansion and economic growth. In turn, profits depend on levels of efficiency and production costs (e.g. the costs of wages, materials used in manufacture like oil and steel, interest rates on credit borrowed from the bank to finance business expansion and equipment imports). Regrettably, rising costs and lower efficiency squeeze profits, cause business bankruptcy and lower investment. This slows the rate of economic growth. By contrast, greater efficiency (perhaps as a result of structural changes by firms in the way they produce goods and services) lowers costs, lifts profits and makes firms keener to expand.

As shown in figure 3.7, the effects of changing supply-side conditions on the long-term rate of economic growth can be illustrated on the AD–AS diagram.

![Diagram](image-url)

Figure 3.7 The improved supply-side conditions can increase the rate of economic growth.

**Typically, for instance, economic growth is helped by greater efficiency, increased availability of resources, favourable climatic conditions and effective microeconomic policy. As a result of these better conditions, the aggregate supply line (AS) for the economy grows and moves out to the right from AS$_1$ to AS$_2$. Notice, too, that the new equilibrium level for economic activity now occurs at GDP$_2$, indicating increased economic growth.**

By contrast, less favourable supply-side conditions (e.g. higher production costs, lower profits, increases in bankruptcy, reduced efficiency) in the long-term, limit the economy’s productive capacity and retard economic growth. They cause the AS line to become smaller (AS$_2$ to AS$_1$) and shift inwards so that equilibrium occurs at a lower level of GDP (GDP$_1$) with a higher inflation rate (P$_1$).

**INFLUENCES ON AUSTRALIA’S RATE OF ECONOMIC GROWTH, 1996–2007**

You will recall that sustainable economic growth in the short to medium term requires a steady rise in AD, pushed along by suitable demand-side conditions. However, in the longer term, there also needs to be an increase in Australia’s productive capacity brought about by favourable supply-side conditions. Let us review some of the more important influences on our growth rate between 1996 and 2007.

**Cyclical demand-side conditions affecting economic growth**

In the past 15 years to 2007, Australia has enjoyed uninterrupted economic growth and has not had to endure the setbacks of a recession. Even so, the rate of economic growth has still moved in a mild cyclical way in response to changes in the level of AD (i.e. C + I + G + X – M) or expenditure levels. When spending grew faster, business stocks tend to fall. In order to meet stronger orders and sales, firms attempted to lift their output, accelerating the rate of growth. This is what happened in both 1997–98 to 1999–2000 and in 2001–02 to 2005–06. In reverse, weaker expenditure on domestic production caused unsold stocks to rise. In this case, firms cut production, slowing the rate of economic growth (e.g. 2000–01). There are many specific demand-side factors that have helped to govern the rate of economic growth in the past 10 years.

**Consumer confidence**

Consumer confidence (i.e. household expectations about future employment and income) has greatly affected the rate of growth in private consumption spending (C), AD, retail sales, and GDP. Although confidence has generally been optimistic (i.e. the 10-year average around 108 index points), there has been some instability. By altering private consumption and AD, changes in household optimism have helped to explain why Australia’s rate of economic growth has moved up and down. This is shown in figure 3.8.
Government macroeconomic policy
The rate of economic growth is influenced by government macroeconomic policies. These measures involve using a mixture of budgetary policy (i.e. related to taxes and budget outlays) and RBA monetary policy (changes in interest rates) to deliberately alter the level of AD and economic activity. Measures are applied in a counter-cyclical way. In other words, when excessively strong AD and rates of economic growth are leading to higher inflation (e.g. as in 1999, 2000, 2004–2006), a contractionary policy approach is used, designed to slow spending. This might include less government spending and higher interest rates. However, an expansionary policy stance is used to lift expenditure, when AD and economic growth are slowing too much (e.g. 2001–02 when there was a budget deficit and cuts in interest rates).

Overseas economic activity
Overseas economic activity (i.e. relating to the strength of economic activity among our major trading partners) affects Australia’s level of net export spending (X – M) and hence levels of AD, sales, stocks, national production and economic growth. For instance, in 2003 and 2006, booming overseas economic activity in the Chinese, Indian and US economies, helped to stimulate our exports. However, by contrast, the Asian economic crisis and downturn of 1997–98, the slowness of the Japanese economy during 1997–2000 and the US downturn following 11 September 2001, slowed our exports and Australia’s rate of economic growth.

Terms of trade
The terms of trade (i.e. the ratio of export to import prices) alter the value of exports and imports, thereby influence the value of retail sales, AD, and economic growth. For example, in some years (e.g. 1999–2004, 2004–2007) the terms of trade rose. This meant that, overall, we were paid far better prices for our exports of wool, wheat and minerals, relative to the prices we had to pay for imports. This tended to lift AD and economic growth. The opposite tended to occur when the terms of trade fell.

The exchange rate
The exchange rate (i.e. the price of the A$ in terms of other currencies) influences the attractiveness of Australian exports relative to imports (X – M), and thus affects AD and economic growth. So, when our exchange rate rose (i.e. appreciated as in 2000, 2001–2006), Australian exports became dearer and less attractive to foreigners, while imports became relatively cheaper and hence more attractive to us. The rising value of imports compared with exports, tended to cut sales of locally made output and hence the rate of economic growth. However, a weaker exchange rate (i.e. a depreciation as in 1998–2000) for the A$, tends to lift the value of net exports and accelerate economic growth.

Favourable supply-side structural conditions affecting growth in productive capacity
Favourable supply-side factors can increase the economy’s speed limit at which AD can grow, by lifting our productive capacity and boosting the nation’s production possibility frontier (see
pp. 6–7). Essentially, this expansion comes down to two main things. First, an economy has the capacity to produce more by increasing the total volume of resources available. Second, it can do this by using existing resources more efficiently (i.e. gaining a bigger output can be gained from the same inputs).

So, what have been the main drivers behind Australia’s productive capacity and economic growth in the past 10 years to 2007?

**Productivity and government microeconomic reforms**

Productivity or efficiency in the way resources are used, has a very big effect on the growth rate. This is shown very clearly in figure 3.9. Notice that rising productivity usually means a stronger rate of GDP growth as in 1998–99 or 2001–02. In reverse, weak or negative productivity as in 2000–01 or 2004–05, caused growth to slow.

![Figure 3.9 The relationship between productivity and the rate of economic growth — Australia (1996–97 to 2005–06)](image)

**Source:** Data derived from ABS 1350.0, 5204.0.

Strong productivity rises mean that workers produce more output per hour. This helps to keep labour and other production costs down and push business profits up. Firms are, therefore, keener to invest and expand their operations, rather than close down as a result of bankruptcy. Overall, productivity growth has risen about twice as quickly during the past 10–15 years, than it did in the 1970s and 1980s. The application of new technologies in business, associated with ICT and the electronics revolution, has certainly helped, but it also necessitates high levels of business investment. In addition, government microeconomic efficiency reforms can take some of the credit too. These measures have involved tariff cuts and trade liberalisation to promote cost cutting and stiffer competition, deregulation of the labour market and the introduction of a performance-based pay system to keep real unit labour costs (RULCs) down, cuts in company, capital gains and personal income taxes to create greater incentives to work hard and invest, and savings measures to help keep interest rates on loans (used by firms to purchase new equipment) lower than they would otherwise be.

**Volume of resources and new discoveries**

New discoveries of minerals certainly have an impact on the quantity of resources available for production. In the past 10 years to 2007, massive exploration and investment in equipment has seen significant finds of natural gas, oil, bauxite, uranium, coal, nickel, copper and iron ore. This has grown our capacity to produce for both the domestic and international markets.

**Interest rates**

Interest rates not only affect spending and AD, but they also have a great impact on productive capacity and AS. As a supply-side factor, they influence business production costs and profits for firms that need to borrow credit. For example, if interest rates are raised, firms are discouraged from purchasing new equipment or growing their capacity. In early 1990 (just before the recession when GDP growth became negative), frighteningly high interest rates over 20 per cent on business overdrafts slowed productivity, caused business bankruptcy and thus reduced economic growth.

**Exchange rate**

The exchange rate also acts as both a demand-side and, as a supply-side factor, to influence economic growth. On the supply-side, a rising exchange rate for the A$ (e.g. up to a 30 per cent rise between 2000–06) makes imports of business equipment significantly cheaper. This helps to increase investment and productivity levels (even though in other ways it tends to slow AD), again growing our productive capacity.

**Drought and other climatic conditions**

Rural production in Australia makes a significant contribution to GDP. However, when there is a drought (e.g. 2002–03 and 2005–06), flood, fire or cyclone (e.g. Queensland 2006), the rate of economic growth slows (e.g. by an estimated 1–2 percentage points in 2002–03) due to reduced productive capacity. By contrast, more favourable growing conditions (e.g. 2001–02) have a positive effect on GDP.
HAS THE GOVERNMENT ACHIEVED ‘SUSTAINABLE ECONOMIC GROWTH’?

Certainly Australia has enjoyed a remarkably long period of fairly rapid economic growth in the past 15 years to 2007. Referring to figure 3.5 (p. 78) and other statistical data allows us to debate the government’s success in achieving sustainable economic growth.

Some strengths of recent performances

On the one hand, supporters of the government note the following achievements:

- The average annual rate of economic growth of 3.6 per cent (1996–97 to 2005–06) was quite impressive.
- Both booms and recessions have been totally avoided.
- Although the 3.6 per cent average fell just short of the government’s medium-term sustainable target of around 4 per cent a year, Australia’s rate of economic growth has been the envy of many of the important countries of the world, including the United States, Japan, Germany, the United Kingdom, Italy, France and OECD members generally.

As a result of substantial economic growth, there have been massive improvements in material living standards as demonstrated by near record annual rises in the level of real national income per head.

Economic growth has been sufficiently rapid to allow for nearly a 60 per cent reduction in Australia’s unemployment rate (since the last recession of 1990–92), again making society much better off than under previous governments.

Some weaknesses of recent performances

However, the government’s critics point out the wasted opportunities for achieving even higher sustainable rates of economic growth. They note that countries like China and India have sustained much faster growth of 6–9 per cent a year or higher. They also highlight that 3.6 per cent growth is significantly slower than that for the 1950s and 1960s, and note that this is partly why unemployment took so many years to get down to its current level. In addition, supply-side bottlenecks (labour and skills shortages, infrastructure constraints in water and power) have recently restricted economic growth and reflect the failure of government policy.

3.4 The objective of full employment

DEFINITION OF ‘FULL EMPLOYMENT’

Employment means that a person over 15 years of age has a paid job. This is seen as a beneficial thing since it means that labour resources are being used productively to lift national output. It also allows individuals to gain income and enjoy better material living standards. However, unemployment occurs when those who are ‘actively looking for work’, cannot find it. These people are prevented from contributing to national production, are a burden on taxpayers, and usually cause national incomes to be distributed less evenly than otherwise. For these reasons, the Australian Government seeks to achieve its objective of full employment.

More specifically, the objective of full employment means that there should be no cyclical unemployment associated with weak aggregate demand and recession. Avoiding recession can eliminate this type of unemployment. One way to do this is to use expansionary macroeconomic budgetary and monetary policies to lift AD and economic activity. Over the past few years to 2007, full employment has been defined as an unemployment rate somewhere between 5–6 per cent of the labour force (maybe even lower). This level has been chosen (rather than zero per cent unemployment), because the government reluctantly accepts that there will always be some natural unemployment due to the following factors:

- Structural change (i.e. involving the use of new technology, the mismatch of skills held by the unemployed to the jobs available, business relocation, cost cutting, rationalisation by firms and some government microeconomic policies).
- Frictional influences (i.e. people unemployed between one job and the next).
- Seasonal factors (i.e. unemployment at the same time each year. For example, shearing sheep and fruit picking are seasonal).
- Hard-core aspects (i.e. personal characteristics that make holding down a job difficult. For example, a person with a criminal record may find obtaining employment difficult).

In addition, an unemployment rate of about 5 per cent is perhaps the lowest rate possible without undermining other government objectives. For example, currently if unemployment remained at 3 or 4 per cent for long, there would be an acceleration of inflation, jeopardising the achievement of price stability. This concept is called the non-accelerating inflation rate of unemployment (NAIRU, i.e. the lowest possible rate of unemployment that will not significantly accelerate inflation). For example, during 2005–06–07, when monthly unemployment went below 5 per cent (as low as 4.4 per cent) on several occasions there was an acceleration of inflation. Currently, therefore, full employment has been achieved.
Economics Down Under Book 2

Even so, it is important to note that this acceptable level of natural unemployment (NAIRU) has not remained fixed at around 5–6 per cent. In Australia, in the 1960s, it was under 2 per cent. By the mid-1970s, it was up to about 4 per cent, then to around 6–7 per cent in the 1980s and 1990s and now, more recently, in the early to mid 2000s down to 5–6 per cent. Recently, the Treasurer and others have been talking about an even lower target being possible in the future if correct government policies are initiated. However, its feasibility is still to be tested.

EFFECTS OF UNEMPLOYMENT

Unemployment is not just hard on individuals and their families, but it is bad for the economy generally.

A drop in income and inequality in living standards

When people lose their jobs and become unemployed on government welfare benefits, they usually take a big cut in their income. For instance, an adult male, working full-time on average weekly earnings, would bring in around $1050 per week (or about $511 on the legal minimum wage). By contrast, an individual on welfare might have to survive on, perhaps, as little as $200–250 a week. Similarly, changing from full-time employment to part-time or casual work also means a corresponding reduction in disposable income. With less income, a person has to reduce spending and purchases of goods and services. It becomes hard to buy life’s necessities. Material living standards fall and income inequality or differences widen. In addition, the long-term unemployed (unemployed for more than 52 weeks) find that their value of wealth (personal assets) is quickly run down to meet daily expenses. Moreover, non-material well-being often suffers due to a loss of self worth, health, skills and friendships, and feelings of despair, isolation and failure.

Reduced efficiency in resource allocation and economic growth

A country’s economic growth depends heavily on access to resources including labour. However, unemployment means that some of these resources are idle. Clearly, the nation is not producing at its productive capacity causing economic growth to suffer.

A burden on taxpayers and government finances

It is important that we provide financial support for the unemployed through welfare. However, this support is expensive if unemployment is high. For example, at the peak of the last recession in 1992 there were over 950 000 unemployed to be looked after. To pay for this income support, those working had to pay higher taxes than otherwise, reducing their wellbeing. At the same time, because there are more people unemployed, total incomes are down and government revenue from taxes falls, causing the federal budget’s outcome to go into deficit (e.g. 1991–95, 2001–02).

MEASUREMENT OF UNEMPLOYMENT AND OTHER LABOUR MARKET INDICATORS

The ‘labour force survey’

The extent to which full employment is achieved is measured using various labour market indicators calculated by the ABS from its monthly labour force survey. The survey interviews a mere 0.7 per cent of Australian households making up a representative sample. This, along with some data from private agencies, enables labour market statistics to be compiled on the following aspects:

- employment level and growth
- unemployment by age, region, race and gender
- participation by gender and age
- duration
- causes of unemployment
- overtime worked
- job vacancies.

Employed persons

Agreed definitions are an essential starting point for all surveys. In compiling these statistics, the ABS defines employed persons as meeting the following criteria:

- working either full-time (i.e. 35 or more hours per week) or part-time in excess of 1 hour per week for pay (or over 15 hours/week in the family business when not being paid)
- aged over 15 years
- have a job, but may be prevented from working because of illness, strikes, holidays or other similar interruptions.

Unemployed persons

Unemployed persons are defined as including those:

- actively looking for full- or part-time work but unable to find it
- able and willing to take up a job in the week prior to the survey period
- aged over 15 years
- waiting to resume work after being laid off or stood down without pay.

There are also several other important definitions. According to the ABS, the labour force includes any group that is employed or unemployed. The participation rate is defined as the proportion of all people aged 15 years and over who are either employed or unemployed according to the above definitions, and job vacancies refer to the number of job offers advertised by employers that are unfilled. Additionally, the duration refers to the average number of weeks for which a person is unemployed, while overtime refers to the average number of extra hours per week a person is employed in excess of the standard hours of work.

Calculating rates

Employment and unemployment can be expressed in two ways:

1. Figures can be given as an actual number (e.g. for July 2006, there were 10 247 500 persons employed and 513 000 persons unemployed out of a total labour force of 10 760 500 persons).
2. Figures can be expressed as a rate or percentage of the labour force (e.g. in July 2006, 95.3 per cent of the labour force was employed while 4.7 per cent was unemployed). Additionally, growth rates for employment and unemployment can also be calculated from these data.
Limitations of the unemployment statistics

Unemployment survey data can never be totally accurate for several reasons.

Survey error
With such a small sample of the population being surveyed, the likelihood of error is possible.

Definitions are arbitrary
The definitions used to classify a person as employed or unemployed are rather arbitrary. For instance why should the cut-off point for employment be those who work more than 1 hour per week? Why should it not be, say, 4 or 6 hours per week?

Misleading data and the hidden unemployed
Before getting too excited about the trend in unemployment, further information needs to be taken into account including the participation rate, the duration and the proportion in full-time work. It is likely that many in part-time work really want full-time work but unfortunately have no choice in the matter. Furthermore, the statistics fail to account for the hidden unemployed. This category includes those who are discouraged from seeking jobs because of their feelings of hopelessness, lack of success in gaining work in the past, the unsuitability of their training and because of personal and family reasons. Because they are not actively looking for work, they are not regarded as members of the labour force, nor are they classified as unemployed during normal surveys. The inclusion of these people would cause a much higher level of unemployment than is currently reported. For instance, the ABS conducted a survey of hidden unemployment and found that their inclusion would have more than doubled the official unemployment rate. In addition, ABS also publishes statistics on the underemployed.

False information
Some people may be tempted to give false information when they are surveyed, because they fear losing their welfare benefits if it was found they actually had a job or were not actively looking for work. This factor may lead to a possible exaggeration of the unemployment figures.

Table 3.3 Other indicators of Australia’s labour market conditions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (% labour force)</td>
<td>11.0</td>
<td>10.2</td>
<td>8.7</td>
<td>8.1</td>
<td>8.3</td>
<td>8.0</td>
<td>7.4</td>
<td>6.6</td>
<td>6.4</td>
<td>6.7</td>
<td>6.1</td>
<td>5.8</td>
<td>5.3</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>Annual rise in the number part- and full-time employed (%)</td>
<td>−0.8</td>
<td>1.6</td>
<td>3.2</td>
<td>2.6</td>
<td>1.0</td>
<td>1.4</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
<td>1.2</td>
<td>2.5</td>
<td>1.8</td>
<td>3.0</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Annual % change in the rate of unemployment</td>
<td>6.7</td>
<td>−2.8</td>
<td>−13.5</td>
<td>−4.2</td>
<td>3.9</td>
<td>−3.5</td>
<td>−6.5</td>
<td>−9.2</td>
<td>−1.1</td>
<td>7.1</td>
<td>−5.9</td>
<td>−6.2</td>
<td>−6.9</td>
<td>−0.2</td>
<td></td>
</tr>
<tr>
<td>Unemployment rate 15–19 (%)</td>
<td>32.2</td>
<td>32.3</td>
<td>27.5</td>
<td>27.5</td>
<td>28</td>
<td>27.4</td>
<td>25.2</td>
<td>21.9</td>
<td>22.6</td>
<td>24.2</td>
<td>22.5</td>
<td>21.4</td>
<td>20.1</td>
<td>21.0</td>
<td></td>
</tr>
</tbody>
</table>
Using almost any indicator over the 14-year period to 2006, it is clear that labour market conditions have strengthened dramatically (and fairly steadily) over the period as a whole.

Except for a slight rise in unemployment during 2001–02 (due to the delayed effects of a mild cyclical slowdown in 2000–01), there has been an impressive reduction in the unemployment rate from 11 per cent in 1992–93, to a 32-year low of just 4.4 per cent in April 2007.

The number unemployed fell by more than 40 per cent (despite population growth).

Employment grew strongly by an average of nearly 2 per cent a year (with around 2 million new jobs created).

The rate of youth unemployment fell by more than one third.

Participation rates rose by over 3 per cent.

The rate of long-term unemployment was down 50 per cent.

Average weekly hours worked increased by nearly 15 per cent.

Job vacancies rose nearly 390 per cent.

### CAUSES OR TYPES OF UNEMPLOYMENT

There are two main types of unemployment, each having different causes:

1. Cyclical unemployment reflects slow rises in aggregate demand resulting from weak demand-side conditions.
2. Natural unemployment is caused by various supply-side structural factors that discourage production or aggregate supply.

We will now take a closer look at these causes.

### The demand-side causes of cyclical unemployment

Cyclical unemployment rises as economic activity slows and the economy moves towards a recession. It is caused by a lack of aggregate demand (AD) or expenditure on locally made goods and services. As such, this deficiency in the level of AD may point to low levels of private consumption (C), business investment (I), government spending (G), and/or net exports (i.e. X – M), reflecting the influence of weak demand-side conditions.

### Consumer pessimism and reduced disposable incomes

When households feel pessimistic about future employment and incomes, this raises savings and slows private consumption (easily the largest component making up AD or expenditure on Australian-made goods and services). With lower retail sales and rising stocks, firms cut production levels and employ fewer resources, reducing the demand for labour. As a result, the level of cyclical unemployment rises.

### Business pessimism and higher interest rates

Pessimism by businesses about their future profits and sales perhaps combined with higher interest rate payments on their bank overdrafts, work to discourage investment spending on plant and equipment. In turn, this slows sales or AD so firms cut production, leading to higher cyclical unemployment.

### The onset of a recession abroad among our trading partners

Cyclical swings in the level of economic activity in say the US, Japan or China, causes spending on our exports to change, thus impacting on sales, AD, stocks, production and employment levels. A downturn overseas, for example, means lower exports and expenditure, so cyclical unemployment rises.

### Contractionary macroeconomic government policies

Sometimes the government feels that it needs to slow down the level of spending and economic activity to avoid inflation. Typically, this involves using contractionary budgetary and monetary policies to slow AD (e.g. increased taxes relative to reduced government spending, or higher interest rates). However, unfortunately, sometimes these measures are too contractionary and can lead to rising cyclical unemployment.
Although these weak demand-side conditions result in a rise in cyclical unemployment as the economy heads towards recession, when these conditions strengthen and AD recovers, cyclical unemployment again falls, perhaps taking total unemployment down to around 5–6 per cent of the labour force.

The development of cyclical unemployment during a recession can be illustrated on an AD–AS diagram. Figure 3.11 shows that if weak demand-side conditions cause expenditure on Australian-made production to fall below the economy’s productive capacity (i.e. a decrease from AD$_1$ to AD$_0$), then national production and employment will fall (i.e. from GDP$_1$ to GDP$_0$) causing cyclical unemployment to rise.

**Figure 3.11 How weaker demand-side conditions can cause cyclical unemployment**

The supply-side causes of natural unemployment

Natural unemployment consists of structural, frictional, seasonal and hard-core unemployment. Currently it makes up around 5–6 per cent of the labour force. This figure represents the non-accelerating inflation rate of unemployment or NAIRU (the lowest unemployment rate that will not result in increased inflation). Often natural unemployment is caused by changing supply-side conditions. Unlike cyclical unemployment that can only occur in a recession, natural unemployment exists all the time. Let us look more closely at its main causes.

Structural unemployment

Structural unemployment is easily the biggest single cause of natural unemployment and indeed accounts for most of the 5 per cent or so unemployment rate that we see today. It occurs because of structural change where businesses alter the way they go about producing goods and services and try to cut costs. Here we think of the following changes:

- **Use of new technology.** In making goods and services, the replacement of labour with new technology and automated machines, can lead to higher structural unemployment. For instance, the past 15–20 years especially, have seen the application of robotics in manufacturing replacing many unskilled jobs (e.g. cars, household appliances) and electronic data processing (e.g. banking, stock management, transportation and warehousing).

- **A mismatch of skills among the unemployed.** When new technology is used by firms, traditional skills are often no longer wanted by firms. There is a mismatch of the skills held by the unemployed with those needed to fill the advertised job vacancies. Nowadays, the sought-after skills might include those of computer programmers, and experts in electronics and robotics but most of our unemployed lack the wanted skills.

- **Businesses closures due to high costs and poor profitability.** If production costs are too high and profits too low, businesses are forced to close down or move to cheap wage countries overseas (e.g. India, China, Philippines). When this occurs, structural unemployment results. There are many supply-side developments that might push up costs and erode profits. For example, low labour productivity, excessively high minimum wages set by the Australian Fair Pay Commission (AFPC), the difficulties faced by some firms in sacking unsuitable workers due to very restrictive unfair dismissal laws, rising costs of raw materials, expensive electricity and water, the onset of drought in rural areas, and high interest rates on borrowed credit used to finance the purchase of new equipment.

The AD–AS diagram shown in figure 3.12 can be used to illustrate the effects of higher production costs on unemployment. These supply-side changes shift the AS line inwards (i.e. from AS$_1$ to AS$_2$). Rising costs of production can force firms to increase their prices resulting in cost inflation (i.e. prices rise from P$_1$ to P$_2$). Cost pressures in turn reduce the competitiveness and profitability of local firms. As a result, some businesses close and there are staff retrenchments as national output falls (i.e. from GDP$_1$ to GDP$_2$).

**Figure 3.12 How supply-side changes involving rising costs and lower business profits can cause structural unemployment**
Government microeconomic reforms. Microeconomic reforms are cost cutting, efficiency-promoting policies. In the short-term, these government measures have often resulted in structural unemployment. One important example of this has been the government’s almost complete acceptance of free trade. Tariff cuts make imports cheaper and expose local industry to stiffer competition. Unable to compete, and with falling sales, some local firms close down. However, there are also other examples of microeconomic reforms that have increased structural unemployment including the privatisation (e.g. Telstra, Commonwealth Bank, Qantas) and corporatisation of some government businesses, where greater emphasis is on cost reduction and profitability. In addition, even the government’s promotion of productivity-based workplace agreements may have worsened structural unemployment in the short-term by allowing firms to produce more output with fewer staff.

Other structural changes in the labour force. There are also other structural developments in the labour force that can affect the supply of labour and the level of structural unemployment. For instance, a rise in the participation rate (e.g. from 60 per cent to 65 per cent) with a larger proportion of those aged over 15 years in the labour force, can tend to increase the unemployment rate. By contrast, a rise in the proportion of people wanting part-time rather than full-time work, or a rise in the minimum school leaving age, might help reduce the unemployment rate.

Frictional unemployment
Frictional unemployment exists when people are unemployed between finishing one job and starting another. This is common in the building trades and in some areas of rural industry.

Seasonal unemployment
Seasonal unemployment results from the termination of jobs at the same time each year due to the regular change in the seasons. For instance, fruit pickers, tourist and holiday operators, ski instructors, school leavers and shearsers, frequently suffer this problem.

Hard core unemployment
Hard core unemployment is often the product of personal attitudes that are seen by some as hostile to effective employment. Sometimes, people lose the work ethic and find it hard to hold down a nine to five job. Especially in the past, it was claimed that our over generous welfare system increased unemployment levels because it made unemployment too comfortable, creating a welfare trap. Sometimes, too, personal appearance, criminal record or a physical disability can prevent individuals from being given an opportunity to work.

INFLUENCES ON AUSTRALIA’S UNEMPLOYMENT RATE, 1996–2007
You may recall the impressive 58 per cent reduction in Australia’s unemployment rate in the past 15 years to 2007, with over 1.8 million new jobs created. Additionally, other labour market indicators also show a remarkable improvement in conditions. Overall, these changes reflect the impacts of both short-term demand-side cyclical factors, and longer-term structural and other supply-side changes.

Generally ideal demand-side conditions
As previously noted, in the 15 years to late 2006, Australia enjoyed sustained economic growth annually averaging 3.6 per cent. This was uninterrupted by periodic recessions that cause higher cyclical unemployment. No wonder, therefore, that unemployment fell to a 32-year low of 4.4 per cent (April 2007) and, currently, there is no cyclical unemployment. Sufficiently strong demand-side conditions like those noted below were the main driving force behind this achievement.

Domestic conditions affecting spending
Domestic conditions were ideal for generating full employment. Overall, we enjoyed solid consumer and business optimism, rising disposable incomes, relatively low interest rates on borrowed credit and a solid growth in the volume of credit. These factors pushed up private consumption spending (C) and business investment spending (I). In turn, this led to a rise in AD and GDP, thereby creating lots more jobs.

Overseas developments affecting spending
Overseas developments have had mixed effects on Australia’s unemployment rate. On the one hand, spending on our exports was slowed by events including the Asian economic crisis in...
1997–98 (Western investors lost confidence investing in South East Asia which resulted in currency devaluations and stock-market declines in the various countries in the region), the slowdown in the US economy (following 11 September 2001), at times a sluggish Japanese economy, and periods where the exchange rate appreciated (e.g. as during 2002–05). This latter event also caused us to spend more on imports representing a leakage that slows AD and GDP, and lifts unemployment. However, on the other hand, overseas developments have often helped to reduce our unemployment rate. For example, global economic activity was generally strong during 2002–06, with most of the world’s key economies (including China, India, UK and US) experiencing remarkably strong economic growth. This meant that Australia was able sell more exports, and cash in on their success. It has also led recently to record term of trade favouring Australia, where our exporters were paid higher prices relative to those paid for imports. Again this tended to lift the value of our exports, along with AD, GDP and employment.

**Government macroeconomic policy**

Appropriate government macroeconomic budgetary policy (i.e. relating to changes in government receipts and outlays) and monetary policy (i.e. mostly involving changes in official interest rates) over the past 10 years, has helped to ensure a steady growth in AD. This too has helped us avoid cyclical unemployment.

Even so, in the future, any further reduction in the unemployment rate below its current level is unlikely to come about from simply accelerating AD or from expansionary macroeconomic policy.

**Favourable effects in the long-term of supply-side structural changes**

Australian experience from the past 20–30 years has shown that supply-side changes have had different effects depending on the time period considered. In the short-term, these factors have often caused a rise in structural unemployment, but they have tended to lower it in the longer-term. Currently, natural unemployment (equal to about 5 per cent of the labour force in 2006) is the main source of Australia’s unemployment, and reflects various changes in the way goods and services are produced. Let us consider some of these supply-side developments affecting natural unemployment.

**Accelerated structural change by local firms**

Following trade liberalisation (breaking down the barriers to free trade by introducing measures such as tariff cuts) and the acceleration of globalisation, the pace of structural change among Australian firms accelerated. To survive and increase business profitability, businesses had to cut their production costs by changing how they operate. For example, Qantas had to raise fuel prices, has redeployed its maintenance operations to Victoria and its IT development maintenance and support services are being outsourced overseas to cut costs. Other companies that have had to change their business practices to cut costs include Virgin, Kodak, Arnotts Biscuits, supermarket chains including Coles and Safeway, mining companies like Rio Tinto and BHP-Billiton, carmakers Ford, Holden, Toyota and Mitsubishi, and the banks like NAB, CBA and Westpac. Over recent times, structural change has included measures like business closures (e.g. Ansett Airlines in 2002), efficiency measures, business rationalisation and relocation, the adoption of new technology, and the relocation of some firms overseas because of lower wages. In addition, new technology means that some businesses have replaced labour-intensive operations with machines. For some workers, too, there is a mismatch of old skills with the new jobs currently on offer. Despite efforts to retrain staff, structural unemployment has occurred especially in the short-term. The upside of this is that now we see business profits at near record levels. This is good for reducing unemployment because it means that firms are generally expanding, rather than closing down.

**Government microeconomic reforms**

The past 15–20 years have seen rapid microeconomic reforms introduced by the Australian Government, which have affected the unemployment rate. In the 1990s and 2000s, these policy measures have included the following:

- Tariff cuts and trade liberalisation accelerated in the 1990s and early 2000s. This led to stiffer competition from imports.
- There was an increase in the level of privatisation (converting a government-owned business into a private company) and corporatisation (requiring government businesses to make profits) of some government businesses.
- Productivity or performance-based enterprise or workplace agreements have been encouraged and widely applied. The immediate effect of this wage system is that some firms have been able to reduce their staff numbers.

In the short-term, all of these policies have tended to increase Australia’s natural unemployment. However, the main benefits of change are again seen in the longer-term. Here, microeconomic reforms that have accelerated structural change have created far more jobs than they have destroyed, by improving business profitability, encouraging the expansion of firms and strengthening the international competitiveness of Australian industry. In addition, some government microeconomic or supply-side policies help to explain the cut in structural, frictional, seasonal and hard-core types of natural unemployment. Several examples come to mind:

- The tightening of welfare generosity has forced some individuals off welfare and into work.
- Ultimately, performance-based workplace wage agreements (especially 1996–2007) have probably helped to reduce our level of structural unemployment by cutting costs and making firms more competitive and profitable. Rather than close down, many businesses are now expanding, creating more jobs.
- The exemption of smaller firms from many of the provisions relating to unfair dismissal laws, introduced in 2005, might mean that businesses have become more willing to hire staff, knowing they can get rid of them more easily if they prove to be unsatisfactory.

Perhaps the benefits of these changed supply-side conditions may now be kicking in and help explain the reduced rate of natural unemployment that we now see in Australia. Indeed, there is reason to believe that even over the 10-year period shown in figure 3.10, the rate of natural unemployment has come down from around 6–7 per cent to about 5-6 per cent or even less.
HAS THE GOVERNMENT ACHIEVED ‘FULL EMPLOYMENT’?

Although it appears that the Australian Government has done an excellent job in achieving its objective of full employment during the 10–15 years to 2007, some commentators point to areas of failure.

Some strengths of recent performances

Supporters of the Australian Government use statistics to highlight the remarkably successful performance in the area of employment:

- Following the recession in the early 1990s, the overall unemployment rate dropped by nearly 60 per cent (comparing the 11 per cent rate for 1992–93 with 4.4 per cent for April 2007). It fell within the old 6–7 per cent target by 1997–98 and to within the newer 5–6 per cent target by 2003–04. The current unemployment rate represents a 32-year low.
- Other labour market indicators (see figure 3.10 and table 3.3, p. 85) for the period 1992–93 to 2005–06, also confirm the government’s success in achieving full employment. For instance:
  - Employment grew by nearly 25 per cent to average 1.7 per cent a year
  - Youth unemployment declined by around 35 per cent
  - The labour force participation rate was up to a record high of nearly 65 per cent (a rise by nearly 2 per cent)

Some weaknesses in recent performances

The government’s critics point out the following areas of weakness in Australia’s labour market:

- It took too long to get the unemployment rate down to where it is today.
- Youth unemployment is still way too high.
- The incidence of unemployment is very high among some racial groups and in some geographic regions.
- There has been a huge increase in the ‘casualisation’ of the labour force where an even larger percentage of people are now pushed (often unwillingly) into part-time work.
- The rates of ‘hidden unemployed’ and ‘under-employed’ are considerable.
- The rate of natural unemployment is still much higher than in the 1950s and 1960s. In part, this is due to weaknesses in government policy.

TRY SHORT ANSWER EXERCISE 3, pp. 136–37

3.5 The objective of external stability

DEFINITION OF EXTERNAL STABILITY

Each year Australians are involved in international transactions with people in other countries around the world. These transactions involve not only the movement of goods, services, incomes and transfers, but they also involve the flows of investment or money capital, both into and out of our country. These transactions are recorded annually on the balance of payments account, either as a credit (i.e. money that comes into Australia from people overseas buying our exports, for example) or as a debit (where Australians make payments abroad, perhaps interest on our overseas debt). As we shall see later on, the overall balance of payments account breaks transactions down, either into items for the current account (where we have a huge current account deficit or CAD, because the value of total debits greatly exceeds total credits), or those recorded under the capital and financial account. Because the levels of these transactions have important effects on the economy, the Australian Government tries to promote its objective of external stability.

In a general sense, the objective of external economic stability is seen as a desirable economic situation where Australia is able to pay its way in its international financial transactions, without these payments abroad (i.e. debits) for items like imports and interest on overseas borrowing, causing undue downward pressure on our exchange rate (i.e. the price or value of the Australian dollar when it is swapped for other currencies). This swapping of currencies is vital for conducting all international transactions, because each country wants to be paid in its own currency units (e.g. A$’s, US$’s, Euros or Yen). So currencies need to be bought (i.e. D) or sold (i.e. S) in the foreign exchange market. In so doing, the exchange rate (i.e. the price of the A$) is determined at the point of equilibrium where the quantity of dollars demanded and supplied is equal. (i.e. D = S). In this market, lots of selling of our dollar causes the exchange rate to fall, whereas lots of buying causes it to rise. The exchange rate, therefore, acts as a barometer or indicator of our success in paying our way in international transactions.

Drawing all of these ideas together, whether or not a country has achieved the objective of external stability, is often judged by trends in three commonly used indicators:

1. How big is the current account deficit? The CAD represents the excess value of total debits over total credits for goods
plus services plus incomes plus current transfers. As a rough guide, the size of the CAD measured against the size of the economy (called the CAD:GDP ratio) should not exceed around 3–4 per cent. Bigger CAD:GDP ratios show external instability, while smaller ratios indicate increased strength externally.

2. Has the exchange rate for the A$ kept its purchasing power? There is no specific exchange rate figure or target that the government aims for. However, we would especially not want to see the A$ fall dramatically over a period of time, or behave erratically in unpredictable ways that would discourage trade. At the other extreme, an excessive rise in the exchange rate is not always appropriate because it can also cause difficulties.

3. Is the net foreign debt (NFD) and the associated income payments abroad (e.g. of interest, dividends, profits), at a sustainable level? The NFD represents the amount by which the money owed by Australians abroad, exceeds the value of Australian-owned assets overseas. Although not all debt is bad (if it is used efficiently to expand our productive capacity), it does create an ongoing burden involving the repayment of incomes abroad. This, then, contributes to a bigger CAD. Again, there is no particular debt target for which the government aims, but the NFD:GDP ratio tells us something about the sustainability or otherwise of our level of debt. Very high ratios are usually a sign of external instability.

We will revisit these three indicators again shortly when we examine the measurement of external stability. However, for the time being, it is important to realise that external stability needs to be defined in a way that makes it reasonably compatible with the achievement of other goals. For instance, it might seem attractive to aim for no CAD, for a rising A$ and for a zero NFD. The pursuit of these three outcomes would certainly prevent many other government objectives from being achieved, such as economic growth, full employment and an equitable income distribution of income. Some flexibility in definition of external stability is clearly required.

**EFFECTS OF EXTERNAL TRANSACTIONS**

Australia’s external transactions and performance (reflected by the CAD, exchange rate, and NFD) greatly affect our economy.

**Economic and employment growth**

The levels of imports, exports and foreign investment influence the level of AD (i.e. \(C + I + G + X - M\)). Exports, for example, represent around 20 per cent of AD, and directly or indirectly employ nearly a quarter of all workers. As such, higher exports relative to the value of imports, or a smaller CAD, would tend to stimulate AD and economic growth, boosting the creation of jobs. By contrast, if imports rose faster than exports and the CAD got bigger, this would tend to slow economic activity and raise cyclical unemployment. A change in the exchange rate is one of many factors that could cause a rise or fall in the value of net exports \((X - M)\). So a rising exchange rate, for example, can result in fewer exports (because they are dearer to overseas buyers) and more imports (because these are cheaper for us to buy). This, then, increases the CAD, slowing both AD and economic activity.

**Inflation**

Australia’s level of inflation reflects demand and cost pressures. Both of these types of inflation are affected by our external performance. For example, demand inflation would tend to rise if there was a drop in our exchange rate. This is because a lower A$ usually encourages exports (since they are cheaper overseas) and discourages imports, thereby stimulating AD. A lower exchange rate also pushes up cost inflation because imports of oil, cars and machinery from abroad are dearer. By contrast, a higher A$ could cause both demand and cost inflation to slow.

**Resource allocation**

If Australia is to maximise its production and material living standards, it needs to allocate or use its scarce resources efficiently. In particular, high levels of business investment are important. Unfortunately, low levels of domestic savings currently mean that we depend heavily on borrowed money capital flowing in from overseas to finance our high levels of investment. One consequence of this foreign borrowing or debt is the repayment of interest and other incomes abroad. Unfortunately, repayments are not as easy without earning lots of income from rising exports, or having our own investments overseas. Another effect of the external sector is that when the exchange rate changes, it also alters the allocation of resources. It does this by changing the relative price, profitability and sales of particular goods and services exported (compared with those imported).

**Income distribution**

International trade impacts on both the level of national income as well as the way this income is divided up or shared between different groups of Australians. For instance, if the exchange rate fell causing the value of exports to rise, this would tend to lift the incomes of exporters relative to those of importers and the rest of the community.
MEASUREMENT OF EXTERNAL STABILITY

There are three common measures or indicators of external stability:
1. The size of Australia’s balance of payments on current account (i.e. reflected in the size of the CAD)
2. The level of the exchange rate for the Australian dollar
3. The size and burden of our net foreign debt (NFD).

Let us now take a closer look at these indicators of external stability.

Measuring the balance of payments account

The balance of payments account is an annual statistical record of the money value of different types of transactions between Australia and the rest of the world. For accounting purposes, money received by Australian residents is regarded as a credit, while money paid to overseas by us is classified as a debit. Because this is a zero balance account, the overall balance of payments account always balances and total credits are equal to total debits. The items recorded on the balance of payments account (BOP) are grouped into either (i) current account transactions or (ii) capital and financial account transactions, before being further subdivided. These are illustrated in figure 3.13.

The overall balance of payments account

<table>
<thead>
<tr>
<th>The balance on current account</th>
<th>The balance on capital and financial accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 — Net goods (credits for goods (\text{MINUS} ) debits for goods)</td>
<td>5 — Balance on capital account</td>
</tr>
<tr>
<td>2 — Net services (credits for services (\text{MINUS} ) debits for services)</td>
<td>Net capital transfers (capital transfer credits (\text{MINUS} ) capital transfer debits)</td>
</tr>
<tr>
<td>3 — Net incomes (income credits (\text{MINUS} ) income debits)</td>
<td>Net acquisition of non-produced financial assets (credits (\text{MINUS} ) debits)</td>
</tr>
<tr>
<td>4 — Net current transfers (current transfer credits (\text{MINUS} ) current transfer debits)</td>
<td>6 — Balance on financial account</td>
</tr>
<tr>
<td></td>
<td>Net investment (equals direct + portfolio + other) (= ) credits (\text{MINUS} ) debits</td>
</tr>
<tr>
<td></td>
<td>Net reserve assets (by the RBA) (= ) credits (\text{MINUS} ) debits</td>
</tr>
<tr>
<td></td>
<td>Net errors and omissions (this may be positive or negative)</td>
</tr>
</tbody>
</table>

The balance on current account

On this diagram, you will notice that the balance on current account is broken down into four sub-accounts.

1. **Net goods**
   - This is the difference in total value between export credits for goods sold overseas (also called merchandise, e.g. wool, minerals and manufactured items) minus import debits for goods purchased from abroad (e.g. for oil, electronic equipment and machinery).

2. **Net services**
   - Net services are equal to the difference between the value of service credits received by Australia (e.g. for tourism, education, transportation, construction, financial, royalties and licence fees) minus service debits paid abroad (e.g. for transportation, tourism, education, royalties and licence fees, and insurance).

3. **Net incomes**
   - This is the difference in value between income credits received from overseas (e.g. wages, salaries, interest, dividends and profits) minus income debits paid out abroad (e.g. for wages, salaries, interest, rent, dividends, profit remittances).

4. **Net current transfers**
   - These refer to the difference between the value of current transfer credits received by our residents (e.g. non-life insurance transfers such as pensions) minus the value of current transfer debits paid abroad (e.g. gifts, taxes, some non-capital foreign aid donated by our residents). Transfers are different from other transactions in that they are a one-way transaction with nothing exchanged.

In order to calculate the overall balance on current account, remember the following relationships.

How to calculate the balance of payments on current account

Net goods (credits for goods minus debits for goods) PLUS
Net services (credits for services minus debits for services) PLUS
Net incomes (credits for incomes minus debits for incomes) PLUS
Net current transfers (credits for current transfers minus debits for current transfers)

EQUALS

THE BALANCE ON CURRENT ACCOUNT

Note: In Australia’s case, the result turns out to be a large CAD.

As shown in figure 3.14 and table 3.4, Australia has a persistent and generally large current account deficit (CAD) because the total value of debits exceeds credits for goods, services, incomes and current transfers. The main reason for our CAD is the large deficit on the net incomes account. This is the result of foreign ownership of many Australian companies and the large amount of foreign debt involving the annual payment of incomes overseas. In addition, there is often a deficit on net goods, services and net current transfers.
Table 3.4  The components making up Australia’s current account

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Net services (SB)</td>
<td>0.074</td>
<td>–1.192</td>
<td>–1.784</td>
<td>–1.396</td>
<td>0.672</td>
<td>–1.218</td>
<td>0.999</td>
<td>0.492</td>
<td>–1.240</td>
<td>–0.703</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Net current transfers (SB)</td>
<td>–0.021</td>
<td>0.022</td>
<td>–0.749</td>
<td>0.218</td>
<td>0.032</td>
<td>–0.017</td>
<td>–0.214</td>
<td>–0.269</td>
<td>–0.420</td>
<td>–0.437</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAD ($B)</td>
<td>17.602</td>
<td>22.807</td>
<td>33.366</td>
<td>33.479</td>
<td>18.944</td>
<td>22.212</td>
<td>40.184</td>
<td>47.033</td>
<td>57.584</td>
<td>54.420</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAD:GDP (%)</td>
<td>3.2</td>
<td>4.0</td>
<td>5.6</td>
<td>5.0</td>
<td>2.6</td>
<td>2.6</td>
<td>5.1</td>
<td>5.5</td>
<td>6.2</td>
<td>5.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Data derived from ABS 1350.0 and 5302.0.

Figure 3.14 Various indicators of Australia’s external stability

**Balance on capital and financial accounts**

The balance on the capital and financial accounts is broken down into two sub-accounts.

1. **Balance on capital account**

   Capital transactions include net capital transfers and the net acquisition of non-produced, non-financial assets. In more detail, these two sections are as follows:
   - **Capital transfers** generally involve the net inflow of funds to Australia by permanent migrants.
   - **The net acquisition of non-produced, non-financial assets** covers the excess of credits over debits for the sale of copyright, patents, franchises and trademarks of a tangible nature.

   Of these two items, capital transfers are by far the largest item.

2. **Balance on financial account**

   The financial account records the following transactions involving foreign financial assets and liabilities.
   - **Net direct investment.** This involves the purchase or expansion of companies and assets in Australia by foreigners (classified as credits), or similar investments overseas by Australian residents (classified as debits).
   - **Net portfolio investment.** Portfolio investment has to do with transactions into and out of Australia involving shares, debt and securities. Portfolio investment or capital inflow from overseas is recorded as a credit, while this sort of investment abroad by Australian residents is recorded as a debit on our financial account.
   - **Other investment.** This category includes credits minus debits for loans, deposits and trade credits.
   - **Reserve assets.** This item contains both RBA and government transactions involving dealings in reserves of foreign currencies, gold, Special Drawing Rights and required contributions to the IMF. Moneys received from overseas are categorised as credits, while payments abroad are categorised as debits on Australia’s financial account.
   - **Net errors and omissions.** This item reflects inaccuracies in the above calculations and estimations. When this category is taken into account, the positive balance on Australia’s capital and financial account will exactly offset the negative balance on current account (the CAD).

   As can be seen, this sub-account records the excess of total credits for investment funds received by Australia from abroad (borrowing), minus total debits for investment by Australians abroad (lending). It also shows the different types of private investment transactions, along with changes in Reserve Assets.

**Measuring the exchange rate**

Another indicator of Australia’s external situation is trends in our exchange rate. This rate measures the price or value of the Australian dollar when it is swapped for other currencies. Exchanging currencies is necessary because a nation’s residents normally want to be paid in the currency unit appropriate for their country. Prior to 1983, Australia had a fixed exchange rate.
where Reserve Bank officials published the day’s rates for major currencies. However, since then, a floating exchange rate has been used. Here, the value or the equilibrium price for the Australian dollar is decided in the foreign exchange market by currency buyers (demanders) and currency sellers (suppliers), as shown in figure 3.15.

Hence, the exchange rate for the Australian dollar will appreciate (rise) when there is less selling or more buying of the currency following stronger than expected trade figures, improvements in the terms of trade, strong overseas economic activity, rises in domestic interest rates, speculation of a rising dollar and improved price competitiveness of our economy against overseas. However, the exchange rate will depreciate (fall) when there is more selling and less buying of the dollar following periods of rapid domestic economic growth, strong consumer and business confidence locally, cuts in local interest rates, global recession, depressed commodity prices and the release of worse than expected trade figures. One consequence of a floating exchange rate is that market forces (demand and supply for the Australian dollar) sometimes create instability and unpredictability in the exchange rate for the Australian dollar.

The exchange rate or price of the A$ Supply > demand for A$\$ Supply/sales of A$\$

Figure 3.15 The foreign exchange market for the Australian dollar (A$)

There are two measures of Australia’s exchange rate — individual exchange rates and the trade weighted index (TWI).

1. Individual exchange rates
The Australian dollar has a separate exchange rate for every currency in the world, including the rate for US dollars, the Euro, British pounds sterling, Japanese yen, Chinese renminbi and the Indonesian rupiah. These express how many currency units for each country can be purchased with one Australian dollar.

2. Trade weighted index (TWI)
The TWI represents the average exchange rate for a basket of foreign currencies weighted according to their relative importance for Australia (e.g. the US dollar is weighted more heavily than the Indonesian rupiah). Because the TWI is an index, a base year (May 1970) is used to compare changes in the currency’s value in subsequent years.

There are many influences that shape market judgements about the value or worth of the Australian dollar. The connection between the CAD and the exchange rate has already been noted. In addition, the behaviour of currency buyers and sellers is affected by numerous local and international events, some real and others imagined or perceived. These are covered shortly.

Measuring the net foreign debt (NFD)
The net foreign debt (NFD) also indicates Australia’s external position. It is the difference in value between what Australia has borrowed from and owes to overseas minus what Australia has lent or invested abroad. There are two main types of overseas borrowers in Australia.

1. Public sector or official government borrowing
Especially in the years up until the mid-1990s, federal, state and local governments borrowed money overseas to help cover their often large budget deficits. At the time, this is added to our NFD. However, the public sector’s foreign debt nowadays makes up less than 10 per cent of the NFD and the federal government has effectively repaid its foreign liabilities.

2. Private sector or non-official borrowing
The main private sector borrowers are the large companies who need to raise capital for financing business expansion and takeovers. High domestic interest rates and a lack of local savings especially contributed to this problem.

Debt can be good, providing that it is used wisely for sound projects. Our overseas debt can also make up for the deficiency in local savings and make access to credit more affordable when domestic interest rates are high. However, as with all debt, the main problem is affording the interest repayments. Especially when the Australian dollar depreciates, the debt burden may become very heavy indeed. It then requires more dollars to be converted into other currencies. Additionally, if our foreign debt rises too quickly and exceeds our capacity to sustain our repayments, our credit rating as a nation may be downgraded by agencies including Moody’s and Standard and Poors. This downgrading then translates into even higher domestic interest rates.

The relationships between the CAD, NFD and TWI
Each of these three indicators of Australia’s external stability affect each other in two-way relationships, as shown in figure 3.16. Let us take a closer look.

Figure 3.16 Typical relationships between indicators of external stability
Some relationships between the CAD and the NFD
A rise in the CAD means Australia has even greater reliance on overseas borrowing and foreign capital inflow. However, the more we borrow abroad, the heavier our income repayments (e.g. of interest, dividends or profits) become, causing the CAD to get bigger.

Some relationships between the A$ and the CAD
When the A$ rises, our exports become relatively less attractive abroad, while to us, imports become more attractive. The CAD, therefore, tends to rise. However, the bigger the CAD becomes, the greater the downward pressure on the A$ which, in turn, may help reduce the CAD by making exports relatively more attractive against imports.

Some relationships between the NFD and the A$
A large and unsustainable rise in unproductive foreign debt tends to depress the exchange rate because it means even bigger interest repayments abroad. These involve selling more A$s in the foreign exchange market. However, a lower resulting exchange rate often causes the burden of the debt servicing to become heavier when it is measured in terms of overseas currencies like the US$.

TRENDS IN AUSTRALIA’S EXTERNAL TRANSACTIONS
Figure 3.17 and table 3.5 show trends in Australia’s external position in the 10 years to 2005–06. Several points stand out:

- Overall, the size of Australia’s CAD was quite large and trended upwards as shown. In addition, although the CAD averaged 4.6 per cent as a percentage of GDP, its level showed considerable cyclical instability. At its low point, it reached 2.7 per cent, but in six out of the 10 years, it was over 5 per cent with a peak at 6.4 per cent in 2004–05.
- The exchange rate (shown by the rate with the US$ and the TWI) also moved up and down cyclically. However, there was an upward trend evident for the period as a whole. The low point for the TWI of 49.7 points was reached in 2000–01, with a high of 64.5 in 2004–05 (an appreciation of around 30 per cent).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CAD:GDP ratio for Australia (percentage) — the government’s target is around 3–4 per cent</td>
<td>3.3</td>
<td>4.1</td>
<td>5.7</td>
<td>5.1</td>
<td>2.7</td>
<td>3.1</td>
<td>5.1</td>
<td>5.5</td>
<td>6.2</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>2. CAD ($ billions)</td>
<td>17.6</td>
<td>22.8</td>
<td>33.6</td>
<td>32.6</td>
<td>18.1</td>
<td>20.7</td>
<td>40.2</td>
<td>46.8</td>
<td>57.4</td>
<td>54.4</td>
<td></td>
</tr>
<tr>
<td>3. TWI for the exchange rate at June (1970 = 100 points)</td>
<td>56.7</td>
<td>57.9</td>
<td>58.4</td>
<td>53.3</td>
<td>49.7</td>
<td>52.3</td>
<td>59.4</td>
<td>59.1</td>
<td>64.5</td>
<td>62.2</td>
<td></td>
</tr>
<tr>
<td>4. A$ exchange rate with the US$</td>
<td>0.75</td>
<td>0.61</td>
<td>0.66</td>
<td>0.60</td>
<td>0.51</td>
<td>0.56</td>
<td>0.67</td>
<td>0.69</td>
<td>0.76</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>5. Ratio of NFD to GDP for Australia (percentage)</td>
<td>39.5</td>
<td>40.7</td>
<td>39.1</td>
<td>43.7</td>
<td>45.3</td>
<td>45.3</td>
<td>47.1</td>
<td>46.6</td>
<td>48.3</td>
<td>52.2</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3.5** Some indicators of Australia’s level of external stability

**Source:** Data derived from ABS 1350.0 and 5302.0.
CAUSES OF EXTERNAL INSTABILITY

For Australia, external instability occurs when we are unable to pay our way in its international financial transactions, without these payments abroad (e.g. for imports and interest owed on our overseas debt) causing undue downward pressure on the exchange rate. We mentioned that there were three key signs of external instability, including a large and rising CAD in excess of around 3–4 per cent of GDP, a depreciating exchange rate for the A$, and an unsustainable rise in the NFD and its associated income payments abroad.

These external weaknesses are interrelated and all have two basic causes:

1. Higher cyclical levels of economic activity caused by excessively strong demand-side conditions that accelerate AD, cause the CAD to rise from around 3–4 per cent, to 6 per cent of GDP. Given these conditions, the exchange rate also tends to weaken.

2. Supply-side structural problems in the economy result in an ongoing CAD equal to around 3–4 per cent of GDP, a rising NFD and a gradually declining value for the A$.

The interplay of these two sets of forces on external stability, can be illustrated in figure 3.18 that shows, hypothetically, how the size and make up of Australia’s CAD changes over a period of time.

Although this diagram focuses on changes in the CAD, the same two factors also help to explain trends in the NFD and especially the exchange rate for the A$. We will now explore these causes more closely.

How demand-side cyclical factors (1) and supply-side structural influences (2) affect the size of the CAD:GDP ratio

![Graph showing the relationship between CAD:GDP ratio and years]

1. Rising levels of AD and an increase in the level of economic activity due to stronger demand-side conditions, causes a cyclical increase in the CAD:GDP ratio from around 3% (in a period of weaker activity), to a peak of around 6% (in a period of strong activity).

2. The ongoing supply-side structural causes of the CAD being at least 3% of GDP, are our poor competitiveness (high costs and relatively low efficiency) and our NFD (due to a lack of domestic savings to fill the national S–I gap).

The government’s target for the objective of external stability is to have a CAD:GDP ratio of around 3–4%. This figure is also the typical cyclical low for the CAD when AD and economic activity are not too strong. It is fairly consistent with achieving other goals.

Figure 3.18 Two sets of factors contributing to Australia’s CAD and external instability

Demand-side factors can cause cyclical instability externally

Let us start by restating the general rule: Cyclical rises in the level of domestic economic activity (i.e. perhaps driven by demand-side factors like strong consumer and business optimism that increase AD) tend to weaken external stability, driving up the CAD and NFD, while depressing the exchange rate. There are several reasons for this. First, very strong spending, pushed up by say consumer and business optimism, can lead to a boom, widespread shortages of goods and services, and demand inflation (if the economy is near its productive capacity). In turn, unsatisfied household and business spending spills over onto imports. Additionally, our exportable surplus of goods and services is reduced. In both cases, the CAD often rises and our exchange rate tends to fall. This depreciation of the A$ occurs because higher imports entail selling more Australian currency in the foreign exchange market, while lower exports cut the demand for our dollar. Second, boom conditions resulting from excessive expenditure, are often associated with rising domestic interest rates and an increase in the demand for credit. If these funds are borrowed abroad because rates there are cheaper than those locally, there will be a rise in our foreign debt. Here, higher interest repayments on our overseas debt, worsen the CAD and eventually weaken the exchange rate.

By contrast, cyclical falls in activity (i.e. perhaps reflecting weaker demand-side conditions like consumer and business pessimism that slow AD), tend to improve external stability by reducing the CAD and strengthening the A$.

The AD–AS diagram in figure 3.19 can be used to show the economic circumstances leading to cyclical changes in our external position. Notice how excess levels of AD in relation to the economy’s productive capacity (at AD$_1$), result in general shortages of goods and services and demand inflation (at P$_2$). These are domestic economic conditions where the CAD rises and the A$ falls. In reverse, very weak conditions of spending at (AD$_3$) tend to result in a cyclical fall in the CAD and a stronger A$.

There are many demand-side factors that might cause a cyclical improvement or deterioration in external stability. We will focus on just a few of the more important ones.
CHAPTER 3 Australia’s economic objectives and performance

97

Figure 3.19 How cyclical demand-side conditions affect external stability

Business optimism
High levels of business optimism about future sales and profits lead to increased investment spending on imports of capital goods (e.g. machinery, trucks, computers). These increase the CAD and weaken the A$. However, pessimism and reduced spending on new equipment, cause a cyclical fall in the CAD.

Consumer confidence
When local households are feeling confident about their future employment and income prospects, it is common to find they spend more and save less. At least some of their spending will spillover onto imports of new cars, holidays and electrical goods, causing a rise in the CAD. The reverse happens when pessimism sets in.

Expansionary government macroeconomic policy
If the federal government runs expansionary budgetary or monetary policies that boost AD (e.g. gives tax cuts, lift spending, runs a deficit financed by borrowing overseas, and the RBA reduces interest rates), these will tend to add to the CAD and weaken the exchange rate. However, contractionary policies (e.g. a budget surplus to slow AD) often tend to strengthen external stability.

Adverse terms of trade
A fall in our terms of trade and drop in international commodity prices received by Australian exporters, cause a rise in the CAD and a drop in the A$ because exporters get a lower price for what they sell. Our exports are worth less. However, stronger terms of trade help to lower the CAD and strengthen the A$.

Weak level of overseas economic activity
Falling levels of economic activity abroad among our important trading partners (e.g. Japan, US) tend to push up our CAD and weaken the A$ because we sell fewer exports. By contrast, when there is an international boom and there is a rise in the demand for our exports, the CAD tends to drop, and the A$ often strengthens.

Supply-side problems can cause structural problems externally
Structural factors can help to explain a big and on-going CAD and NFD, as well as a long-term fall in the exchange rate. These factors relate to the way our economy is organised and how production is carried out. Structural problems can reflect various adverse supply-side developments such as poor efficiency and rising production costs for local firms, reducing our competitiveness against imports, a lack of domestic savings leading to higher interest rates here relative to those overseas, and even bottlenecks or constraints such as drought and labour shortages that lower our ability to produce exports. These structural problems can occur, even if there is no excess AD leading to a cyclical rise in the CAD.

A few of the more important supply-side factors that can add to the CAD and NFD include the following:

The national-saving investment gap
Having a high level of investment (I) is vital for any economy to grow. However, as explained in figure 3.20 (p. 98), investment needs to be financed using savings (S). If the level of national savings by households, firms and governments is only $200 billion, for example, yet the desired level of national investment is $250 billion, then the only way that this is possible is by borrowing savings from overseas. Unfortunately, however, borrowing adds to Australia’s net foreign debt. In turn, this liability results in us having to make annual income repayments abroad (e.g. as interest, dividends, profits), increasing the CAD and weakening the A$. By contrast, increased levels of national saving could close the national S–I gap, and reduce the CAD and NFD.
General price level

<table>
<thead>
<tr>
<th>GDP_0</th>
<th>GDP_1</th>
<th>AS_0</th>
<th>AS_1</th>
</tr>
</thead>
<tbody>
<tr>
<td>lower national output</td>
<td>original level of GDP</td>
<td>higher costs reduce productive capacity and local competitiveness</td>
<td>original productive capacity (when there were lower production costs)</td>
</tr>
<tr>
<td>P_0</td>
<td>P_1</td>
<td>Cost inflation</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3.21** Adverse supply-side developments can create conditions that increase the structural CAD.

### Higher interest rates

Higher domestic interest rates

When domestic interest rates are higher than those prevailing overseas (i.e. a structural problem due partly to the lack of domestic savings and the high demand for borrowing credit), higher rates or returns here attract international investors. As more money is sucked in, the NFD rises, along with annual repayments of interest and other incomes that lead to a structural CAD.

### Higher inflation rates

When the level of domestic inflation is higher than rates abroad, locally made goods and services become less competitive and attractive. Exports fail to grow, thereby increasing the CAD and undermining the exchange rate.

### Low productivity, poor technology and high wage costs

Low efficiency or output per hour worked often leads to higher real unit labour costs (RULCs). Sometimes, the absence of adequate investment in new technology adds to the problem or it may result from excessively high minimum wages. In turn, these structural weaknesses reduce the competitiveness of our exports relative to imports, pushing up the CAD. Clearly this would not be such a huge problem if productivity were stronger or wages lower.

### Bottlenecks that restrict export production

Sometimes there are bottlenecks that restrict export production and cause a bigger CAD. Here we might think of the recent effects of drought or the absence of water, or even the lack of skilled labour and inadequate generating capacity needed to service industry with cheap electricity. Sometimes, these obstacles mean that there is little value adding or processing of our exports (e.g. converting wheat into biscuits or iron ore into machinery) in Australia. This causes their value to be less than otherwise, accounting for a larger CAD and weaker A$.

### Government taxes and charges

Expensive taxes and high government charges are structural problems that reduce company profits and erode the competitiveness of local producers. This has the effect of depressing exports, while at the same time, giving imports the edge over locally made goods and services, further worsening the CAD.

We can again use the AD–AS diagram, to show how adverse supply-side problems, for example, can create domestic economic conditions that add to the large structural CAD. Notice that higher costs reduce our productive capacity (i.e. a shift from AS_1 to AS_0) in figure 3.21. They also cause equilibrium to occur at a lower level of GDP (i.e. shift from GDP_1 to GDP_0) and in particular, at a higher level of cost inflation (i.e. move from P_1 to P_0). With higher costs and prices, local firms are not as internationally competitive. Imports and borrowing overseas become even more attractive than exports, increasing the CAD and NFD.

**Figure 3.20 Australia’s national saving-investment gap (hypothetical $ billions/year)**

Source: Derived from ABS 1350.0.
Demand-side conditions and the cyclical level of economic activity

As a general rule, when strong demand-side conditions cause total expenditure to grow faster than Australia’s productive capacity (shown by very low levels of unemployment), there is a cyclical rise in the CAD. Typically, excess spending spills over onto imports that are sucked into the economy to help fill the shortages of locally made goods and services. At the same time, booming local sales reduce the size of our exportable surplus. Strong spending and economic activity occurred, especially during 2004–05–06, and to some extent in 1998–99–2000, leading to a cyclical rise in the CAD to around 6 per cent. By contrast, weaker demand-side conditions and slower activity in 2001–02, helped to explain the cyclical fall in the CAD to around 3 per cent. In the short-term, the pace of economic activity (and thus the size of the CAD) has been dictated partly by the strength of demand-side conditions, both locally and from overseas.

Consumer and business confidence

Changing levels of consumer and business confidence about the future, greatly affect our spending on imports of goods and services. For example, in 2003–04–05–06, business optimism resulted in more imports of capital equipment (e.g. machinery, computers and transport equipment including planes), while, as shown in figure 3.22, households spurred on by rising disposable incomes, spent up big on imported iPods, plasma TVs and other electrical appliances, cars, clothes and overseas holidays. Sometimes, too, the combination of strong confidence, more spending on imports and a bigger CAD, was eventually reflected in a weaker A$ and a rise in the NFD.

Exchange rate

The exchange rate greatly influences the attractiveness of Australian exports relative to imports, thereby affecting the CAD. This is shown in figure 3.22. So when our exchange rate rose (i.e., appreciated as in 2000, 2001–06), Australian exports became dearer and less attractive to foreigners, while imports became relatively cheaper and more attractive to us. Rising values of imports compared with exports, tended to increase the CAD. However, a weaker exchange rate for the A$ (i.e. a depreciation as in 1998–2000), tended to lift the value of net exports and reduce the CAD.

Interest rates

Interest rates impact on the CAD because they influence the levels of savings, AD and economic activity. For instance, allowing for a time lag of one to two years, relatively lower interest rates in 1997–98 and 2001–02, probably helped to explain some of the increase in borrowing and spending by Australian firms and households. Some of this expenditure was directed onto imports, pushing up the CAD a short time later. However, again after a time lag, higher rates (e.g. 1999–2000) tended to lower spending on imports, reducing the CAD (e.g. 2001–02).

Overseas economic activity and the terms of trade

Overseas economic activity (i.e. relating to the strength of economic activity among our major trading partners) affects Australia’s level of exports and CAD. For instance, in 2005 and 2006, booming overseas economic activity in the Chinese, Indian and US economies, tended to stimulate our exports and keep the CAD lower than it would be otherwise. In addition, strong activity overseas at this time also pushed up our terms of trade. This too helped to increase exports and hold down the CAD. By contrast, the Asian economic crisis and downturn in the terms of trade of 1997–98, the slowness of the Japanese economy during 1997–2000 and the US sluggishness following 11 September 2001, all tended to reduce the value of our exports and increase the CAD.

Defence spending and aid

Defence spending and foreign aid can impact on the CAD. For instance, Australia’s substantial overseas aid donations totally over $1 billion to the 2005 Tsunami relief effort in Indonesia and elsewhere, resulted in an increase in the CAD, as did our military contributions in East Timor, Solomon Islands, Afghanistan and Iraq.

Supply-side structural conditions

There are many supply-side structural conditions that have affected Australia’s external position as reflected in the CAD, NFD and exchange rate.

The level of domestic savings and interest rate differentials with overseas

As already noted, Australians do not save enough to finance their high level of investment spending needed to grow the economy’s productive capacity. This causes us to have a large national saving-investment gap which is one of the biggest reasons for our large CAD. During the 10 years to 2006, Australia’s NFD ballooned, from around 39.5 per cent of GDP in 1996–97, to over 52 per cent of GDP in 2005–06. The rise was not so much
caused by the growth in public sector or government borrowing abroad (since certainly the federal government was running big budget surpluses in 2004–05–06–07), as it was attributed to private sector debt. This suggests that we were becoming even more dependent on overseas borrowing. One way to reduce this problem would be to use government policies to increase the level of national savings. Borrowing overseas was also encouraged by the large difference between high interest rates in Australia, relative to lower ones overseas. The lack of domestic savings combined with a big demand for credit, helps to explain why our interest rates are quite high compared with those in say Japan (e.g. official RBA interest rate in August 2006 was 6 per cent, against the equivalent ones in Japan at 0.25 per cent or the Euro area at 2.75 per cent). These interest rate differentials not only make Australia very attractive to foreign investors seeking high rates of return, but the ability to borrow overseas also suits locals wanting cheaper credit. Either way, the NFD and the CAD continue to grow.

Factors affecting the competitiveness of local producers

Having a cost advantage in production helps local exporters compete successfully through lower prices and increased sales. There are many factors that determine this and thereby affect the size of Australia’s CAD:

- **Productivity growth.** Efficiency in using labour and capital resources is very important for external stability since this can help cut production costs for local firms competing for markets at home and abroad. This is because higher efficiency means that fewer resources or inputs are needed to make the same output, so prices can be kept down. In the 10-year period to 2006, productivity growth was nearly double the levels from the 1970s and 1980s (although it was below that for the 1950s and 1960s). Government microeconomic efficiency reforms (e.g. tariff cuts to increase the level of competition, the introduction of productivity-based wages set on a firm by firm or enterprise basis, easing of unfair dismissal laws, reduced tax rates applied to businesses and individuals, and deregulation of capital markets) can take some of the credit for improved productivity.

- **RULCs.** Per unit wage costs help determine whether or not locally made goods and services can compete with imports. In the 10 years to 2006, real unit labour costs (RULCs) actually fell by around 6 per cent, helping to improve our trade balance and reduce the CAD. The only problem is that RULCs were still higher in Australia than among many of our trading competitors.

- **Interest rates as a cost.** Higher interest rates in Australia, relative to those in some countries like Japan, place local firms at a real cost disadvantage. It also means that our businesses are discouraged from borrowing and purchasing new equipment that incorporates the latest technology. This limits our exports and adds to the CAD.

- **Exchange rate.** Exchange rate movements also help to determine how competitive exports are against imports. A high exchange rate, as we saw between 2002 and 2006 for instance, has made it very difficult for our exporters. However, the lower exchange rate of 2000–01 helped to reduce Australia’s CAD by making our exports relatively more attractive.

- **Economies of large-scale production.** The size or scale of businesses affects the price they must charge to make a profit. This is because bigger firms can often spread their fixed costs (e.g. advertising, product development, technology and equipment) more thinly over a greater annual output. The problem here is that many Australian firms are too small, catering mainly for the local market, so they are unable to maximise economies of large scale. It may be that, in some instances, the application of the Trade Practices Act limiting some takeovers and mergers, may have actually reduced the capacity of local firms to compete.

- **Transport costs.** Large distances within Australia and to our overseas destinations, put local firms at a competitive disadvantage in the European and US markets. However, our closeness to the growing Asian market is surely a potential competitive advantage.

Value adding in export industries

A large proportion of Australia’s exports of rural and mining commodities involve very little value adding or processing. This reduces their value below what it could be, thereby making the CAD larger than otherwise.

New discoveries of minerals

New discoveries of minerals including natural gas in the North-West Shelf over the past decade, have increased Australia’s capacity to export. Recently, for instance, a deal was signed between Australia and China for the sale of around $30 billion of gas.

Drought and climatic conditions

Good climatic conditions favourable for farming (e.g. 1999–2001), help grow our capacity for exports and tend to reduce our CAD. However, drought-like conditions throughout many parts of Australia in the past five years since 2002–03, have slowed exports and contributed to a bigger CAD.

HAS THE GOVERNMENT ACHIEVED ‘EXTERNAL STABILITY’?

Debate exists about the significance of the large CAD and NFD, and the Australian Government’s apparent poor performance in achieving its objective of external stability.

Some strengths of recent performances

The government and its supporters tend to argue that there is no need for alarm over Australia’s large CAD and rising NFD.

- The 4.6 per cent average CAD:GDP figure is still fairly close to the 3–4 per cent target. Indeed, to do any better would have meant slowing AD and economic activity. This would have been inconsistent with achieving other objectives such as economic growth, full employment and living standards. Put another way, it could be argued that the big CAD is a reflection of a very strong economy, not a sign of weakness.

- With largely free or competitive markets, external imbalances like the CAD and NFD, should automatically tend to be corrected by a fall in the AS, and by rises in domestic interest rates. Since 2002–03, supporters point out that the exchange rate has remained fairly strong and interest rates are relatively low by our own historical standards. Surely this would not be the case if things were really bad.
Some weaknesses of recent performances

The government’s critics use statistical data to highlight its complete failure to achieve external stability.

- The CAD:GDP figure has averaged 4.6 per cent for the 10 years ending 2005–06, exceeding the 3-4 per cent target by up to 50 per cent.
- The NFD:GDP figure has rocketed from around 39 per cent to over 52 per cent, causing the CAD to grow even faster. Despite its savings-promoting policies, this trend shows that the government has not done enough to close the national saving–investment gap.
- The government has not made sufficient effort to reduce the capacity constraints (e.g. address the labour skills and infrastructure shortages) that currently limit the growth in Australian exports.
- Although the A$ (indicated by the TWI) is currently on a short-term or cyclical high, it has still lost around 40 per cent of its value since 1970 and much more if we go back still further. This decline has reduced the purchasing power and living standards of Australians.
- There is still insufficient ‘value adding’ to a large percentage of Australian rural and mineral exports, so that the total value of exports has grown only very slowly.

3.6 The objective of efficiency in resource allocation

DEFINITION OF ‘EFFICIENCY IN RESOURCE ALLOCATION’

The allocation of resources involves deciding how best we should use our productive inputs (i.e. including land, labour and capital resources). In Australia, for example, how many resources should go into producing clothes, cars, tourist accommodation, wheat, entertainment, health services or defence? Unfortunately, because our resources are scarce or limited, we cannot have all the goods and services that we would like. We are forced to choose carefully so that more wants can be satisfied and our level of material well-being increased. However, if we could only use our resources more efficiently (i.e. make more output with less inputs), it would be possible to lift the overall level national production, reduce cost inflation, make us more competitive in international trade, create more jobs and increase real income per person. With all these compelling reasons, it is no wonder that the Australian Government pursues its goal of efficiency in resource allocation.

As a government economic objective, efficiency in resource allocation exists when our productive inputs are used to create the highest possible value of national output (i.e. GDP is at its highest level). In turn, having more goods and services available helps to ensure the maximum satisfaction of our society’s needs and wants. Put another way, optimum efficiency only exists when changing the way resources are used would not further increase the economy’s GDP. This would require that resources only flow into areas of production where we have a comparative cost advantage. Efficiency also implies that resources are not wasted either because of high unemployment, or misdirected into less productive or more speculative uses as a result of rapid inflation. While the federal government has not stated an exact efficiency target, some commentators believe that it is reasonable for Australia’s labour efficiency (measured by GDP per hour worked, see pp. 102–103) to grow by an average of about 1.5 per cent to 2 per cent a year, or more.

There are four different elements making up the concept of efficiency in resource allocation:

1. Allocative efficiency means ensuring that resources are only used to make those particular types of goods and services that best satisfy society’s needs and wants. Many economists argue that, in general, consumer sovereignty (i.e. only producing what consumers want to buy) and highly competitive markets using the price system, help to achieve allocative efficiency. However, sometimes, allocative efficiency does not occur because of ‘market failure’ or as a result of ‘government failure’ (see chapter 1, pp. 21–22). For example, allocative efficiency is usually low when competition is weak due to the existence of monopolies, oligopolies, high tariffs on imports to protect local industries, and government regulation of

Local firms are still at a competitive disadvantaged relative to overseas due to their high production costs, excessively high interest rates, low efficiency, bureaucratic red tape and heavy government taxes and charges.

Some countries run current account surpluses (e.g. currently Japan, Germany, France, Canada and China in 2005–06) and are net exporters and lenders of capital, rather than net importers and borrowers like Australia.

TRY SHORT ANSWER EXERCISE 4, pp. 137–38
markets (as in the case of the labour market with the fixing of the minimum wage).

2. **Technical efficiency** (also known as **productive efficiency**) is about firms producing goods and services using the least-cost method and by minimising the quantity of resources used. For this to occur, businesses need to employ **best practice** involving plant design, the use of equipment that incorporates the latest technology, and the most effective managerial strategies currently available. For instance, sometimes a higher level of investment spending by firms on new equipment (e.g., robotics, and ICT) rather than simply employing more staff, is the cheapest way to lift output per worker.

3. **Dynamic efficiency** entails firms being adaptive and creative in response to changing economic circumstances. This may mean using the latest technology, upgrading employee skills and incentives to work more efficiently, undertaking market research and product development, and encouraging firms to be innovative in their products so that they better meet the changing tastes of consumers.

4. **Intertemporal efficiency** means that there is a suitable balance between resources being allocated towards current consumption on the one hand, and saving that becomes available to finance future investment on the other. Unfortunately, Australians are good spenders but poor savers so this balance is not quite right for optimum efficiency.

**EFFECTS OF EFFICIENCY IN RESOURCE ALLOCATION**

Greater efficiency in resource allocation has many effects on Australia’s economy. Although some of these may be negative in the short term, in the long-term greater efficiency helps the government to better achieve all of its other economic objectives.

**Faster economic growth and living standards**

Greater efficiency in the way resources are used, normally results in more output being produced from the same quantity or fewer inputs. Our productive capacity grows and the speed limit governing how fast GDP can increase is lifted. In turn, Australians can enjoy better material living standards (i.e. indicated by more purchasing power or higher real incomes per head). In addition, it is possible that some aspects or our non-material living standards will also benefit from greater efficiency. Maybe we can extend our life expectancy, provide cultural experiences and travel that enrich our lives, use technology and wealth to control environmental pollution, end the drudgery of hard manual jobs or increase the amount of leisure time. In reflecting on the issue of efficiency, we must be careful not simply to assume that having more things necessarily makes our lives better. We must also take into account the negative externalities or costs of greater efficiency.

**More jobs, less unemployment and better equity in the long-term**

Strategies that increase productivity can sometimes cause workers to lose their jobs, at least in the short-term. For example, measures to increase efficiency like business rationalisation and cost cutting, the use of new technology that replaces workers, privatisation of government businesses and tariff cuts, often contributed to structural unemployment in the immediate to medium-term period. However, in the longer-term, jobs only exist in firms and economies that are competitive and profitable. Greater efficiency is vital in achieving these things. In addition, more jobs and less unemployment means higher incomes and instead of the government paying out billions of dollars to the unemployed in welfare, these resources can be used more productively elsewhere to provide health, schools and infrastructure.

**Lower cost inflation**

Greater efficiency helps firms reduce their production costs, since they can make a bigger output from purchasing fewer resources. With lower costs, there is less pressure on businesses to raise their prices (to protect their profit margins). Some of the benefits of lower costs are passed onto Australian households in the form of lower prices. So rising incomes have even more purchasing power than previously.

**Improved international competitiveness and smaller CAD**

Efficiency in resource allocation occurs when natural, labour and capital resources are directed into areas where a firm or country has a comparative cost advantage (i.e. we should specialise only in producing the things we make best). Only efficient countries and firms with low production costs can export and compete with rival companies elsewhere in the world. In this way, efficiency helps to improve Australia’s balance of trade and reduce the size of our CAD.

**THE MEASUREMENT OF EFFICIENCY IN RESOURCE ALLOCATION**

There are a number of ABS (see ABS publication number 5204.0) measures of efficiency in resource allocation, including **labour productivity**, **capital productivity** and **multi-factor productivity**. In general, each of these attempts to estimate the annual change in output gained from one or more inputs or resources used in production. However, the two most common indicators are the index of GDP per hour worked and the index of multi-factor productivity.

**GDP per hour worked as an indicator of labour efficiency**

One measure of the efficiency of labour resources is the annual GDP per hour worked. In other words, the aim is to see the average annual change in the volume of goods and services produced from each hour’s input of labour resources. If output per hour is up on previous years, this may be a sign that labour resources are generally being allocated more efficiently. However, if GDP per hour is down against previous years, this could be a sign that labour resources are less efficient. Basically the annual calculation involves the following approach:
Labour productivity or GDP per hour worked = \frac{\text{Annual value of goods and services produced (chain volume GDP)}}{\text{The total number of hours worked by all employed workers per year}}

Overall or multi-factor productivity = \frac{\text{Annual value of goods and services produced (chain volume GDP)}}{\text{Total annual cost to firms of all inputs purchased for production}}

The result gained in this way is then converted to an index from which the annual growth rate in labour productivity can be estimated. The index’s base year of 100 moves forward one year every year (as for chain volume GDP). The year used is the one preceding the latest completed year.

**Multi-factor productivity as a general indicator of efficiency of all resources**

Multi-factor productivity is an annual measure of the change in efficiency generated by the combined effects of labour and capital resources (also called factors of production). This indicator seeks to estimate the annual change in output per unit of measured inputs. As shown at the top of the page, it is calculated by dividing the annual value of output (using GDP) by the overall cost to firms of inputs purchased.

Again (as is the case for labour productivity), the result is converted to an index that uses a moving base year from which the annual growth rate in multifactor productivity is estimated.

**Limitations of the efficiency measures**

There are a number of problems and inaccuracies involved with estimations of efficiency.

**Is labour or capital responsible?**

One problem in measuring trends in labour efficiency is to isolate the change in the size of GDP produced and resulting from variations in the efficiency of labour, as opposed to other inputs such as the efficiency of capital. For example, is GDP per worker up because of worker effort and productivity, or is it that better capital equipment helps each worker to lift output per hour?

**The rise in non-recorded hours**

There is the problem of knowing exactly the total number of hours worked each year. Certainly firms keep pay and other records, but during the past 20 years, there has been a remarkable increase in non-recorded (and non-paid) overtime, especially in the services sector where total working hours have grown. It may be that an apparent rise in labour productivity is a statistical illusion involving the sacrifice of leisure and family time.

**GDP cannot be accurately measured**

As we know, the accuracy of production or GDP estimates is limited by the existence of excluded production, imputed items and the need for constant price adjustments using chain price indexes. Unless GDP is entirely accurate, it is hardly possible to use GDP as the basis of measuring quite small changes in labour or multifactor productivity.

**The index of GDP per hour worked is only an average**

GDP per hour worked is only an indicator of average changes in worker efficiency. It probably disguises large productivity variations between sectors, firms and individual workers.

**Are there costs of higher labour efficiency?**

Even if the statistics show increased labour efficiency, one should ask the question, efficiency at what cost? It is possible that there could be a deterioration in job satisfaction, employee tiredness, early retirement, reduced working conditions, a decline in productivity, and the need for constant price adjustments using chain price indexes. Unless GDP is entirely accurate, it is hardly possible to use GDP as the basis of measuring quite small changes in labour or multifactor productivity.

**A rise on what?**

Whether a given percentage growth rate in productivity is good or bad needs to take account of the absolute starting level or base. If productivity is initially very poor, large rises in productivity rates are easy to achieve. Given Australia’s past poor performance relatively in the 1970s and 1980s, this may be a reason why our current rates seem impressive!

**TRENDS IN AUSTRALIA’S EFFICIENCY IN RESOURCE ALLOCATION**

Productivity changes have been very volatile and unpredictable on a year-by-year basis. This is shown in figure 3.23 (part 1) (p. 104). It also seems that there are cycles (phases) each made up a few years (e.g. perhaps up to five years). For this reason, the ABS now looks at average annual trends across productivity cycles between 1950 and 2004. These too, are identified in figure 3.23 (part 2). Additionally, productivity varies widely from industry to industry as shown in figure 3.23 (part 3).

Several observations seem to stand out about trends in Australian productivity between 1996 and 2006.

- In the period, 1994–99, there was a peak in labour productivity growth that reached a 30-year high of 3.2 per cent a year. The same trend was also apparent with multifactor productivity at 2.1 per cent a year. Unfortunately, this was followed more recently in 1999–2004 by a significant slowing to a rate closely approximating our long-term average trend. Labour productivity eased to 2.2 per cent while multifactor productivity slumped to only 1.0 per cent a year. However, despite the slowdown, both these phases enjoyed far better productivity growth than in the 1970s, 1980s and early 1990s.
- Labour productivity shows far greater strength than multifactor productivity.
- For the most recent period or phase, 1999–2004, it is also clear that labour productivity varied considerably across different industries, with agriculture, manufacturing, transport, culture and recreation leading the pack. Most surprising, perhaps, is the recent poor performance from mining, construction and the utilities (gas, water, electricity).
Figure 3.23 Indicators of change in Australia's productivity
Sources: Data derived from ABS 5204.0 and also from 'Understanding Productivity Trends', B Dolman, L Rahman and J Rahman.
CAUSES OF EFFICIENCY IN RESOURCE ALLOCATION

There are two main determinants of efficiency in resource allocation:

1. There are cyclical changes in domestic economic activity resulting from changes in demand-side conditions that affect efficiency in resource allocation.
2. Perhaps more importantly, supply-side structural causes of changes in labour and capital productivity, influence efficiency in resource allocation.

Demand-side factors affect efficiency in resource allocation

Productivity seems to move in a cyclical way. In part, it can be driven by the effects of changes in demand-side conditions and the level of economic activity. Let us see how this happens.

If the levels of AD and economic activity slow leading to a recession (i.e. perhaps due to weak demand-side conditions like a drop in consumer or business confidence), labour efficiency can suffer for at least four reasons.

1. Faced with a slowdown in sales, initially, some firms are reluctant to sack their experienced staff despite reduced production. There is ‘labour hoarding’. This occurs because firms hope that the recovery is not far away and keeping staff on later saves them the cost of hiring and training new staff. Unfortunately this strategy means overstaffing which lowers the level of output per hour worked.
2. When there is a prolonged and severe cyclical recession in economic activity, firms are eventually forced to cut staff numbers, leading to higher cyclical unemployment. This slows efficiency rates because more of Australia’s resources are lying idle.
3. A recession might be partly caused by depressed business confidence about future sales and profits. This then causes firms to cut their levels of investment spending on new plant and equipment that incorporates the latest technology. Consequently, productivity slows.
4. The cyclical slowdown in the domestic productivity sometimes follows trends in the level of economic activity and productivity overseas.

In reverse, productivity also slows when there is an inflationary boom following cyclical rises in the level domestic economic activity. This is especially the case when the growth in AD (perhaps due to demand factors like consumer and business optimism) exceeds the economy’s productive capacity. There are at least four ways productivity may slow in this situation.

1. When the economy is stretched to its capacity or speed limit, workers can feel too secure in their jobs and not work as hard. Absenteeism can rise, along with strikes and industrial unrest. This cuts efficiency.
2. When the economy is at its capacity, there can be diminishing returns resulting from equipment breakdowns, labour shortages and generally less efficient natural, labour and capital resources being dragged into service.
3. With rapid inflation, interest rates rise and undermine business confidence. This can lead to reduced investment in new equipment and technology. This slows efficiency.
4. Investment capital can be sucked out of more productive uses (e.g. like expanding business investment in plant and equipment needed for lifting productive capacity and technical efficiency) and pumped into less productive or more speculative areas (e.g. real estate and frenzied stock market activities). This misallocation of resources also slows productivity.

The negative effects of these two types of cyclical changes in the level of economic activity on productivity are shown in figure 3.24 (p. 106). As explained, when economic activity is weak due to a reduced level of AD (i.e. spending is at AD₀), productivity falls due to pessimism, reduced investment, unemployed resources, and labour hoarding. At the opposite extreme, if there is excessively strong spending and economic activity (i.e. the economy is at AD₂ and GDP₂), productivity also suffers for the reasons noted. By contrast to these two situations, productivity is likely to be maximised when AD and domestic economic activity are at ideal levels (i.e. the economy is located at AD₁, GDP₁ and P₁) and demand-side conditions are positive, but are neither too weak nor too strong.

Although there are lots of demand-side factors that can cause cyclical changes in the levels of AD, economic activity and efficiency, a few of these stand out as being especially important. This is because they all affect the level of business investment spending (I) which is such an important influence on productivity.

Business confidence

The level of business optimism has a cyclical impact on efficiency. For instance, when firms are optimistic about future sales and profits (perhaps because of strong consumer confidence, rising household disposable incomes or a boom in their overseas markets), businesses are keen to invest in new equipment incorporating the latest technology. This can lead to capital deepening where each worker has a greater value of machinery to use in the production process than previously (as opposed to capital widening where each worker has less equipment). Not only does this improve technical efficiency, but it also raises the level of GDP per hour worked.

Interest rates

Interest rates represent the cost of credit. When business overdraft rates are higher, firms are often reluctant to borrow in order to purchase new, more efficient plant equipment. This is because of increased repayments. Consequently, investment spending and productivity slow.

Company tax rates

The rate of company tax greatly affects a firm’s after-tax profits. In turn, this impacts on their level of investment spending. Reduced tax rates can lead to increased investment spending and better productivity.
Supply-side structural factors especially affect efficiency in resource allocation

As noted, supply-side or structural factors are perhaps the most powerful influence on allocative, technical, inter-temporal and dynamic efficiency in resource allocation. Let us focus on some of these major supply-side factors affecting the efficiency of firms as users of resources.

Accelerated structural and technological change by firms
Structural change occurs when firms alter the way they go about producing goods or services. This might involve many different things. For example, it could entail business efforts to cut production costs by linking higher wages to better productivity. In addition, firms might also minimise materials and recycle waste, improve management structures and lines of communications, rationalise their operations and sell off non-performing assets, cut or re-deploy excess staff, improve worker training, reduce strikes and industrial conflict, undertake heavy investment involving the use of robotics and automation on the assembly-line to speed up production, employ the concept of ‘best business practice’, widely apply ICT (e.g. computers and the Internet) and adapt it to the business’s needs, and undertake research and development (R&D) to lift efficiency. As a result, more output will be produced from the same or fewer inputs of resources.

Government microeconomic reforms
Government microeconomic efficiency reforms involve the extension of free trade (no tariffs or other forms of protection), deregulation of labour and other markets to strengthen efficiency, tightening and enforcing the Trade Practices Acts to promote stronger price competition between rival firms, privatisation or corporatisation of government businesses, and measures to encourage domestic savings and higher investment in new plant and equipment. All these measures can help to accelerate structural change; grow our productive capacity and lift the efficiency with which resources are used.

The influence of these supply-side factors on efficiency in resource allocation can be seen using the AD–AS diagram shown in figure 3.25. Improved supply-side conditions will mean more output from the same inputs and thus increase aggregate supply (i.e. shift AS1 to AS2). In other words, improved efficiency allows for a greater equilibrium output to be produced (national output rises from GDP1 to GDP2), while costs or prices fall (i.e. the shift from P1 to P2).

Figure 3.24 How demand-side conditions and cyclical changes in economic activity can affect efficiency in resource allocation

Figure 3.25 How better supply-side conditions can increase efficiency in resource allocation and increase output
INFLUENCES ON AUSTRALIA’S EFFICIENCY IN RESOURCE ALLOCATION, 1996–2007

You may recall that Australia’s productivity growth has been unsteady and seems to move in phases. Since the peak years of 1994–1999, average productivity slowed significantly to 2005–06. This was due to both cyclical demand-side and structural supply-side factors.

Demand-side conditions and the level of economic activity

For the reasons previously noted (see p. 105), efficiency rises faster when there is domestic economic stability, than it does during either a recessionary downswing or in an inflationary boom. It is not surprising, therefore, that the peak years for Australia’s efficiency cycle (i.e. 1994–99) corresponded with our recovery from the recession of the early 1990s. Cyclically stronger domestic and international demand-side conditions were behind this period of rapid expansion and helped to create the economic conditions where productivity could be maximised.

By contrast, the period since 2000, and especially between 2003–04 to 2007, has generally seen slower rates of economic growth as the economy approached its productive capacity and when unemployment was really low (below 5 per cent). Here, general economic conditions in Australia have become less favourable to productivity. In this climate, for example, there were obstacles to efficiency created by the labour and skills shortages of having only 4.4 per cent unemployment. This has sometimes meant that less qualified, skilled or productive staff was employed to fill vacancies. In this situation, too, some workers perhaps did not see the need to push themselves, knowing there were plenty of other jobs around. Furthermore, rising interest rates (2002–06), along with the lure of quick returns through generally booming property and share prices (especially until late 2005), drew some investors into these more speculative ventures, so there was less money capital invested in new equipment that would have helped efficiency even more. The following demand-side factors especially contributed to the cyclical nature of economic activity and hence efficiency levels.

Consumer confidence

A feature of the past 10 years to 2007 is that households have been optimistic about their future employment prospects and income (the index of consumer confidence averaged around 108 points). Consequently, private consumption spending has grown steadily, pushing AD and economic activity towards productive capacity. Until the early 2000s, this helped to lift efficiency, but more recently with little unused capacity available, it may have created conditions less ideal for productivity.

Business confidence

Throughout the period, 1996–2007, business confidence has also remained strong, leading to solid rises in investment spending in nearly all years. Unfortunately, during 2001–05, much of this was directed into the booming property market rather than in more productive plant and equipment, slowing productive efficiency.

Interest rates

Although business confidence about future sales and profits remained optimistic throughout the period 1996–2007, rising interest rates between 2002 and 2007 (as against 1994–99) have more recently tended to slow the growth in investment spending on new plant and equipment. With smaller additions to Australia’s stock of capital equipment, and with an economy now close to its productive capacity, efficiency has tended to suffer.

Tax rates

Income tax rates (e.g. PAYG, capital gains and company taxes) on firms and individuals can affect economic activity and hence productivity. There were significant tax reforms between 2000–07, which helped to stimulate household consumption and business investment spending. This lifted AD and pushed the economy even closer to its productive capacity, leading to slower rises in efficiency.

Supply-side structural conditions

Perhaps the main factors explaining the previous peak (1994–99) and the more recent slowdown in Australia’s efficiency to 2007 are a number of supply-side structural developments.

Climatic conditions including the drought

Drought and below average rainfall (e.g. 2002–03 to 2006–07), floods, cyclones (coastal Northern Queensland in 2006) and fires (Grampians in 2005) impacted not only on Australia’s rural contribution to GDP but also on efficiency in resource allocation. This is because national output is reduced by far more than the volume of inputs of labour or capital resources. Recently, we have experienced many of these conditions that help to explain the current slowdown in productivity rates. In addition, as shown by the industry contribution to productivity change (see figure 3.23, p. 104), drought has also had a negative impact on efficiency in the water, gas and electricity sectors (i.e. the same labour inputs have been used but less output has been produced).

Before and after special sporting events

In some ways, unusual once-off events like the Sydney Olympics (2000) and Melbourne’s Commonwealth Games and Grand Prix (2006, 2007) might have helped to slow productivity since 1999. Some researchers have found that, for the duration of these events, worker efficiency fell, perhaps due to the daily distractions of telecasts and worker fatigue resulting from late-night TV replays. In addition, after the withdrawal of voluntary or unpaid voluntary labour for these events that helped to increase our GDP, the next calculation period for measuring the level of output per worker, is made to look relatively bad (e.g. 2001, 2006).

Changing rates of investment in new technology

The discovery of useful new ideas (perhaps from undertaking R&D over many years) and innovative breakthroughs from time to time occur at varying rates in different industries. It is not a steady process. So it is hardly surprising that investment spending on new state-of-the-art plant and equipment (e.g. ICT and robotics) occurs in waves or cycles, where it speeds up or slows down. After the flurry of robotics, electronics, computer and Internet-based technologies in the mid-late 1990s (where our productivity peaked), many recent innovations have been
relatively far less significant. This has tended to slow efficiency. Given the long lead times, it may be that the fairly recent rises in investment spending on R&D as a proportion of GDP from 1.51 to 1.78 per cent between 2000–01 and 2004–05, is a sign that in the future, Australian productivity will again rise. Figure 3.26 shows trends in Australian R&D against those abroad. Notice that relative to some countries, we are a long way behind the pack.

![Graph showing R&D as % of GDP](image)

**Figure 3.26 Changes in spending on research and development by country as a percentage of GDP**

**Sources:** Derived from OECD Database (quoted from AFR, 12 October 2006, p. 7, S Morris, ‘Record for R&D but below OECD par’).

**Trade liberalisation or openness of the economy**

The liberalisation of trade involves reducing tariffs (i.e., a tax on imports), producer cash subsidies, import quotas and restrictions on the movement of international money capital. The Australian Government accelerated this reform process, especially between 1988 and 1996. General manufacturing tariffs were slashed to a mere 5 per cent by 1996, down from nearly 40 per cent only 20 years earlier. These latter years corresponded with the record high in labour productivity between 1994 and 1999. More recently, tariff rates for industries given special treatment (i.e. textiles, clothing, footwear and cars) have also been reduced and those applicable to manufacturing inputs, abolished. In addition, increased competition from cheaper imports forced local firms and workers to cut their production costs and change the way they produced goods and services.

**Labour market reforms**

After tariffs were cut and globalisation accelerated, local firms had to fight harder to survive by cutting their costs. For most, the main disadvantage in Australia was high labour costs (for many businesses representing 60–80 per cent of total production costs). But this problem was made even worse by low worker productivity (i.e. output per hour worked). One reason for this worry was the old centralised wage system where pay rises were largely unrelated to efficiency. Since 1991, the Australian Government has attempted to change this through labour market deregulation. This involved the successful encouragement of industry-by-industry enterprise or workplace agreements that now cover over 80 per cent of all workers. Here wage increases are usually linked closely to better efficiency. Other labour market reforms have also targeted worker efficiency. These have included watering down unfair dismissal laws, union amalgamation, and a reduced role for unions in wage and workplace agreements. By effectively weakening the negotiating power of some employees, staff feel that they need to work even harder to keep their job. This might also help to lift efficiency in the short-term, especially when unemployment is high. Thinking again about the recent slowdown in Australia’s productivity to 2006 (as against the peak years 1994–99), perhaps workers are reaching the limits of how much more output can be squeezed out through greater motivation or effort to work harder.

**Other government microeconomic reforms**

Already mention has been made of several government microeconomic efficiency reforms. As will be detailed in chapter 7 (pp. 237–72), these cost-cutting, supply-side policies (e.g. privatisation of some government businesses, cuts in tax rates on companies and capital gains, promotion of competition and market deregulation, measures to lift domestic savings and reduce the national saving-investment gap) can remove some of the local constraints on efficiency. However, the implementation of reforms has not been at a steady pace. For example, there was a rush of these policies in the late 1980s and early 1990s, another burst in 1996, one in 2000 and more recently still, in 2005–06. The speed of these reforms also affects productivity growth.

**HAS THE GOVERNMENT ACHIEVED EFFICIENCY IN RESOURCE ALLOCATION?**

As always, it is possible to debate whether or not the federal government has actually achieved its economic objective of efficiency in resource allocation as it is defined.

**Some strengths of recent performance**

Supporters of the federal coalition, often draw attention to its successes:

- There were close on record levels of productivity in the period, 1994–99. More recent productivity rates for 1999–2005 are still at levels significantly better than those for the 1970s, 1980s and early 1990s. It is, therefore, reasonable to say that the government’s performance has been excellent.
- Improved efficiency has helped to raise real household disposable incomes, and make goods and services cheaper and more affordable. Figures suggest that productivity improvements over the years to 2005–06, permanently added an average of around $1500 of extra income per person.
- Productivity growth would have been faster if the federal opposition had not blocked many of the coalition’s microeconomic reforms (prior to the government gaining a majority in both the upper and lower houses of parliament in 2005).
Critics of the Australian Government, often highlight the following issues:

- Despite some reasonable rises in efficiency in percentage terms (because Australia was growing its efficiency off a very low base), Australia’s absolute level of GDP per hour worked placed us only fifteenth out of 24 OECD countries. Figure 3.27, for instance, shows that on average, Australian workers produce only 80 per cent of the hourly output of US workers.
- The average productivity figure for the most recent cycle is only slightly above Australia’s long-term average.
- Claims of success with efficiency have been exaggerated to justify the government’s microeconomic reform program.
- The ABS’s productivity figures are unreliable and frequently revised downwards.

3.7 The objective of equity in personal income distribution

DEFINITION OF ‘EQUITY IN INCOME DISTRIBUTION’

Nowadays, the Australian economy generates well over $1 000 000 million of incomes each year, which can take many forms (e.g. wages, salaries, profits, rent, interest, and dividends). Income generally comes about as a reward to those people who help in the production of goods and services, but some people gain income from government social welfare payments. The big question that arises from this is how should the nation’s income cake be cut up or distributed? Should everyone get exactly the same sized slice of the income cake or is it good to have some degree of inequality, as in Australia?

On this matter, the Australian Government pursues the objective of an equitable distribution of personal income by narrowing the gap between high and low incomes. Here, a fair or equitable distribution of final income means that even the poor can have access to basic goods and services including food, housing, electricity, clothing, health and dental care, education and justice. Clearly, it also means that there should be no absolute poverty (i.e. where an individual is unable to access the necessities of life) and that everyone should be able to enjoy basic living standards acceptable to society. However, unlike most other objectives, there is no specific statistical figure or target for defining exactly what is meant by an equitable distribution of personal income. Its definition seems rather vague and its interpretation depends partly on the values of government of the day and what the community sees as acceptable.

However, there is general agreement on what it does not mean. Equity or fairness does not mean that the nation’s $1 000 000 million annual income cake should be cut so everyone gets an equal-sized slice. The reason for this is that it would eventually jeopardise the achievement of other important government objectives including economic growth, full employment, efficiency in resource allocation, external stability and ultimately, improvements in material living standards. To illustrate these problems, if excessive levels of equality were pursued using, say, an over-generous welfare system, this would tend to reduce the incentive for work and be a burden on taxpayers. Similarly, using very steeply progressive income taxes would discourage effort, enterprise and hard work, while free community services would be expensive and create a huge burden on taxpayers.
EFFECTS OF INCOME DISTRIBUTION

The way Australia divides up or distributes its national income cake has important effects on us all.

Living standards

For example, if one individual gets a small slice of the nation’s income cake, while someone else gets a much bigger slice, clearly material living standards (annual per capita consumption) and their daily lives will be vastly different. The latter will have access to proper health and dental care, tertiary education, exciting holidays, designer clothes, housing in leafy suburbs with quiet streets, and any number of other trappings associated with the ‘good life’, even in their retirement. The other individual will face daily financial troubles and uncertainty, few choices, and life will be a rather spartan affair with little to look forward to in old age, except perhaps an inadequate government pension. If the gap in income between the rich and poor becomes too great, it could foster resentment by the poor, alienation, civil discontent and increased crime rates. Guided by its objective of equity, the Australian Government re-distributes national incomes far more evenly than otherwise, to help avoid these problems and ensure that everyone can enjoy at least basic living standards.

The way resources are allocated or used

The way Australia’s resources are allocated or used is affected by who has the income or spending power. If there is a great gap between high and low incomes, it is likely that there will be over-production of luxury items wanted by the rich, and under-production of necessities like basic foods and affordable medicine, housing and education required by the poor.

Production levels and unemployment rates

Some economists believe, too, that extremes in income can lead to unemployment and even depression (e.g. the Great Depression in the US of 1929–33). This is because the rich save a larger percentage of their income than the poor, reducing overall expenditure and production levels, and increasing unemployment. If this inequality was reduced by redistributing income using say progressive taxes, public services and welfare assistance, then total spending, GDP and employment may be higher.

Labour productivity and the motivation to work

Too much equality is often seen as a bad thing in our economy, because it can reduce efficiency.
- Moderate inequality might spur workers to greater effort so they can escape their plight and join others further up the income ladder.
- Imagine, too, the problems there would be if everyone had the same income. What would make people want to work hard, other than knowing that your efforts are helping to build the nation?

- In addition, who would do the more dangerous, dirty and less glamorous jobs if pay was equal? Indeed, in Australia’s economy, labour resources are allocated through price or wage signals. The market capitalist system simply could not work if all wages were the same. We would then have to rely on government direction telling us what to do.

- Then there is the problem created if welfare is over-generous and an individual can earn more on government benefits, than working part-time or limited hours.

- Similarly, heavier tax rates on the rich might act to deter people from working longer hours, gaining extra skills or education, or getting a job promotion.

MEASUREMENT OF INCOME DISTRIBUTION

The ABS and some non-government agencies (e.g. NATSEM) compile a range of statistics that can be used to reveal a profile of Australia’s distribution of income and wealth. However, often these data are not prepared on an annual basis.

ABS measures of income distribution

One of the best sources of data showing the pattern of Australia’s income distribution is the ABS Income Distribution Survey. The measure involves the following steps:

- The survey sample covers about 0.2 per cent of the population. Trained interviewers ask individual questions regarding the income unit’s pre-tax or gross incomes received from all sources (e.g. wages, salaries, rent, interest, dividends, profits, government welfare or transfer payments, scholarships, wills, superannuation and alimony).

- Using the results showing gross income levels, income units or recipients are then organised in ascending order from the poorest to the richest. This is the overall spread of incomes.

- This spread of incomes (making up 100 per cent of all income recipients), is then divided into five exactly equal-sized groups called quintiles (i.e. five groups each making up 20 per cent of the total survey group) with the same number of income units in each. The spread of gross income for each quintile group is then determined.

- Calculations are then made to determine the percentage share of the gross income cake actually received by each quintile group. If there was absolute or total equality in income distribution, all five quintiles would receive exactly the same proportion (percentage) of total national income. However, in unequal societies like Australia (see table 3.6), quintile 1 would receive a much smaller percentage than quintile 5 (i.e. the highest income group of recipients).

- When using statistics showing the distribution of income, it is important to be very clear about the type of income that is being considered. For example, there are vast differences between the distribution of market or private incomes (i.e. income prior to government efforts to redistribute income more evenly), against the distribution of gross incomes (i.e. income after the receipt of welfare benefits but before tax), or disposable incomes (i.e. income after the receipt of means-tested welfare payments and after the payment of progressive incomes).
personal income taxes) or social wage incomes (i.e. income after taking into account welfare payments, progressive taxes and the value of government services provided free of charge or at a subsidised price) or the distribution of final incomes (i.e. income after the payment of direct and indirect taxes, welfare benefits and provision of government services). These are summarised in the boxed insert on the right. Of these, the distribution of final income probably provides one of the best indications of whether there is an equitable access to basic goods and services including food, housing, education, health and justice. Additionally, special equivalence scales (see also pp. 112–13) are sometimes used to adjust the shares of incomes to take into account differences in the size of income units (e.g. singles, couples, couples with children) and the number of non-working dependants. This adjusted figure is a better measure of distribution and is called the equivalent income.

* The ABS survey of Household Income Distribution not only provides information about the distribution of income by decile or quintile. It is also used to provide other statistics including:
  - the distribution of income by occupation
  - the distribution of income by age
  - the distribution of income by gender
  - the distribution of income by state
  - the distribution of income by educational attainment
  - the distribution of income by ethnic background.

### Table 3.6  Distribution of Australian equivalised disposable income share (%) by quintile — 2002–03

<table>
<thead>
<tr>
<th>QUINTILE 1</th>
<th>QUINTILE 2</th>
<th>QUINTILE 3</th>
<th>QUINTILE 4</th>
<th>QUINTILE 5 (HIGHEST INCOME)</th>
<th>GINI COEFFICIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.7</td>
<td>12.8</td>
<td>17.6</td>
<td>23.7</td>
<td>38.3</td>
<td>0.309</td>
</tr>
</tbody>
</table>

*Source: Data derived from ABS, 6523.0 — Income Distribution, 2002–03 (released Dec. 2004).*

### Using Lorenz diagrams and Gini coefficients to measure inequality

The results of the ABS survey of income distribution by quintile can also be used to draw a Lorenz diagram. A Lorenz diagram is used to show and compare different patterns of income distribution. For instance, the cumulative proportion of equivalised disposable income received by each successive group from quintile 1 (the poorest group) through to 5 (the richest group), is plotted to form a Lorenz curve that shows the pattern of income distribution. The same can also be done for the distribution of wealth (also called net worth). Various Lorenz curves applicable to Australia are illustrated in figure 3.28 and table 3.7 (p. 112).

**Figure 3.28** Australia’s distribution of equivalised disposable income and wealth (net worth) by quintile share (percentage) 2002–03
### Measurement of inequality in distribution

The degree to which there is this divergence indicates the extent of inequality in distribution. Hence in 2002–03, the distribution of Australian equivalised disposable income was fairly unequal. In the case of the Lorenz curve for the distribution of Australian household wealth or net worth in 2002–03, the deviation from the diagonal line of equality was even more pronounced, indicating greater inequality in wealth than in disposable income distribution.

#### The Gini coefficient

Perhaps the most common measure of inequality in the distribution of income or wealth is the Gini coefficient. Calculations of these are made by both the ABS and published in its survey of income distribution, and by non-government agencies like NATSEM. This Gini coefficient is a number between 0.00 and 1.00. The lower the coefficient the greater the degree of equality. By contrast, a number closer to 1.00 indicates more inequality in distribution. For Australia’s disposable income in 2002–03, the Gini was 0.294, while the Gini for household wealth distribution in 2002–03 was estimated at 0.63. Essentially, the Gini is calculated using the Lorenz diagram. It involves measuring the area between the diagonal line of absolute equality and the actual Lorenz curve. The resulting figure is then expressed as a proportion of the total triangular area below the diagonal. Gini figures collected over a number of years can also be compared so as to determine trends in the distribution of either income or wealth.

#### Measurement of poverty rates

When most of us think of ‘poverty’ we think of serious material deprivation and the absence of the real necessities needed to sustain life, as commonly found in Third World nations. However, despite pockets of absolute poverty like this (often in remote indigenous communities), those measuring Australian poverty usually have relative poverty in mind where people’s material living standards are low, relative to some changing level deemed acceptable to the community.

Unfortunately, the level of poverty is extremely difficult to measure. However, despite the problems, most attempts to measure Australian poverty use the disposable cash income (i.e. income after tax but before the receipt of non-cash benefits like free or cheap public education or health) of a family, to determine if that family’s consumption level is below a certain benchmark standard called, the poverty line. But this raises the next question, how much income is enough to stay out of poverty? Some measures for instance use 50 per cent of average income, but others use 50 per cent of median income. This causes results to differ. In addition, since we are measuring relative poverty, the amount of income needed will have to be adjusted upwards over time, so that the relative income of the poor remains at the same distance from that of the rich. Another problem is that an allowance needs to be made to the poverty level of income, so

---

**Table 3.7** Australia’s distribution of equivalised disposable income and wealth (net worth) by quintile share (percentage) 2003–04

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Cumulative quintile (0%)</th>
<th>Cumulative quintile (20%)</th>
<th>Cumulative quintile (40%)</th>
<th>Cumulative quintile (60%)</th>
<th>Cumulative quintile (80%)</th>
<th>Cumulative quintile (100%)</th>
<th>Gini coefficient (i.e. value 0–1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equivalised income share by cumulative quintile 2003–04</td>
<td>0</td>
<td>7.7</td>
<td>20.5</td>
<td>38.1</td>
<td>61.8</td>
<td>100</td>
<td>0.294</td>
</tr>
<tr>
<td>Wealth (net worth) share by cumulative quintile 2003–04</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>20</td>
<td>41</td>
<td>100</td>
<td>0.630*</td>
</tr>
<tr>
<td>Total equality in income or wealth distribution</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>0.000</td>
</tr>
<tr>
<td>Total inequality in income over wealth distribution</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*Note: * denotes estimate only.

**Source:** Data derived from ABS, 6523.0 (2005) and other sources.
that it reflects the size of the income unit dependent upon a family’s income. Equivalence scales are used to come up with a range of poverty lines so that different combinations of individuals in different income units (e.g. a single person, a couple without children, a single parent with two children) would suffer the same degree of poverty. The assumption here is that it does not cost two people living together, twice as much as one person. The use of these scales also creates controversy. Different academics use different equivalence scales (e.g. Professor Henderson’s versus the OECD’s scales) and again, this leads to disagreement about the level of poverty.

Limitations of measuring personal income distribution

Inequality in income distribution is a tricky thing to measure, but whether or not this distribution is equitable, is even harder. There are several reasons for this.

Definitional problems
Equity, or fairness, in income distribution cannot be defined in an objective way. Not surprisingly then, there is no single index that adequately measures equity in income distribution. Indeed, it is one thing to establish the degree of inequality in income and wealth (which for Australia most measures do), but it is another, to determine whether or not there is equity or inequity. For instance, there may be great inequality in distribution between the rich (who may have many times the income or wealth of the poor), but if the absolute level of income of the poor in dollar terms ($) is adequate for them to afford basic goods and services, according to our definition, this should ensure there is in fact equity (i.e. the avoidance of absolute poverty and the enjoyment of reasonable living standards). In the end, our judgement perhaps comes down to personal values and beliefs.

Statistical problems
The statistics gained from measuring income and wealth inequality are not totally accurate. This is due to sampling error, false information, and the unreliability of making equivalence adjustments to allow for different family needs, circumstances and the number of breadwinners. In addition, ABS income surveys are not conducted every year so there are gaps in the data.

Subjectivity of poverty measures
As for surveys that measure poverty, we have seen why these provoke heated debate over their accuracy. For example, there is the problem with defining poverty (i.e. is it ‘absolute’ or, as in Australia’s case, ‘comparative’ poverty?), the issue of making appropriate adjustments for income units using equivalence scales, and finally, determining where the poverty line should sit relative to the percentage of the community’s average income (e.g. should it be set at 50 per cent of average income or what?).

Australia’s income distribution is uneven
It is almost impossible to deny that the current distribution of Australia’s income cake is unequal. Although this is especially true of the distribution of market or private incomes, it is also true of the distribution of equivalised disposable income (i.e. the distribution after taking into account the effects of receiving cash welfare payments, paying direct income tax and adjustments to reflect the differing compositions and needs of households), and even the distribution of final incomes (i.e. after allowing for the effects of direct cash welfare benefits mainly to the needy, the payment of direct progressive tax, the provision of indirect benefits or public services, and the effects of regressive indirect taxes). In figure 3.29 (part 1, p. 114), notice that the median disposable weekly income for quintile 1 was only $195 (representing a mere 7.7 per cent of the total income cake), but for quintile 5 it was over 400 per cent higher at $976 (or 38.3 per cent of the total cake).

Notice, too, in figure 3.28 and table 3.7 that, for 2003–04, there is much inequality seen on Australia’s Lorenz diagram (and attached table) for both the distribution of equivalised disposable income, and especially for the distribution of household wealth (net worth). In addition, other graphs (figure 3.29 parts 3, 4 and 5, p. 114) show considerable income inequality that depends on an individual’s circumstances, gender, and the state or territory of residence within Australia.

Inequality in disposable income is increasing
Although it is matter of controversy (due partly to the limitations of measures), it seems that the distribution of Australia’s income cake probably became more unequal during the past 10 years or so to 2005–06. This appears to be shown in figure 3.30 (p. 115) relating to Gini coefficients for equivalised disposable incomes, poverty rates, and the ratio of GDP paid as wages and salaries to employees relative to the ratio of profits going to business owners.

With the aid of added trend lines for the three graphs making up figure 3.30 (p. 115), you might spot the following conclusions:

- There was a general rise of around 5 per cent in the Gini coefficient for disposable household incomes. Even the ABS acknowledged the likely upward trend and noted that the apparent fall in 2003–04 may be the result of changes to measurement and other one-off developments.
- There appears to be a rise in relative poverty rates, even using the most conservative measure of 50 per cent median household disposable income as the yardstick (rather than using the Professor Henderson’s measure that was over two times higher).
- The graph for Australia’s wage-profit shares of GDP shows growing inequality. There was a downward trend in the wage share going to employees, and a corresponding rising share going to business owners.

TRENDS IN AUSTRALIA’S INCOME DISTRIBUTION

Two important points can be made about Australia’s distribution of income between 1996–97 and 2006.
1. The distribution of Australia’s equivalised disposable weekly ‘income cake’ by quintile, 2003–04

Mean weekly disposable income, quintile 1 = $195 (7.7% of total income cake)
Mean weekly disposable income, quintile 2 = $326 (12.8% of total income cake)
Mean weekly disposable income, quintile 3 = $450 (17.6% of total income cake)
Mean weekly disposable income, quintile 4 = $536 (21.5% of total income cake)
Mean weekly disposable income, quintile 5 = $976 (38.3% of total income cake)

Mean weekly disposable income = $604 (23.7% of total income cake)

2. Australia’s distribution of equivalised disposable income and wealth (net worth) by quintile share % 2002–03

3. Inequality in average disposable weekly earnings ($) by circumstance — Australia

4. Inequality between male and female average weekly earnings ($) in Australia (July 2006)

5. Inequality in annual gross household disposable income ($’000) per head, by state — Australia (2004–05)

**Figure 3.29** Indicators of income inequality in Australia

**Sources:** Data for the five graphs are derived from the following: 1, data derived from ABS, 6523.0, 2002–03, p. 12 (released 2004); 2, ABS 6523.0; 3, ABS 4102.0, table 1; 4, ABS 1350.0 (July 2006); 5, ABS 6523.0.

Gini coefficient of equivalised household disposable income
Linear trend (Gini coefficient of equivalised household disposable income)

(NOTES: Higher Gini values show greater income inequality. *Means no survey conducted)

2. Changes to Australia’s poverty rate (%) 1995–96 to 2000–01

Poverty rate among all Australians (before housing) — half average income poverty line
Poverty rates among children — half median income poverty line
Linear trend (Poverty rates among children — half median income poverty line)
Linear trend (Poverty rate among all Australians (before housing) — half average income poverty line)

3. Change in % GDP going to employees (LHS) as against owners of businesses (RHS) in Australia 1996–97 to 2005–06

Change in % GDP paid as wages and salaries to employees
Linear trend (Change in % GDP paid as wages and salaries to employees)
Change in % GDP going to owners of businesses
Linear trend (Change in % GDP going to owners of businesses)

Figure 3.30 Data showing the change in inequality in Australia’s income distribution, 1996–97 to 2005–06

Sources: Data for the above graphs derived from ABS publications, 1350.0, 4102.0, 5206.0, 6523.0; Parliament of Australia, Senate Committee, 2002–04 (original source poverty rates from Harding, Lloyd & Greenwell, pp. 5, 35 and from Financial disadvantage in Australia 1990–2000, p. 4) Poverty Report, 7 June 2006.
CAUSES OF INEQUALITY IN PERSONAL INCOMES

Australians receive income from three main sources:
1. **Earned income** includes wage and salaries. As a business employee, it is the result of personal effort, and the sale of mental talents and physical power. This is the main source of income for nearly 60 per cent of households.

2. **Unearned incomes** might involve receiving interest, dividends, profits and rent. As such, it arises from the ownership of various assets or wealth including property, shares, businesses and savings and appears to involve very little or no personal effort. Just over 10 per cent of households have this as their main source of income.

3. **Transfer incomes** mainly include government welfare assistance or direct cash benefits provided to needy families and individuals (e.g. aged, sick, those seeking work, veterans, single parents, youths). These payments make up the main source of income for almost 30 per cent of all households.

Understanding these three main sources of income raises several interesting questions about the causes of income inequality. For example, why do some employees get high salaries, while others receive low wages? Why do only some households gain substantial unearned incomes, and what causes others to depend almost entirely on government transfer income? The answer to these questions again lies in two basic sets of factors:

1. The main cause of income inequality is **institutional factors** and other supply-side structural conditions. Institutional factors include the many organisations within an economy, like the operation of markets and governments that influence levels of income.

2. In addition, income distribution is affected by cyclical variations in demand-side conditions and the level of economic activity. We now need to take a closer look at these two sets of influences.

**Institutions and other supply-side structural conditions**

Several institutional and other supply-side factors operate to influence the distribution of personal income.

**The growing importance of a deregulated labour market as a wage-setting institution**

Wages are the prices gained from selling different sorts of labour. In Australia, different institutions like the operation of free markets or regulations by government bodies, influence pay levels. In the past 100 years, wage rates for most Australian workers were greatly affected by government regulations including the setting of the minimum wage. The main institutions involved here were the Australian Industrial Relations Commission (AIRC), and more recently, since 2005, the Australian Fair Pay Commission (AFPC). While government wage regulation still exists, increasingly it is the free operation of labour market forces that decide pay levels. Nowadays, the widespread use of enterprise bargaining or individual workplace agreements involving negotiations between workers and their boss, is just one of the signs of a much freer or more deregulated labour market, as our key institution for setting wages.

Given labour market deregulation, wages more closely reflect the relative scarcity of each type of occupation. As noted, wages will mirror differing conditions of demand (D) and supply (S) in the labour market. Figure 3.31 shows the unregulated operation of a labour market. Here, wages for lawyers and cleaners are set at equilibrium where their demand and supply are exactly equal (i.e. where D = S). Well-paid jobs (e.g. successful AFL footballers, pop stars, CEOs, lawyers, ICT innovators) are those where the supply of labour is relatively limited due to the need for talent, high educational qualifications, much skill, substantial on-the-job experience, unattractive working conditions (e.g. long hours, dangerous, unpleasant or risky environment) or very high levels of personal responsibility (e.g. brain surgeons, air traffic controllers). By contrast, low paid occupations (e.g. part-time junior workers at McDonald’s, cleaners) have few special job requirements that limit the number of workers available. In addition, good wages may also reflect a relatively strong demand for a person’s services. Here, for example, a high demand for a particular type of labour may be the result of changing fashions and tastes (e.g. some pop stars and sporting heroes), technological advances and effective advertising. Against these conditions, weak demand for a given occupation will cause market wages to be fairly low.

![Income inequality caused by the operation of the labour market as an institution](image)

**Figure 3.31 How the unregulated operation of the labour market as an institution causes wage inequality**

Here, in figure 3.31, we have shown that wage inequality results from the fairly free operation of the labour market, like we increasingly see in Australia.

**Our capitalist economic system as an institution**

Under Australia’s capitalist economic system, private individuals own most resources. Those households with more resources to sell (due to, e.g. higher qualifications, more hours of work, or greater skill) manage to gain higher incomes than others. Some of these incomes can then be saved, invested wisely or used to purchase assets (e.g. businesses, shares, superannuation, property) that in turn can help generate even higher incomes.
(e.g. in the form of profits, dividends, rent) and more wealth. In addition, those with the talent, drive, or the entrepreneurship needed to buy and sell assets wisely, can make capital gains, access higher incomes and further grow their wealth. However, despite the great strengths of capitalism as an institution, one problem that can arise (if it is not checked by government policy) is that the rich tend to get richer; relative to the poor. Furthermore, family inheritance (as we have in Australia), allows wealth inequality in one generation to be passed onto the next.

Other supply-side conditions affecting structural unemployment and cost inflation
Supply-side factors can also affect the distribution of personal income by sometimes causing cost inflation and structural unemployment. Cost inflation arises when it costs firms more to produce (e.g. perhaps because of higher wage costs, dearer materials and equipment or higher interest rates on credit borrowed by businesses), so they are forced to charge consumers higher prices in order to protect their profit margins. This reduces the purchasing power of incomes so that the poor are less able to afford basic goods and services than previously. Structural unemployment can be the consequence of supply-side developments in industry like the use of new technology that replaces labour, cost cutting by firms trying to compete, business rationalisation, the closure of unprofitable firms, a mismatch of worker skills to job vacancies, or it may even by the result of government policies like tariff cuts. Whatever the case, in the short-term, the effects are the same. Workers lose their jobs and become unemployed. They take a dramatic cut in incomes leading to reduced purchasing power when they move onto government welfare benefits, thereby making income distribution less equitable.

Cyclical variations in demand-side conditions and economic activity
The level of economic activity moves up and down with changes in demand-side conditions affecting the level of AD. As a result, there will be periods of demand inflation (booms) and cyclical unemployment (recessions) that greatly affect the distribution of personal income.

Unemployment, hours worked and incomes
When there is not enough spending by households, firms, governments and those overseas on Australian-made goods and services (e.g. perhaps due to weak consumer or business confidence, or a global economic downturn), firms typically cut production and reduce their staff numbers. This causes higher cyclical unemployment, lower incomes and recession. For example, individuals who were originally employed full-time on the minimum wage of around $511 per week (or average full-time weekly earnings of over $1050 per week in 2006), might find themselves on government welfare with less than half that amount of income on which to survive. In addition, when the duration of unemployment is long, households typically run down their wealth (e.g. the value of savings and shares), and are often forced to sell personal possessions such as a house or car. Together, these factors cause reduced access to basic goods and services, increase poverty rates and greater inequality in income distribution. Furthermore, income inequality is worsened because unemployment is not spread evenly across different races, genders, age groups, industries, towns and states.

Inflation and purchasing power of incomes
High inflation is often a cyclical factor that can occur in booms. It results from widespread shortages of goods and services caused by excessively strong demand-side conditions in an economy near its productive capacity. The problem with inflation is that it erodes the purchasing power of households whose incomes rise more slowly than the inflation rate. This loss of purchasing power then means that basic goods and services are less affordable and living standards are reduced. Such outcomes are common for retirees and others living off fixed incomes, families paying back variable interest rate mortgages when trying to buy a house, exporters unable to compete with overseas and workers who are in a weak bargaining position and employed in unprofitable industries. By contrast, some people benefit from inflation. For example, property and share speculators often find that the value of their wealth and income grows strongly and at a faster rate than prices in general. In these ways, inflation can lead to even greater inequality.

INFLUENCES ON AUSTRALIA’S INCOME DISTRIBUTION, 1996–2007
Overall, it appears that Australia’s income cake is now being divided more unevenly than in the past, but with generally rising incomes, even the poor can usually access most of life’s necessities. A range of local and overseas events, often pushing in different directions, has shaped this trend. Some of these developments have changed incomes by altering demand-side conditions in the labour market, by affecting economic activity and, therefore, the demand for labour. However, others have involved new supply-side conditions in the labour market or institutional changes.

Demand-side conditions and the cyclical level of economic activity
The ups and downs in economic activity (driven by changing demand-side conditions and variations in AD), affect the levels of cyclical unemployment and demand inflation. In turn, both of these developments influence income inequality and equity, by altering the purchasing power of individual incomes and, thus, the affordability of basic goods and services. In the past 16 years until 2007, generally strong demand-side conditions have allowed Australia to enjoy sustained economic growth, free from inflationary booms or damaging recessions that raise cyclical unemployment. This should have helped to promote equity.

Lower cyclical unemployment
Indeed, since the last recession of the early 1990s, economic growth has averaged around 3.6 per cent a year. This has allowed for the creation of 1.8 million new jobs and a reduction in the number unemployed by over 400000, leading to around a 60 per cent drop in the unemployment rate. This has surely helped to reduce inequality, and raise disposable incomes, purchasing power and access to basic goods and services for most of the poor. Despite some cyclical variation in these factors, overall, strong demand-side conditions (like those listed below) have helped to sustain this remarkable growth in economic activity...
that, in turn, has helped to lower cyclical unemployment and inequality by increasing the demand for labour:

- Consumer confidence has been strong (i.e. averaging 108 points).
- Business optimism has been maintained (i.e. the net balance figure averaged over +7).
- Rising household disposable income (i.e. averaging over 5 per cent a year) was helped on occasions by tax cuts (e.g. 2000, 2005, and 2006) or increased budget outlays on welfare and infrastructure.
- Relatively low interest rates prevailed (i.e. the official RBA cash rate averaged around 5 per cent).
- When required, the successful use of expansionary government macroeconomic monetary and budgetary policies helped to ensure an adequate growth in the level of AD (e.g. 2000–02).

Despite this rosie picture, it should also be pointed out that the incidence of unemployment across different states, regions and industries, and its spread across different races and genders, still caused the burden of unemployment to fall more heavily on some, leading to inequality in incomes.

### Demand inflation and asset prices

As noted, demand-side conditions were not so strong that they led to shortages of goods and services and inflationary booms where some individuals gain purchasing power (e.g. property and share speculators where their incomes often rise faster than inflation), while others suffered reduced purchasing power (e.g. ordinary families or those on fixed incomes that cannot keep up with rising prices). Even so, 16 years of sustained economic growth and rising incomes, fuelled by low interest rates on borrowing, led to some huge rises in asset prices for property and shares, which increased inequality in both income and wealth.

While household wealth has grown quickly overall, recently it is likely that the main winners were the speculative members of the upper few quintiles who gained increased incomes and were able to make significant capital gains. By contrast, lower-income earners trying to buy housing at inflated market prices, have found that its affordability has declined (despite lower interest rates) and interest repayments as a proportion of income, have actually risen. Property rents have also grown so for those on low-incomes have had to redirect money away from spending on other necessities like food, medical and dental care, clothing, power, and childcare.

### Supply-side changes and institutional factors

The past 10–20 years to 2007 has seen some very significant supply-side and institutional developments that have impacted on the distribution of Australian incomes.

#### The continued deregulation of the labour market and extension of workplace agreements

The labour market is the main institution in Australia for determining the distribution of income and the level of wages of individuals in different occupations. Foremost, since the early 1990s, there has been a progressive shift towards a much greater reliance on a more deregulated labour market. This has involved the extension of workplace agreements negotiated between employees and their boss. Wages (i.e. the price of labour) now more closely reflect local conditions of market demand and supply for each worker’s occupation. For most employees (now covering well over 80 per cent of all workers), this newer system has largely replaced the traditional approach involving the setting of a minimum (award) wage. One result of this and other government labour market reforms is that there is less wage uniformity because wages are set on a firm-by-firm basis. Under the system of workplace agreements, some staff that are in a strong bargaining position (e.g. some of our high profile Australian CEOs who have negotiated as much as $25,000 per day in salaries and bonuses), have gained huge pay rises using workplace agreements (often in exchange for improved efficiency). However, the system places others in a much weaker negotiating position (such as females, unskilled employees, workers in less profitable firms or areas of the economy, migrant workers, and non-metropolitan employees). These groups have gained much smaller pay rises, increasing income inequality. Labour market reforms have also helped to erode union membership (i.e. membership has fallen from 55 per cent in the 1980s to 28 per cent in 1999 and even lower to 18 per cent of private sector workers in 2006), and this, along with the removal of many unfair dismissal provisions for smaller firms (starting in 1996, and especially since 2005), have weakened the power of workers, contributing to growing wage inequality.

#### Female participation and employment

The past 20 years have seen rising participation rates in work among the general population, especially females. In addition, females employed at higher levels of responsibility are now more common. Both these developments have helped to increase the share of income going to females. However, average wages are still far from equal to those of males, and this is not helped by interrupted employment due to pregnancy, difficulties finding childcare and a 30 per cent lower participation rate than for men.

#### The recent rise in part-time work and the casualisation of the labour force

There has been a very significant rise in the proportion of the labour force in part-time rather than full-time employment (i.e. more than 35 hours per week) from 19 per cent in 1986–87 to over 28 per cent in 2006. Those working fewer hours, also earn much less income than full-time employees. This increases inequality.

#### Recent changes in tax rates

There has been much talk about tax reform and cuts in tax rates. However, these have not always benefited the poor as much as the rich. This might help to explain the apparent rise in Australia’s income inequality. For example, since 2000–01 when the goods and services tax (GST) was introduced, the proportion of government revenue raised from indirect taxes has grown. This means that far more reliance is now placed on regressive taxes that take a higher proportion of the income of the poor than they do from the rich. For example, indirect taxes like the GST and excise tax take nearly 21 per cent of the income of the poorest quintile 1, but only 9 per cent from the richest quintile. That is, the poorest of the poor pay an indirect tax rate that is 130 per cent higher than that for the rich. Robin Hood, famous for robbing the rich and giving to the poor would have been outraged. In addition, various rounds of cuts in rates for personal incomes have tended to favour the rich. This is also
the case for the cuts in rates of company tax from 36 to 30 per cent in 2000–02, and the 50 per cent reduction in the rate of capital gains tax in 2000. In the absence of probate or death duties, the wealth of this generation will no doubt be passed to the next, encouraging even greater inequality in wealth and income in the future.

Welfare reforms
Access to Australia’s welfare system by the needy has been greatly tightened and made less generous since 1996. Increasingly recipients have been required to meet their obligations to earn incomes from their own efforts. This has had both good and bad effects on income distribution and equity. On the one hand, tighter welfare increases the attractiveness of work, freeing resources for use elsewhere and reducing the burden on firms and individuals paying taxes. It has also allowed for cuts in tax rates, an added incentive for firms to grow and create more jobs, and for individuals to earn higher disposable income from their work. However, around 30 per cent of households depend heavily on government welfare assistance or cash benefits. Some of these have found they are worse off following recent reforms, leading to even more inequality.

Structural unemployment and change
In the past 10–15 years, structural change in most Australian workplaces has been massive, adding to levels of structural unemployment in the short term. It has involved cost cutting by firms in the face of tariff reductions and greater exposure to international competition from cheaper imports. Cost cutting has taken many forms. For example, some firms like the major banks (e.g. NAB, ANZ and Westpac), mining companies (e.g. BHP-Billiton and Rio Tinto) and car and other manufacturers (e.g. Mitsubishi, Arnotts, Kodak, Heinz) have closed unprofitable operations or branches. Other firms have shifted some, or all, of their operations offshore to cheap labour countries like China, Indonesia and India (e.g. some of Qantas aircraft servicing, Telstra for some IT work). Our major supermarkets have also increasingly sourced tinned or frozen fruit and vegetables overseas, as have other firms requiring call centres, accounting operations and marketing. Moving offshore is also made attractive to some companies seduced by lower tax rates. In addition, to lower labour costs, firms (e.g. car manufacturers like GM and Toyota) have accelerated the use of new technology including robotics that replace manual operations. Other companies have automated their warehouses, used ICT to maintain stock and accounting records, or replaced bank staff with ATMs. As noted, in the short-term, many of these cost-cutting strategies have led to structural unemployment, reduced incomes, and greater inequality in living standards. In addition, the incidence of structural unemployment has not been evenly shared across all industries, regions or states. However, despite the negative effects on unemployment in the short term, in the longer term, more jobs have been created rather than destroyed. It is here that we see the upside of structural change in helping to promote higher incomes for workers and greater equity.

Increased casualisation of work
There has been a very significant rise in the proportion of the labour force in part-time rather than full-time employment (i.e. more than 35 hours per week) from 19 per cent in 1986–87 to 24 per cent in 1996–97, and rising further to over 28 per cent in 2006. Those working reduced hours also earn much less income than full-time employees. This increases inequality.

Drought
There has been drought and many dry seasons across Australia in the past five years to 2007. With severe cuts in the capacity to produce, this has had a devastating effect on farm incomes, forcing many off the land crippled by heavy debts.

HAS THE GOVERNMENT ACHIEVED AN ‘EQUITABLE INCOME DISTRIBUTION’?
It is one thing to establish that inequality has risen (which appears to be the case for 1996–97 and 2005), but another to determine whether there is equity, so that even the poor can access basic goods and services and enjoy reasonable living standards. What, for instance, is meant by ‘reasonable living standards’ and how should it be measured? No wonder this contentious issue provokes disagreement.

Some strengths of recent performance
On the other hand, supporters of the government argue that Australia has a strong record in promoting equity and ensuring that the poorer sections of the community can enjoy rising real per capita incomes (i.e. after allowing for the fact that inflation causes prices of goods and services to rise, thus reducing the purchasing power of disposable incomes) and hence material living standards.

Even the poor are richer
Despite rising inequality in equivalised disposable incomes, even the poor are richer and have more purchasing power (i.e. allowing for inflation) than ever before. This improvement is the consequence of uninterrupted and rapid economic growth in the past 15 years, a 30-year low in the unemployment rate (e.g. 4.4 per cent in April 2007 as against 11 per cent in 1992–93), effective government microeconomic reforms (that may have ultimately helped the needy by increasing jobs, efficiency and incomes in the long-term), and policies that have redistributed incomes more evenly than otherwise. Research (Ann Harding, the National Centre for Economic Modelling, 2005) has also shown that between 1994–95 and 2002–03, average private household incomes have risen faster in percentage terms (but not absolute dollar value terms) for lower income groups (e.g. 165 per cent rise for recipients in decile 1), than for higher income groups (e.g. 38 per cent for recipients in decile 10).

The safety net of the ‘welfare state’
Australia’s welfare state has provided a safety net and much support for the needy. There is in fact a massive income redistribution from the rich to the poor as a result of progressive taxes (with higher marginal rates for the rich), means and assets tested cash benefits, and cheap or free services. These measures almost halve the Gini coefficient from over 0.5 for private incomes to around 0.30 for final income distribution. Again, quoting NATSEM data from Ann Harding (for 2001–02), low-income recipients in quintile 1 had their incomes substantially increased from just $47 to $489 per week, while high-income recipients in

CHAPTER 3 Australia’s economic objectives and performance 119
Some weaknesses of recent performances

Critics of the Australian Government highlight its failures in promoting equity and focus on the rises in the level of income inequality and poverty. They also draw attention to the following.

Adverse government policies

Many of the government’s policies (e.g. welfare, tax, public sector privatisation and workplace reforms) have left the poor and weak even more vulnerable to economic hardship, thereby accelerating income inequality and reducing equity. This will especially be apparent if the economy slows and unemployment rises.

Aboriginal and Torres Straight Islanders

Data are available which show that Aboriginal and Torres Straight Islanders typically have incomes 38 per cent below the Australian average. Against the general population, they also have considerably shorter life expectancies, higher rates of serious disease, a generally lower level of educational attainments, minimal access to clean water and health care in some communities and much higher rates of unemployment (around 40 per cent). Indeed, for many, their living conditions are equal to the worst in Third World countries.

Geographic inequality

There is considerable geographic inequality in income across Australia’s states and different postcodes. This shows the failure of policy to share the gains of economic and income growth equitably.

Gender inequality

Gender inequality shows few signs of disappearing, so often females (rather than males) are excluded from enjoying reasonable living standards.

Inequality in educational opportunities

There is growing inequality of opportunity to access quality education, which often provides a passport to better employment and higher income.

Inequality and age

Income is being redistributed from the young to the old, due partly to the uneven employment opportunities, the welfare system, job inexperience and inadequate training.

International comparisons

Australia has one of the more unequal distributions of income, compared with other countries around the world, even the US.

3.8 Relationships between the government’s economic objectives

Economics has a lot to do with studying the relationships that exist between variables in the economy. This is especially obvious when we see how the pursuit of one government economic objective affects what happens to another. These relationships between objectives can be either compatible or conflicting in their nature.

Compatible relationships

Compatible relationships occur when promoting one economic goal actually helps the government to better achieve another (i.e. more of goal ‘A’ also means more of goal ‘B’).

Conflicting relationships

However, conflicting relationships exist when an improved performance for one economic objective undermines the achievement of another (i.e. more of goal ‘A’ means less of goal ‘B’).

Compatible and conflicting relationships

Sometimes, too, it is possible for both types of relationships to exist between the same two government objectives. For example, the relationship might be partly compatible, perhaps in the long-term, but to some extent, also conflicting, especially in the short-term. We will now take a closer look at each of the government’s economic objectives.

RELATIONSHIPS BETWEEN PRICE STABILITY AND OTHER ECONOMIC OBJECTIVES

Pursuing price stability has both compatible and conflicting relationships with other government economic objectives.

Price stability and rapid economic and employment growth

Price stability can be compatible with sustained or long-term economic and employment growth (e.g. 1997–early 1999, 2001–05). There are two explanations for this relationship. First, price stability helps to create a climate of good business confidence. This encourages non-speculative, productive investment in new plant and equipment that can bolster economic capacity and create new employment opportunities. By contrast, rapid
inflation erodes business optimism and diverts scarce capital resources into speculative areas. This does little to promote production and employment. Second, price stability strengthens our international competitiveness at home and abroad. As a result, local and export sales, production and employment levels should rise. However, having noted the compatible side of the relationship, there may also be some degree of conflict. For example, some economists argue that a modest inflation rate can actually stimulate economic growth and lower unemployment by opening up profitable business opportunities. Additionally, government policies designed to pursue price stability and suppress demand inflation (e.g., higher interest rates), also require a slowing of spending and economic activity. As a result, unemployment usually rises. This conflict was clearly seen between 1989 and 1992 with ‘the recession we had to have’ (a phrase coined by former Prime Minister Paul Keating) and, maybe, in the more recent slowdown of 2000–01 that was partly due to policies (large budget surpluses and higher interest rates) designed to slow rising inflation in 1999–2000.

**Price stability and external stability**

As noted previously, price stability usually helps to strengthen external stability. The main reason for this compatible relationship is that the avoidance of inflation lifts the price competitiveness of local firms. In turn, this tends to slow imports. In addition, lower inflation in the longer term, allows us to enjoy cheaper interest rates locally (relative to those overseas). This helps to make overseas borrowing or debt relatively less attractive. At the same time, lower inflation means that we locally made goods and services can become even more appealing to domestic and foreign consumers, thereby helping to reduce the size of the CAD.

**Price stability and equity in the distribution of income and wealth**

Price stability can be compatible with improved equity in the distribution of personal income. Several points can be made. First, price stability (e.g., 1996–2005, except in 2000–01) usually means that the purchasing power of ordinary family incomes and fixed income earners (e.g., self-funded retirees with most income from fixed term deposits) is protected better than would be the case during rapid inflation. Their incomes are more likely to keep pace with rising prices, so there is no need for them to reduce their access to basic goods and services. Second, inflation redistributes incomes in fairly arbitrary ways. Some groups gain greater incomes and wealth at the expense of others. For example, share and property speculators, importers and workers that are in a strong bargaining position are often able to increase their wealth and incomes. By contrast, ordinary families, fixed income earners, exporters and workers in a weak bargaining position employed in uncompetitive industries, will suffer a loss in their share of the income and wealth cakes.

**Price stability and living standards**

Price stability often helps to improve our material living standards, making the two aims compatible. As noted already, price stability can provide a better foundation for sustained long-term economic growth. It helps us become more competitive internationally, sales are stronger, business and consumer confidence are enhanced and national production is more likely to rise quickly. This probably means that there is more output and income to share per person, allowing us to enjoy higher levels of consumption or material well-being. Additionally, if price stability helps to generate stronger economic and income growth, some aspects of our non-material living standards may gain leading to a better quality of life. For example, consumer choice, the arts, affordability of education, travel to enrich our experiences, the adequacy of medical care and life expectancy, may all benefit from increased economic growth. This suggests a partly compatible relationship between price stability and living standards. However, the two government economic objectives may also be in partial conflict. If price stability enhances long-term economic growth, then this can have detrimental effects on some qualitative aspects of our well being through the creation of negative externalities including environmental pollution, climate change and resource depletion.

**RELATIONSHIPS BETWEEN ECONOMIC GROWTH AND OTHER ECONOMIC OBJECTIVES**

Let us now examine just a couple of the relationships that exist between the pursuit of economic growth and other government goals.

**Economic growth and full employment**

Strong and sustained rates of economic growth averaging around 3.6 per cent a year (1996–2006), helped to cut Australia’s unemployment rate from 8.3 per cent, to a 32-year low of only 4.5 per cent in March 2007. The objective of full employment was eventually reached by the early 2000s. This compatible relationship is demonstrated in figure 3.32.

![Figure 3.32 The mostly compatible relationship between strong economic growth and low unemployment — Australia](image)

Source: Data derived from ABS, 1350.0.
The reason why stronger GDP growth generally reduces cyclical unemployment is that firms are forced to purchase more resources including extra staff, in order to expand their output. Despite this positive relationship, a degree of conflict can occur between these two goals. This is especially the case if firms lift their output by restructuring their operations more efficiently, closing unprofitable branches and by cutting their production costs. While these changes help to promote stronger economic growth, they can also lead to rising structural unemployment in the short term. This might prevent unemployment from often falling below 5 per cent. Moreover, while government microeconomic reforms including tariff cuts, market deregulation, and the privatisation and corporatisation of government businesses, ultimately strengthens our international competitiveness, economic growth and job creation, in the short-term, these government reforms may add to the level of structural unemployment.

**Economic growth and price stability**

Usually it is true to say that when economic growth remains strong, sooner or later inflation accelerates. This indicates that the two goals sometimes have a conflicting relationship. It is especially true during a sustained period of excessively rapid economic growth leading to an inflationary boom. We saw these conditions develop in the latter 1980s and, to a lesser extent, perhaps in 2005–06 when the economy was close to its productive capacity. During this period, shortages of both resources and finished goods and services, can lead to increased cost and demand inflation. Even so, up to a point, it is sometimes possible to enjoy non-inflationary economic growth so that the two goals have a more compatible relationship. For example, this occurs in cases where economic growth is accelerated by cost cutting, restructuring and efficiency rises. These things increase the output, which the economy can produce from its available resources. General examples of this can be cited in the period between 1992 and 2007 (except for 2000–01). Here, there was both fairly rapid growth and generally quite low inflation.

**Economic growth and external stability**

Usually, strong economic growth conflicts with external stability causing a rise in the CAD. This is because sustained growth normally entails rapid rises in aggregate demand. If this occurs when the economy is near its productive capacity, it can result in rising inflation and general shortages of goods and services. Under these conditions, there are at least three reasons why the CAD usually rises (indicating reduced external stability). First, our exports and locally made goods and services, tend to become less price competitive. Second, imports become relatively more price attractive and are one way to solve the problem of growing domestic shortages of goods and services. Firms wanting to expand also increase their purchases of imported equipment. Third, strong growth and inflation usually cause local interest rates on loans to become dearer, relative to the cost of overseas borrowing. This can increase our level of foreign borrowing and, with it, interest payments abroad and the CAD. Figure 3.33 clearly illustrates this conflicting relationship between 1996 and 2006. As GDP accelerated (e.g. 1996–99, 2001–06), especially when the economy is near its productive capacity (e.g. 2004–06), the CAD:GDP ratio grew, but when economic growth was slower (e.g. 2000–01), the CAD shrank.

Having argued that this relationship is usually in conflict, one can think of exceptions where the two goals could be partly compatible. For instance, if non-inflationary economic growth is pursued through improved efficiency in the use of resources, our export competitiveness and capacity would be strengthened, and imports might become relatively less attractive. As a result, the CAD should decline.

![Figure 3.33 The mostly conflicting relationship between strong economic growth and a small CAD:GDP ratio — Australia](image)

**Source:** Data derived from ABS, 1350.0.

**Economic growth and improved equity in the distribution of income and wealth**

It has long been argued by some that economic growth is fairly compatible with improved equity. The point is made that economic growth is essential for the expansion of employment opportunities, upward job mobility and the general reduction in unemployment. For instance, between 1992 and 2007, sustained economic growth created over 1.8 million new jobs and cut unemployment by 60 per cent. Because economic growth does lead to reduced unemployment, there are fewer families dependent on government welfare benefits and charity. It stands to reason that more people should be able to afford basic goods and services needed to avoid poverty. Additionally, with full employment, fewer poor families are forced to run down their past savings or use up their assets or wealth. Furthermore, strong economic growth leading to full employment usually means that there are rising national incomes and government taxation revenues. Helping to promote equity becomes much more affordable for the government, because it has more to spend on welfare programs and community services. Even so, one can argue that a partly conflicting relationship can occur if economic growth is allowed to become so strong that inflation rises (e.g. in the 1980s). Unfortunately, inflation hurts groups like exporters, fixed income retirees and those ordinary families whose wages fail to rise as fast as prices. At the same time, inflation can bring windfall gains and an arbitrary redistribution of income and wealth in favour of speculators in shares and property, and to those whose wages rise faster than the inflation rate.
Economic growth and improved living standards

The ultimate aim of the government is to improve Australia’s living standards. These depend on both material (i.e. quantitave) and non-material (i.e. qualitative) elements. Material living standards mainly reflect the level of people’s real GDP or income per head, and actual per capita consumption levels. Given this, rapid economic growth is at least partially compatible with making us better off materially, provided that, at the end of the day, the rising incomes and the larger volume of goods and services that have been produced, are actually distributed equitably. Turning to the non-material side of living standards, economic growth has varying effects on the quality of our lives. There are several ways in which non-economic aspects of our living standards can benefit from rapid economic growth. Increased production and incomes can help provide better community services (e.g. public education, housing, health, transport, law and order, defence), more generous welfare benefits, increased life expectancy, the promotion of the arts and improved protection of the environment, simply because these become more affordable. Furthermore, if unemployment is lowered as a result of rapid economic growth, this eases the welfare burden on taxpayers; it lessens family tensions and probably helps to ease social problems. Despite these compelling arguments in support of economic growth as a way of improving living standards, there are also some non-material aspects of our well-being that suffer because of economic growth. For example, there are negative externalities or costs that arise because of environmental and other damage caused by rapid economic growth. Wilderness beauty spots are ruined, rivers and air are polluted, urban problems become extreme, future generations are deprived of access to the resources that our generation had at its disposal, eco-systems and native species are destroyed, there is global warming and its associated climatic, health and geographic problems, family cohesion is undermined by the pressures of both parents working longer hours, and our sense of moral and community responsibility may be corrupted by the seductive glitter of materialism. These unwanted results of economic growth, conflict with better overall living standards.

RELATIONSHIPS BETWEEN FULL EMPLOYMENT AND OTHER ECONOMIC OBJECTIVES

Here are some examples of relationships between the achievement of full employment and other economic objectives.

Full employment and economic growth

These two goals are partially compatible. The full employment of labour and other resources is important for maximising national production. By contrast, when resources are lying idle or are unemployed, they cannot contribute to GDP. Despite this relationship, full employment can also undermine the economic conditions needed for economic growth. For example, both cost and demand inflation often accelerate as the zone of full employment and maximum production is approached. In turn, inflation drives up interest rates and thereby erodes business and consumer confidence. It also diverts resources into speculative and less productive uses. Additionally, inflation reduces our international competitiveness causing reduced sales of goods and services at home and abroad. Lower sales also slow economic growth causing a conflicting relationship.

Full employment and price stability

Falling unemployment rates often tend to conflict with price stability. This is because low unemployment (i.e. less than about 5 per cent) signals that the economy is operating close to its productive capacity. Increasingly, firms find it difficult to produce enough output to satisfy customers. General shortages of goods and services appear, leading to demand inflation. Additionally, full employment lifts disposable incomes and is often associated with robust consumer and business optimism. Strong demand-side conditions like these, can mean that expenditure or AD grows too quickly, resulting in demand inflation. Typically, too, full employment and labour shortages can lead to accelerated wage growth, and cost inflation. An example of this conflict was seen in the late 1980s, and, to a lesser extent, perhaps in 2005–06. Even so, between 1996 and early 2007, falling unemployment has not greatly jeopardised price stability, thanks to labour market deregulation, improved efficiency and cost cutting.

Full employment and external stability

It has already been noted that full employment is often associated with rising expenditure, a lack of unused productive capacity, general shortages of goods and services domestically, and increasing inflation. If this is the case, full employment will tend to increase the size of the CAD leading to a conflicting relationship. Often consumer and business optimism, strong spending and rising domestic inflation encourage imports and discourage exports abroad. Furthermore, these conditions can make foreign borrowing even more attractive, increasing the need for interest repayment abroad. As partly supported by figure 3.34, Australia’s CAD generally got bigger in 2003–04–05–06–07 when full employment was actually achieved.

![Diagram showing the relationship between full employment and external stability](https://example.com/diagram.png)
**Full employment and improved equity in income distribution**

Up to a point, full employment (e.g. as in 2003–04–05–06–07) is usually compatible with equity. Perhaps the biggest contributor to poverty and inequity is high unemployment. Table 3.8 shows that this usually results in greatly reduced family incomes as people move from full-time pay, to welfare benefits.

<table>
<thead>
<tr>
<th>CATEGORY OF INDIVIDUAL</th>
<th>DETAILS</th>
<th>WEEKLY INCOME, JULY 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working/employed</td>
<td>Average weekly earnings (for adults employed full-time)</td>
<td>$1012</td>
</tr>
<tr>
<td></td>
<td>Minimum weekly wage (for the unskilled on the minimum wage)</td>
<td>$468</td>
</tr>
<tr>
<td>Unemployed</td>
<td>Newstart allowance (welfare rate for single with children)</td>
<td>$228</td>
</tr>
<tr>
<td></td>
<td>Youth allowance (welfare rate for &lt;18 partnered with children)</td>
<td>$184</td>
</tr>
<tr>
<td>Unemployment – then and now . . .</td>
<td>July 1991</td>
<td>July 2006</td>
</tr>
<tr>
<td></td>
<td>953 000</td>
<td>514 000 (down 46%)</td>
</tr>
</tbody>
</table>

**Table 3.8** Comparison of incomes for those employed and those unemployed

**Sources:** Data derived from ABS 1350.0 and from Centrelink.

**Full employment and improved material living standards**

As a general rule, fuller employment (i.e. as opposed to higher unemployment) is largely compatible with living standards since it helps to lift both the quantitative and qualitative aspects of Australia’s well being. It has already been argued that, up to a point, full employment means that resources are used more productively to help maximise national output. It also means that the tax burden is lessened and more resources can be directed into necessary community projects that lift our material and non-material welfare. There are also other benefits that flow to families and the community when most people have jobs. Poverty and inequity are reduced, crime rates (e.g. theft, drugs, violence, graffiti) tend to fall, families are more likely to remain together, and personal self-esteem and happiness are enhanced. Despite all this, an element of conflict between these two goals can arise if full employment leads to higher inflation. This development would weaken the purchasing power of those on relatively fixed incomes, thereby reducing the quantity of goods and services that can be purchased.

**RELATIONSHIPS BETWEEN EXTERNAL STABILITY AND OTHER ECONOMIC OBJECTIVES**

The achievement of better external stability has both compatible and conflicting relationships with other government economic objectives.

**External stability, economic growth and full employment**

Improving external stability (i.e. perhaps indicated by a lower CAD), sometimes conflicts with rapid economic growth and full employment. This is because, in order to avoid general short-ages, demand inflation and the spilling-over of domestic expenditure onto imports, the economy often has to be slowed down using government contractionary policies (e.g. increases in interest rates and taxes, combined with cuts in budget outlays). Unfortunately, when these measures are introduced to slow aggregate demand and reduces the CAD, economic growth and job creation will also suffer.

**External stability and price stability**

These two objectives enjoy a compatible relationship. For one thing, if external stability is pursued by using micro-economic policies to help make exporters and local producers more competitive and efficient, this will also slow cost inflation. Another reason for compatibility is that, normally, external stability is more likely to occur when AD and domestic economic activity are not too strong. If this is the case, it is also probable that inflation will be slower.

**External stability and equity in the distribution of income and wealth**

In the short term, external stability sometimes conflicts with equity. For example, one way to reduce the cyclical rise in the CAD is to use contractionary budgetary and monetary policies to slow AD and economic activity (e.g. use higher tax rates, cuts in government outlays, large surplus budgets and higher interest rates as in 2004–07). Although this helps to slow spending on imports, it also reduces spending on Australian-made goods and services. As a result, cyclical unemployment may rise. In turn, rising unemployment unfortunately cuts the disposable income of those who end up on welfare, making basic goods and services less affordable.
External stability and living standards

These two objectives usually share a compatible relationship. External stability should help complement material living standards since it implies that Australia is ‘paying its way and is better able to meet its international financial obligations’. For this to occur, the size of the CAD:GDP ratio must be relatively small, our dollar must be retaining its value and the NFD:GDP ratio must be at a sustainable level. When these conditions are met, our material living standards are more likely to be maintained than if there were unbearable interest repayments on foreign debt, a falling A$ and the need to run high domestic interest rates due to the large CAD:GDP ratio.

**Figure 3.35 A compatible relationship between greater efficiency (GDP per hour worked) and price stability — Australia**

**Source:** Data derived from ABS 1350.0, 5204.0.

When efficiency is rising quickly (e.g. 1996–98, 2001–03), inflation is relatively slower than when productivity is weak (e.g. 1970s, 1980s, 1999–2001, 2005–06). This relationship stems from the fact that greater efficiency (often involving structural change and government microeconomic reforms) means lower production costs for firms, since more output can be produced with fewer inputs of resources. This eliminates cost inflation pressures, since firms are able to still make good profits without raising their prices to cover higher costs (e.g. of labour and materials used in manufacture).

Efficiency and economic growth

As supported by figure 3.36, there is an obviously close and compatible relationship between increased efficiency and higher rates of economic growth. When worker productivity is getting stronger (e.g. 1996–98, 2001–04), growth seems to accelerate. However, when efficiency weakens (e.g. 1999–2001, 2004–06), GDP also grows more slowly.

**Figure 3.36 The mostly compatible relationship between improved efficiency in resource allocation (GDP per hour worked) and rapid economic growth (GDP) — Australia**

**Source:** Data derived from ABS 1350.0, 5204.0.

By definition, greater efficiency means that existing resources are capable of being used to increase the economy’s productive capacity and output levels, without accelerating inflation. Using the AD–AS diagram, increased productivity shifts the AS line outwards and to the right, so that equilibrium level of economic activity occurs at a higher GDP and with the added bonus of a lower inflation rate. One reason for Australia’s generally strong economic growth during the period, 1996–2006 (average growth rate in GDP was over 3.6 per cent a year), is that, unlike the slower growth of the 1980s, productivity rises were nearly double those for the 1980s.

Efficiency and external stability

Efficiency and external stability share a compatible relationship. Greater efficiency in the use of resources means that productive inputs will be used to produce goods and services where we have a comparative cost advantage. Local firms will be more able to keep costs down. This should mean improved international competitiveness leading to increased exports, reduced imports, a lower structural CAD and a stronger AS. Additionally, higher domestic productivity may help strengthen local firms against takeovers by foreign investors, again helping to slow the rise in the CAD and NFD.

**Figure 3.37 External stability and living standards**

**Source:** Data derived from ABS 1350.0, 5204.0.
Efficiency and equity in the distribution of personal income

Efficiency has mixed effects on equity in the distribution of personal income. In the short term, greater efficiency may conflict with equity. This is because cost-cutting and structural change used by firms to improve efficiency, often cause higher unemployment as workers lose their jobs and uncompetitive firms close down. Especially during the 1980s and 1990s, large parts of Australian manufacturing (e.g. textiles, clothing, footwear, automobiles) underwent rapid structural change and faced increased penetration of the local market by imports. The same was true for some services (e.g. banking, warehousing, transport, the public services) as firms cut costs and rationalised their operations to become more competitive. Additionally, widespread government microeconomic reforms also added to structural unemployment. As we know, rising unemployment brings with it a cut in income, lower purchasing power or access to basic goods and services, and the running down of household wealth. However, it is also true that in the long term, greater efficiency should be compatible with improved equity. There is substantial Australian evidence to show that, overall, greater efficiency in the 15 years to 2005–06 has meant stronger economic growth, higher incomes (e.g. a sustained 1 per cent a year addition to productivity rates lifts average per capita disposable incomes by around 20 per cent over 25 years). This increases spending and purchasing power, raises employment and, as argued, lowers prices and makes basic items more affordable for the poor. In addition, given that greater efficiency accelerates spending, economic growth and incomes, this also increases the level of government tax revenue, making it easier for it to provide better welfare and community services for the needy. In contrast, poor productivity that slows economic, employment and income growth, increases the burden on taxpayers of looking after the poor and diminishes equity.

Efficiency and living standards

Productivity rises are partly compatible with higher material living standards (if this is roughly measured by GDP or annual income per head, average Australians currently enjoy around $414844). This relationship exists because solid efficiency rises of, say, 2 per cent a year, more or less mean about a 2 per cent increase in average per capita income. In the 1970s and 80s when Australian productivity was poor, Australia’s relative position among rich nations slipped dramatically to sixteenth position. However, better efficiency rises of late relative to many overseas nations, have enabled us to gradually claw our way back up the list to eleventh. Of course there is an assumption here that the increased volumes of goods and services produced as a result of greater efficiency and economic growth, are being shared equitably among all members of society. Unfortunately, this is not necessarily the case for Australia where there is evidence of growing inequality in incomes and wealth. There is also another side of the relationship between greater efficiency and living standards. A degree of conflict can sometimes occur if greater efficiency has resulted in higher structural unemployment, negative externalities, increased stress and reduced leisure time to spend with family and friends. Even so, offsetting these costs, productivity improvements could be taken as reduced hours of work (rather than higher incomes). Greater productive efficiency could also mean less waste of natural resources that damage the natural environment. Furthermore, the higher incomes generated could be used to enrich our lives or redistributed by government to help the needy.

RELATIONSHIPS BETWEEN EQUITY IN INCOME DISTRIBUTION AND OTHER ECONOMIC OBJECTIVES

The achievement of equity in the distribution of income may have a compatible or conflicting relationship with other government economic objectives.

Equity and economic growth

As a general rule, pursuing greater equality or equity in income distribution, usually conflicts with the goal of rapid economic growth. On the one hand, greater equity can be pursed by using government policies such as steeply progressive taxes (i.e. where rates rise with incomes), generous means-tested welfare benefits, the provision of free or subsidised collective services and the enforcement of the minimum wage (i.e. now set centrally by the Australian Fair Pay Commission). All of these can help the poor gain access to basic goods and services and narrow the ‘income gap’ between individuals. Unfortunately, however, these measures can also reduce personal motivation, work efficiency and effort. If this occurs, economic growth will slow down. Despite this, it is also possible to argue that equity and growth enjoy a partially compatible relationship under certain conditions. Some economists have claimed that steeply progressive personal taxes actually help to force ambitious individuals seeking high incomes and wealth, to work even harder to achieve their personal financial goals. Additionally, if the distribution of income and wealth become too uneven (e.g. as occurred at home and abroad in the 1920s), so that income is concentrated in the hands of the few, this could bring on a depression with negative economic growth. This argument goes on to say that redistributing income and wealth more evenly should help to avoid this problem.

Equity and full employment

As mentioned above, pursuing equity using government redistribution policies including the minimum wage and generous welfare benefits, may actually undermine efficiency and thus conflict with economic growth and full employment. More particularly, for instance, the minimum wage system may reduce our international competitiveness. In turn, this may be reflected in slower rates of economic and employment growth. Furthermore, over-generous welfare payments may undermine the work ethic and promote welfare dependency. Although they are currently being tackled by changes in government policy, poverty traps still exist in our welfare system, which discourage some individuals from working. These, too, result in a conflicting relationship and may result in even higher levels of hard-core unemployment.
Equity and price and external stability

If it is true that increased equity often erodes efficiency and thus adds to cost pressures, then it is also likely to increase cost inflation. In turn, higher costs undermine our international competitiveness at home and abroad causing the CAD to rise because of falling exports and rising imports.

Equity and living standards

There is a dilemma in understanding the relationships between this pair of economic objectives. On the one hand, promoting equity using means-tested welfare benefits or free community services can lift the general living standards of the poor by helping these families to access basic goods and services that they could not otherwise afford. As a result, both ‘quantitative’ and ‘qualitative’ aspects of overall welfare are improved. Here, the relationship between the two objectives is a compatible one. However, there can also be a conflicting relationship. If, as already argued, the promotion of better equity slows efficiency and consequently reduces Australia’s international competitiveness, this would only worsen price stability, weaken economic growth and result in higher unemployment. All these outcomes are bad news for general living standards. Specifically, inflation is detrimental because it reduces the purchasing power of family incomes and the affordability of basic goods and services. Slower growth and, especially unemployment, also undermine material welfare. Incomes are reduced and the volume of production to be shared among the population becomes smaller. Additionally, unemployment reduces average household incomes. Again, essential goods and services are less affordable, while rising family disintegration, crime rates, health problems and other worries aggravated by high unemployment, cause our non-material wellbeing to be reduced.
Already you should have completed the first of two SACs required for VCE Economics Unit 3. Having completed chapter 3, it is now time to tackle the second task. SAC 2 will assess outcome 2. With this in mind, your teacher could select one (or more) of the following assessment tasks:
- a folio of economics exercises
- an essay
- a report in multimedia format
- a test with multiple-choice and short-answer questions
- a written report.
This task will be marked out of 60. Teachers are also urged to check the latest VCAA’s Assessment guide to ensure that all assessment requirements are met fully.

To help prepare you for the end-of-the-year examination and to provide some guidance for SAC 2, several sample tasks have been included in this section of your text. For instance, chapter 3 contains:
- multiple-choice test items
- short-answer questions suitable for a folio of exercises or inclusion in a test
- a written report.
Additionally, this section of your text also contains a wide range of other learning activities (e.g. web quests, debates, concept maps, quiz, etc.), to help make learning more effective, interesting and relevant.

**MULTIPLE-CHOICE test questions**

*Instructions:* You may like to complete a range of the following 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 this with a tick (√).

**Answer grid**

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
<th>28</th>
<th>29</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
<th>35</th>
<th>36</th>
<th>37</th>
<th>38</th>
<th>39</th>
<th>40</th>
<th>41</th>
<th>42</th>
<th>43</th>
<th>44</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 1
Concerning the Australian Government’s economic objective of price stability, which statement is most correct?
A Price stability means there should be no increase in inflation over a period.
B Price stability means the general level of prices of consumer goods and services should rise by less than 1–2 per cent a year.
C Price stability means that the CPI should rise by less than 10 per cent a year.
D Price stability means that, over the duration of the economic cycle, general consumer prices should rise by an average rate of 2–3 per cent a year.

Question 2
Which of the following best defines the Consumer Price Index (CPI) for Australia?
A It is an index that measures actual changes in all prices of goods and services produced in Australia during the year.
B It is an index that measures the price changes of exports against imports for the year.
C It is an index that measures the average rate of change in the prices of a basket of consumer and investment goods and services during the year.
D It is an index of the average annual change in the price of a basket of goods and services representing a high proportion of expenditure by metropolitan households.

Question 3
If the CPI for a country in 2006–07 was 90 index points, while in 2007–08 it was 120 points, the annual inflation rate measured by the CPI would be:
A 40 per cent
B 30 per cent
C 20 per cent
D none of the above percentages.

Question 4
Inflation in a country may cause:
A increased unemployment
B larger income inequalities
C a decline in the value of the nation’s currency in foreign exchange markets and an increase in the CAD
D all of the above.

Question 5
Theoretically, when there are strong demand-side conditions such as rapid rises in disposable income and consumer confidence under conditions where the economy is operating close to its productive capacity, it is likely that there will be:
A shortages causing demand inflation
B stagflation
C cost but not demand inflation
D high unemployment causing less wage growth.

Question 6
Rising RULCs and falling productivity tend to cause inflation which is primarily generated by:
A excessively strong AD
B firms lifting their prices so as to cover higher production costs and to protect their profit margins
C contributing to reduced inflationary expectations
D weakening the international competitiveness of local firms.

Question 7
The Australian Government’s goal of sustainable economic growth means that the value of national output of goods and services should:
A rise by at least 5–6 per cent a year in real terms
B rise by about 4 per cent annually in real terms
C rise steadily by between 3–5 per cent a year in real terms
D rise steadily by 2–3 per cent annually in real terms.

Question 8
For Australia, if expenditure on Australian-made production rose sharply by 8 per cent annually over several years, it is likely that:
A sooner or later, there would be demand inflation
B the CAD would probably grow as more imports and foreign capital are sucked into the country.
C Both (A) and (B) are likely.
D Neither (A) nor (B) are likely.

Question 9
Assume that GDP at current market prices in year 1 was $200 million and in year 2 was $222 million. During this same period, the deflator price index for GDP rose from 100 to 111 points. From these data:
A It is not possible to calculate the value of GDP at constant prices for year 1.
B GDP at constant prices rose by $22 million over the two year period.
C GDP at constant prices fell.
D GDP at constant prices failed to rise or fall but remained constant.

Examine the hypothetical data in the table on page 130 for an economy very similar to Australia’s, and then answer questions 10 to 13.
Question 10
In 2005–06 and 2006–07, this domestic economy probably experienced:
A stability or economic bliss
B a boom
C a slowdown in economic activity
D stagflation.

Question 11
In 2008–09 and 2009–10, this economy probably experienced:
A domestic and external stability
B a boom internally and an improving external situation
C stagflation internally and a weakening external situation including a depreciating currency
D none of the above internal/external economic situations.

Question 12
It is likely that the internal or domestic economic situation existing in 2009–10 was caused by:
A excessive levels of AD
B an insufficiency of spending on domestic production and rises in cost inflation
C an inadequate level of AD and falling production costs
D expansionary budgetary policies.

Question 13
The external situation in 2009–10 was most likely caused by:
A high unemployment and government budget surpluses
B a slow rate of economic growth and a slow growth in the value of imports
C a loss of business confidence and a strong growth in exports
D rapid domestic inflation and a fundamental tendency for the value of total debits to exceed credits in international financial transactions.

Question 14
When demand-side conditions severely weaken the growth in AD:
A falling sales generally cause businesses to cut output to avoid rising stocks.
B firms are unlikely to change production and employment levels.
C firms are likely to lift their prices to make up for lost sales.
D firms usually undertake new capital expenditure on plant and equipment.

Question 15
All of the following generally explain how it has been possible for Australia to enjoy both quite strong economic growth and fairly stable prices simultaneously, between 1996–97 and 2005–06 except:
A rapid and successful structural change
B market deregulation, efficiency reforms of the public sector including privatisation
C generally good rises in worker productivity assisted by the spread of enterprise bargaining
D rising costs of materials used in manufacture.

Question 16
Which combination of the following factors best explains why the growth of chain volume GDP per head at (i.e. GDP/head constant prices) is an unsatisfactory measure of changes in living standards of a country?
(i) It takes no account of possible changes in work hours or the environmental impact of such production.
(ii) It gives no real indication of the actual distribution of income or production.
(iii) It takes no account of the rate in population growth.
(iv) It fails to take account of the negative externalities associated with increasing GDP.
A Factors (i) and (ii)
B Factors (ii) and (iii)
C Factors (i), (iii) and (iv)
D Factors (i), (ii) and (iv)

Question 17
Many goods and services provided by the government are not actually sold or marketed. Their contribution to GDP is therefore given a value equal to:
A zero
B an imputed value based on estimates of the cost of providing the goods and services for the community
C the value of profits earned in their production
D an imputed amount determined by the value earned in the production of comparable privately produced goods and services.

Question 18
Full employment is one of the Australian Government’s economic objectives. This is normally taken to mean:
A a zero rate of unemployment overall
B an almost zero rate of natural unemployment
C almost zero cyclical unemployment rate
D almost zero hard-core unemployment.

Question 19
Concerning the problem of unemployment and the NAIRU for Australia, which statement is false?
A Overall natural unemployment rates in the period 1996–97 to 2007 were higher than they were in the 1960s and 1970s.

### Table

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual CPI (%)</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Average unemployment rate (%)</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>TWI (index points)</td>
<td>100</td>
<td>120</td>
<td>98</td>
<td>80</td>
<td>65</td>
</tr>
<tr>
<td>Annual rate economic growth (%)</td>
<td>4.4</td>
<td>5.8</td>
<td>3.0</td>
<td>0.1</td>
<td>–2.0</td>
</tr>
</tbody>
</table>
A Full employment is a situation where up to about 5 per cent of the total labour force will be unemployed (partly as a result of an accelerated rate of structural change).
B Overall, unemployment is now much lower than in the 1950s because of the government’s new labour market policies.
C Full employment is a situation where up to about 5 per cent of the total labour force will be unemployed (partly as a result of an accelerated rate of structural change).
D The NAIRU is the unemployment rate below which inflation will start to accelerate.

**Question 20**
The ABS usually measures the unemployment rate by:
A surveying all workers
B calculating the percentage of the labour force who were able to work and who were actively looking for work but who were unable to find a job
C excluding all those people aged over 64 without jobs yet wanting work
D including all those who failed to work at least 35 hours per week.

**Question 21**
Weak demand-side conditions such as falling disposable income and lower consumer confidence are most likely to cause:
A cyclical unemployment
B natural unemployment
C structural unemployment
D frictional unemployment.

**Question 22**
New supply-side conditions including higher RULCs, increases in interest rate charges to firms, privatisation, corporatisation and company restructuring, are most likely to be associated with:
A cyclical unemployment
B structural unemployment
C frictional unemployment
D hard-core unemployment.

**Question 23**
Normally, which of the following is not a sign of weaker labour market conditions?
A Reduced job vacancies
B Increased overtime
C Falling participation
D Increased duration of unemployment

**Question 24**
For Australia, the unemployment rate was lowest in:
A 2005–06
B 2004–05
C 2003–04
D 2002–03.

**Question 25**
The impact of a high unemployment rate includes:
A wasted productive capacity and lower living standards
B a need for a higher tax burden on the employed than otherwise
C greater community social costs and less government money available for providing community services
D all of the above.

**Question 26**
The Australian Government’s goal of equity in the distribution of personal income does not mean:
A total equality in dividing the income cake
B that everyone should have the means to access basic goods and services
C the elimination of absolute poverty
D taxing the rich at a higher rate to avoid a widening income gap between the rich and the poor.

**Question 27**
One of the best measures of equity, the degree of inequality and access to basic goods and services in Australia is the Gini coefficient for:
A private or market income
B gross income
C disposable income
D final income.

**Question 28**
The Gini coefficient for income distribution in Australia during the 1990s and early 2000s shows:
A a generally falling Gini coefficient for gross income
B a generally low Gini coefficient for private income
C a Gini coefficient for disposable income of around 0.60
D more equity in the distribution of equivalised disposable income than for market or private incomes.

**Question 29**
In general, providing that stronger demand-side conditions do not become excessive, they tend to:
A promote greater income inequity, depriving poorer households of access to basic goods and services
B enhance equity by reducing cyclical unemployment which can be a major cause of low income and limited access to basic goods and services
C reduce job opportunities, career promotion and hours of paid overtime worked per week
D cause the poor to run down their wealth or assets.

**Question 30**
The supply-side factors which would generally tend to cause increased inequality in the distribution of incomes are:
A the existence of tax loopholes and restrictive trade practices among businesses that increase prices
B government labour market training programs for the unemployed
C the provision of free education and scholarships for the poor
D the promotion of Aboriginal land rights legislation and increases in the minimum school leaving age.

**Question 31**
External stability is an Australian Government economic objective. This seeks to:
A keep the CAD to zero or have a CAS
B keep the CAD:GDP ratio to around 3–4 per cent
C avoid any changes in the exchange rate indicated by changes in the TWI
D discourage all foreign borrowing or debt.
Question 32
Examine the following figures relating to a nation’s balance of payments for 2007–08. Assume that the country had a floating exchange rate.

<table>
<thead>
<tr>
<th>BALANCE OF PAYMENTS ITEM</th>
<th>$ MILLION (+ = SURPLUS, - = DEFICIT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net goods</td>
<td>+100</td>
</tr>
<tr>
<td>Net services</td>
<td>-50</td>
</tr>
<tr>
<td>Net incomes</td>
<td>-100</td>
</tr>
<tr>
<td>Net current transfers</td>
<td>+25</td>
</tr>
</tbody>
</table>

From these data, the balance of payments on current account would be:
A $125 million surplus
B $125 million deficit
C $175 million deficit
D none of the above.

Question 33
The CAD represents the extent to which:
A total debits for merchandise imports exceed total credits for merchandise exports
B total debits for imports of goods and services exceed total credits for exports of goods and services
C total income and transfer debits exceed credits
D the total value of debits exceeds credits for merchandise, services, incomes and current transfers.

Question 34
The demand-side and supply-side development most unlikely to cause an appreciation of the Australian dollar is:
A a rise in world commodity prices
B a recession in Japan and the United States
C higher domestic interest rates and the relaxation of controls on the level of foreign investment
D new discoveries of natural resources.

Question 35
The demand-side and supply-side development most unlikely to cause a depreciation of the Australian dollar is:
A a rise in federal government budget surplus
B a rise in consumer and business confidence associated with the onset of a boom in the level of domestic economic activity
C a drop in worker productivity
D a cut in R&D funding by the federal government.

Question 36
Which statement is generally false for Australia?
A Very strong levels of domestic economic activity usually cause a fall in the CAD.
B A weaker Australian dollar can actually help improve the balance of net goods.
C Rapid economic growth resulting in inflation can cause a fall in the TWI.
D In itself, foreign borrowing tends to weaken the balance of payments current account by raising the overall value of income debits relative to the overall value of income credits.

Question 37
Concerning strong rates of economic growth, which statement is false?
A Rapid economic growth is normally fairly compatible with fuller employment.
B Pursuing rapid economic growth by improving efficiency and cost cutting can lead to increased structural unemployment in the short term.
C Rapid economic growth is normally compatible with price stability.
D Rapid economic growth can result in negative externalities which can undermine qualitative aspects of general living standards.

Question 38
The pursuit and achievement of price stability by the government is likely to:
A worsen the CAD
B improve the purchasing power of low incomes thus promoting better equity in income distribution
C weaken the exchange rate for the Australian dollar
D conflict with long-term employment growth.

Question 39
Economic growth necessarily:
A raises the level of economic welfare
B raises the total real value of goods and services produced
C increases the level of non-economic living standards
D means that everyone will benefit equally from higher production.

Question 40
Economic growth is unlikely to raise the actual level of total welfare for most people when:
A there are negative externalities passed onto the community by business firms
B there are large income inequalities within the community
C the production requires a huge increase in the hours of work and reduced leisure time
D all of the above apply.

Question 41
The accuracy of the unemployment statistics is lowered due to:
A the existence of hidden unemployment
B the smallness of the survey sample
C both (A) and (B) above
D neither (A) nor (B) above.

Question 42
The accuracy of chain volume GDP as a measure of the real value of production in a country is limited, because:
A there are problems in making accurate adjustments for inflation or deflation
B there is a large black market or cash economy
C there are errors in imputing the value of production for some specially selected non-marketed goods and services
D all of the above exist.
Question 43
Which of the following supply-side factors would tend to increase cost inflation?
A Lower domestic interest rates
B A higher exchange rate for the Australian dollar
C A rise in the rate of company tax
D Reductions in indirect or direct tax rates

Question 44
Concerning the balance of payments account, which statement is false?
A The sale of Australian wool to Japan would be recorded as a debit on Japan’s balance of net goods.
B The payment of share dividends by Telstra to overseas shareholders would be recorded as a debit on Australia’s capital account.
C Investment by Ford of America in expanding its plant in Geelong and Broadmeadows would be initially recorded as an item on the financial account.
D The staging of the Soccer World Cup would be likely to strengthen Australia’s net services account.

Question 45
The ultimate economic objective of the Australian Government is:
A price stability
B rapid economic growth
C improved material living standards
D consumer sovereignty and economic freedom.

Question 46
An improvement in the terms of trade for Australia would not normally result from:
A falling export prices at a rate less than the fall in import prices
B rising export prices at a rate faster than that for import prices
C rapid economic growth in Japan, United States, and Asia generally
D depressed international commodity prices for minerals, wool and cereals.

Question 47
Which of the following factors is unlikely to result in higher rates of natural unemployment?
A A rapid growth in RULCs
B Overgenerous welfare benefits
C A fall in real GDP per worker and a reduction in the minimum school leaving age
D Falling bankruptcy rates and improved business profitability

Question 48
The dominant reason for Australia’s CAD is:
A the lack of domestic savings and relatively high local interest rates which encourage overseas borrowing and lead to income repayments abroad
B too many imports of merchandise and services
C a lack of export competitiveness and sales abroad
D Australia’s current transfer debits are too high.

Question 49
Which of the following would not be a general consequence of Australia’s failure to achieve price stability?
A A rising foreign debt
B A larger CAD
C Structural unemployment
D A redistribution of income in favour of fixed income earners and exporters

Question 50
Which of the following provides the least accurate definition of the government’s objective of efficiency in resource allocation?
A When overall opportunity costs associated with resource allocation increase
B When resources are used to maximise the satisfaction of society’s needs and wants
C When changing the allocation of resources, fails to increase production and satisfaction
D When resources are not wasted and production is at its optimum

Question 51
Concerning the aspects of efficiency, which of the following is least correct?
A Allocative efficiency usually involves having healthy competition in markets so that the price mechanism will direct resources into areas most wanted by consumers.
B Inter-temporal efficiency involves having a balance between needs and wants.
C Technical efficiency is about firms using best practice and the latest equipment in production.
D Dynamic efficiency is about helping firms and staff to become more adaptable to the changing trends and circumstances in the market.

Question 52
Which of the following is most likely to reduce efficiency in resource allocation?
A The onset of severe recession following a dramatic plunge in consumer and business confidence
B Capital deepening where there is a rise in the value of new equipment at a faster rate than the rise in the labour force
C Increases in R&D, human capital and educational retention rates in secondary and tertiary study
D The adoption of new technology and increases in investment by firms

Question 53
Which statement about the measurement of efficiency in resource allocation is least correct?
A Multi-factor productivity is a measure of the efficiency generated by the combined effects of various resources and is calculated by dividing the annual value of output (using GDP) by the overall cost of inputs purchased.
B GDP per hour worked is a measure of the efficiency of labour resources.
C During the period 1999–2004, there was a fall in the average growth rate of multi-factor productivity growth against the general level recorded in the 1970s and 1980s.
D Productivity was weaker in the period 1999–2004 than it was in the period 1994–99.
**Question 54**
Examine the hypothetical statistical data in table 3.9 relating to two commonly used measures of changes in a country’s productivity. Which statement is **least** correct?
A  Indicator 1 shows that productivity increased each year.
B  Indicator 2 shows a productivity fall in 2008–09 by around 7 per cent on 2006–07 levels.
C  Indicator 2 shows a productivity fall in 2008–09 on levels in the base year by exactly 6 per cent.
D  The fall in multi-factor productivity in 2008–09 is not likely to reflect the decline in the productivity of capital resources during the period.

**Table 3.9  Hypothetical productivity data for a country**

<table>
<thead>
<tr>
<th>INDICATOR OF PRODUCTIVITY</th>
<th>2006–07 (BASE YEAR)</th>
<th>2007–08</th>
<th>2008–09</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Index of GDP per hour worked</td>
<td>100</td>
<td>103</td>
<td>105</td>
</tr>
<tr>
<td>2. Index of multi-factor productivity</td>
<td>100</td>
<td>101</td>
<td>94</td>
</tr>
</tbody>
</table>

**Question 55**
Concerning efficiency in resource allocation, which statement is **incorrect**?
A  Greater efficiency leads to higher average incomes nationally.
B  Greater efficiency is compatible with the objective of external stability.
C  Greater efficiency may conflict with low unemployment because, in the short term, it can cause higher structural unemployment.
D  Greater efficiency is incompatible with stability of costs and prices.

**STRUCTURED SHORT-ANSWER QUESTIONS or applied economic exercises for your folio**

**Instructions:** Your teacher **may** direct you to complete a selection of exercises made from the following questions.

**Question 1**
A  Accurately define what is meant by the Australian Government’s **objective of price stability**. (3 marks)
Examine the CPI data in table 3.10 showing trends in Australia’s inflation rate, before answering the questions that follow:
B  What is the Consumer Price Index (CPI)? Outline how the ABS goes about constructing it. (3 marks)
C  Identify and briefly describe two important weaknesses of using the CPI as a measure of Australia’s inflation rate. (3 marks)
D  Using table 3.10 (updating it if possible), calculate the CPI inflation rates for all years from 1997–98 onwards. Use the inflation rates you have just calculated to plot a graph showing changes in Australia’s inflation rate. On this graph, clearly label the various phases in Australia’s inflation rate from 1997–98 onwards. (3 marks)
E  Identify and explain the **two main factors** that have affected Australia’s inflation rate during the past 10 years to 2006. In addition, illustrate and explain the effects of these factors using two fully labelled AD–AS diagrams (each showing the ‘before’ and ‘after’ effects of the factor). Try to illustrate your explanation with examples and specific statistical evidence drawn from the past 10 years. (8 marks)
F  Explain how you would expect a lower inflation rate to affect each of the following. (3 + 3 = 6 marks)
   - The distribution of income between various groups making up Australian society.
   - The value of exports, imports and the size of the CAD.
G  Explain **two reasons** why the federal government considers a low inflation rate to be a very important economic objective. (2 marks)

**Table 3.10  Trends in Australia’s CPI as a measure of inflation**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI at June (1989–90 = 100)</td>
<td>121.0</td>
<td>121.0</td>
<td>122.3</td>
<td>126.2</td>
<td>133.8</td>
<td>137.6</td>
<td>141.3</td>
<td>144.8</td>
<td>148.4</td>
<td>154.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Data derived from **RBA Monthly Bulletin**.
H Explain how you would expect a continuation of the general downward trend in unemployment shown in figure 3.37 to affect Australia’s inflation rate. (3 marks)

Figure 3.37 Trends in Australia’s unemployment rate (percentage)
Source: Data derived from ABS 1350.0.

I What is the difference between the normal CPI inflation rate and the underlying inflation rate? (3 marks)

J Explain how any two of the following factors would affect the achievement of price stability in Australia: (2 + 2 = 4 marks)

- The 25 per cent appreciation of the A$ between 2000–01 and 2005–06.
- A rise in oil prices from $25 to US$78 per barrel between 1999 and 2006.
- The recent drought and dry seasons between 2002–07 or the 2006 cyclone in coastal Queensland.
- A fall in RULCs (e.g. 2001–05) or a faster rise in labour productivity (e.g. 2001–02).
- An increase in the rate of the GST (an indirect tax) from 10 per cent to 12.5 per cent.

Question 2

A Explain what is meant by the Australian Government’s objective of a sustainable rate of economic growth. (2 marks)

B How is the rate of economic growth generally measured by the ABS? Outline two important limitations or inaccuracies of this measure of economic growth. (2 + 2 = 4 marks)

Examine table 3.11 (below) showing recent trends in Australia’s rates of economic growth and unemployment.

C ‘In the long term, strong and sustainable rates of economic growth can only be achieved if there is increased productive capacity. However, in the short term, economic growth will not occur unless the level of aggregate demand also grows steadily.’

(i) Explain the meaning of the term, productive capacity. (2 marks)

(ii) From the following, select and explain one demand-side factor that would be likely to increase aggregate demand and economic growth, and one other demand-side factor would be likely to slow aggregate demand and economic growth:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased budget surplus (e.g. 2002–03 to 2005–06)</td>
<td>Increase in aggregate demand and economic growth</td>
</tr>
<tr>
<td>Stronger economic activity among our overseas trading partners (e.g. US)</td>
<td>Increase in aggregate demand and economic growth</td>
</tr>
<tr>
<td>Increased Australian interest rates (e.g. as occurred between 1992 and 2006)</td>
<td>Slow aggregate demand and economic growth</td>
</tr>
<tr>
<td>A reduced rate of company tax (e.g. 2000–02) or PAYG income tax (e.g. 2005–06)</td>
<td>Slow aggregate demand and economic growth</td>
</tr>
<tr>
<td>Lower consumer and business confidence in Japan</td>
<td>Slow aggregate demand and economic growth</td>
</tr>
<tr>
<td>Increased budget outlays as a percentage of GDP from 20 to 25 per cent.</td>
<td>Slow aggregate demand and economic growth</td>
</tr>
</tbody>
</table>

D Identify, define and explain how any two important supply-side factors have affected Australia’s rate of economic growth in the past 10 years to 2007. Illustrate the before and after effects of these factors on a labelled AD–AS diagram. Where possible, quote supportive statistical evidence or examples to show a cause and effect relationship. (6 marks)

E Explain two important economic problems that would arise if Australia’s rate of economic growth were consistently running at around 5–6 per cent a year. (4 marks)

F Quoting statistical evidence from table 3.11, explain the type of relationship that exists between the growth in Australia’s GDP and the unemployment rate. (3 marks)

G (i) Given the information for a country contained in table 3.12 (p. 136), calculate the chain volume GDP for year 2, showing your basic working. (3 marks)

(ii) Briefly outline why it is necessary for the ABS to make these adjustment to the value of GDP at market prices. (1 + 2 = 3 marks)

Table 3.11 Trends in Australia’s rates of economic growth and unemployment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage chain volume GDP (reference year is 2003–04)</td>
<td>3.8</td>
<td>4.5</td>
<td>5.2</td>
<td>4.0</td>
<td>1.9</td>
<td>3.8</td>
<td>3.2</td>
<td>4.0</td>
<td>2.6</td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage labour force unemployed</td>
<td>8.3</td>
<td>8</td>
<td>7.4</td>
<td>6.6</td>
<td>6.4</td>
<td>6.7</td>
<td>6.1</td>
<td>5.8</td>
<td>5.3</td>
<td>5.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data derived from ABS, 1350.0.
H Explain how any two of the following factors would tend to affect Australia’s rate of economic growth:
- the drought and series of dry seasons (e.g. 2002–07)
- a fall in labour productivity
- a fall in the exchange rate for the A$ (i.e. real GDP)
- infrastructure bottlenecks or shortages
- an ageing population.

I Explain how a slowdown in the rate of economic growth would affect any two of the following: (2 + 2 = 4 marks)
- material living standards and equity
- the level of negative externalities
- the size of the trade or CAD
- the unemployment rate
- the inflation rate.

Question 3
A Define the government’s objective of full employment. (3 marks)
B Briefly explain two accuracy limitations of unemployment statistics. (2 marks)
C Examine table 3.13.

### Table 3.12
**Data for calculating chain volume GDP**

<table>
<thead>
<tr>
<th>DATA FOR THE CALCULATION</th>
<th>YEAR 1</th>
<th>YEAR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP at current or market prices</td>
<td>$100 million</td>
<td>$110 million</td>
</tr>
<tr>
<td>Chain price index (year 1 is the reference year for chain volume GDP in year 2)</td>
<td>100 points</td>
<td>105 points</td>
</tr>
<tr>
<td>Calculate the value of chain volume GDP for year 2 (i.e. real GDP)</td>
<td>$100 million</td>
<td>$ …… million</td>
</tr>
</tbody>
</table>

D Examine the data in table 3.14 relating to Australia’s labour market conditions to 2005–06, before answering the questions that follow.

### Table 3.13
**Australia’s population and labour force estimates, 2005–06**

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>PERSONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population of Australia</td>
<td>20 600 000</td>
</tr>
<tr>
<td>Total number of persons aged over 15 years</td>
<td>16 442 000</td>
</tr>
<tr>
<td>Number of people employed</td>
<td>10 065 000</td>
</tr>
<tr>
<td>Number of people unemployed</td>
<td>539 500</td>
</tr>
</tbody>
</table>

Use the data to calculate each of the following: (4 marks)
- (i) the size of the labour force
- (ii) the unemployment rate
- (iii) the employment rate
- (iv) the participation rate.

### Table 3.14
**Trends in Australia’s labour market indicators**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (percentage labour force)</td>
<td>8.3</td>
<td>8.0</td>
<td>7.4</td>
<td>6.6</td>
<td>6.4</td>
<td>6.7</td>
<td>6.1</td>
<td>5.8</td>
<td>5.3</td>
<td>5.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual rise in the number of part plus full time employed (percentage)</td>
<td>1.0</td>
<td>1.4</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
<td>1.2</td>
<td>2.5</td>
<td>1.8</td>
<td>3.0</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual percentage change in the rate of unemployment</td>
<td>3.9</td>
<td>−3.5</td>
<td>−6.5</td>
<td>−9.2</td>
<td>−11.1</td>
<td>7.1</td>
<td>−5.9</td>
<td>−6.2</td>
<td>−6.9</td>
<td>−0.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate 15–19 (percentage)</td>
<td>28</td>
<td>27.4</td>
<td>25.2</td>
<td>21.9</td>
<td>22.6</td>
<td>24.2</td>
<td>22.5</td>
<td>21.4</td>
<td>20.1</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation rate (percentage)</td>
<td>63.6</td>
<td>63.4</td>
<td>63.1</td>
<td>63.4</td>
<td>63.4</td>
<td>63.7</td>
<td>63.5</td>
<td>64.0</td>
<td>64.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term unemployed as a percentage of total (at June)</td>
<td>29.2</td>
<td>31.6</td>
<td>31.9</td>
<td>28.7</td>
<td>23.1</td>
<td>22.2</td>
<td>21.9</td>
<td>21.2</td>
<td>19.0</td>
<td>17.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number unemployed (‘000)</td>
<td>765</td>
<td>738</td>
<td>690</td>
<td>626</td>
<td>620</td>
<td>663</td>
<td>624</td>
<td>586</td>
<td>546</td>
<td>539</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual total job vacancies (‘000)</td>
<td>77.4</td>
<td>90.0</td>
<td>108.2</td>
<td>112.4</td>
<td>106.2</td>
<td>91.5</td>
<td>104.1</td>
<td>110.7</td>
<td>138</td>
<td>143</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index of aggregate weekly hours worked (1997–98 = 100)</td>
<td>98.9</td>
<td>100.0</td>
<td>101.9</td>
<td>98.2</td>
<td>100.0</td>
<td>98.1</td>
<td>100.0</td>
<td>101.7</td>
<td>102.9</td>
<td>103.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Data derived from ABS 1350.
(i) Using supportive statistics drawn from Table 3.14, describe the general trend in Australia’s overall labour market conditions over the period (or update by using the Internet to analyse recent data using the RBA Monthly Bulletin or ABS 1350.0). (3 marks)

(ii) From the following, select one important demand-side factor and one important supply-side factor, and explain how each has recently affected Australia’s labour market conditions. Quote statistical data to show this cause and effect relationship. (3 + 3 = 6 marks)

- the change in government budget outcome
- RULCs
- changes in overseas economic activity
- domestic consumer confidence
- moves in the exchange rate for the A$
- changes in interest rates
- business confidence in Australia.

E Quoting statistical evidence from the Table 3.14, evaluate the extent to which the federal government has actually achieved its objective of full employment in the years since 2000–01. (3 marks)

F Briefly explain three major differences between cyclical and natural unemployment. (3 marks)

G Explain two important causes of structural unemployment, giving examples of each drawn from Australian experience. (3 marks)

H Examine the data contained in Table 3.15 before answering the question that follows.

What is meant by the non-accelerating inflation rate of unemployment (NAIRU)? Referring to economic relationships, explain how a continued move towards a lower unemployment rate in 2006–07, may affect the government’s achievement of price stability. (4 marks)

I Full employment should help in the achievement of a more equitable distribution of personal income. Explain what this statement means. (3 marks)

J Explain how a federal government priority of reducing the level of unemployment below about 5 per cent may conflict with the achievement of external stability. (3 marks)

Question 4

A Explain the government’s objective of external stability. (3 marks)

B Use Table 3.16 to calculate the following balance of payments items for Australia, 2005–06. Please show your working. (5 x 1 = 5 marks)

(i) net goods
(ii) net services
(iii) net incomes
(iv) net current transfers
(v) the balance of payments current account.

C (i) What is meant by the current account deficit (CAD) and, recently, how big is it? (2 marks)

(ii) From the following list, select and explain two demand-side factors and two supply-side factors that have affected the size of Australia’s CAD in the past 10 years. Where possible, illustrate your answer with reference to some specific factors or events, and quote statistical evidence to show the cause and effect relationship. (2 + 2 + 2 + 2 = 8 marks)

- the recent drought (e.g. 2002–07)
- rapid economic growth in China and the US (e.g. 2005–06)

Table 3.15 Trends in Australia’s unemployment and inflation rates

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment (percentage of labour force)</td>
<td>8.3</td>
<td>8</td>
<td>7.4</td>
<td>6.6</td>
<td>6.4</td>
<td>6.7</td>
<td>6.1</td>
<td>5.8</td>
<td>5.3</td>
<td>5.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual CPI (percentage change)</td>
<td>1.3</td>
<td>0.0</td>
<td>1.2</td>
<td>2.4</td>
<td>6.0</td>
<td>2.8</td>
<td>2.7</td>
<td>2.8</td>
<td>2.5</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data derived from ABS 1350.0.

Table 3.16 Australia’s balance of payments for 2005–06

<table>
<thead>
<tr>
<th>ITEM</th>
<th>VALUE ($’000 MILLIONS)</th>
<th>ITEM</th>
<th>VALUE ($’000 MILLIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods credits</td>
<td>154</td>
<td>Income credits</td>
<td>25</td>
</tr>
<tr>
<td>Goods debits</td>
<td>170</td>
<td>Income debits</td>
<td>62</td>
</tr>
<tr>
<td>Services credits</td>
<td>38</td>
<td>Current transfers credits</td>
<td>4</td>
</tr>
<tr>
<td>Services debits</td>
<td>39</td>
<td>Current transfers debits</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Data derived from ABS 5302.0.
the 25 per cent rise in the exchange rate for the A$ (e.g. 2000–01 to 2005–06)
a rise in international terrorism, avian bird flu and mad cow disease in the UK, US and elsewhere
the staging of the World Soccer Cup in Melbourne
a sustained fall in labour productivity (e.g. 2002–06)
Australia’s record high in its terms of trade index (e.g. 2005–06)
a rise in oil prices to over US$100 per barrel
a further decline in the level of national savings
a large government budget surplus (e.g. 2002–07)
a decline in consumer and business confidence in the US, Japan and China
record levels of domestic business confidence
rises in the interest rate differential with higher rates in Australia relative to those overseas
speculation the exchange rate for the A$ will fall shortly.

D How is Australia’s exchange rate determined? Illustrate this diagrammatically for the foreign exchange market.
(2 + 1 = 3 marks)

E Giving clear reasons, explain how each of the following events would be likely to affect the exchange rate for the A$: (8 × 2 = 16 marks)
a rise in domestic interest rates (e.g. 2002–06) (2 marks)
slower economic activity overseas (e.g. 2000–02) (2 marks)
rising business and consumer optimism in Australia (e.g. generally 2003–06) (2 marks)
speculation of a future rise in A$ next week (2 marks)
a rise in the Terms of Trade as in 2003–04–05 (2 marks)
a rise in interest rates in the US, relative to those in Australia (2 marks)
a fall in RULCs in Australia (2 marks)
a massive increase in defence spending on new equipment. (2 marks)

F Thinking about economic relationships, explain how the recent appreciation of the exchange rate for the A$ (i.e. 2000–01 to 2005–06) is likely to affect any two of the following: (4 + 4 = 8 marks)
• the size of the CAD
• the levels of aggregate demand (AD), economic growth and unemployment
• the rate of inflation and price stability
• the distribution of personal income.

G Australia has a huge NFD of over $500 billion.
(i) What is the NFD? (1 mark)
(ii) Outline two important reasons why Australia’s debt is large and growing. (2 marks)
(iii) Outline one cost and one benefit to Australia of our NFD. (2 marks)

H Giving reasons, briefly explain how each of the following developments would affect Australia’s NFD.
(i) a change in the policy of the federal government involving a return to large budget deficits (2 marks)
(ii) the household savings ratio rises dramatically from its current low level. (2 marks)

I There is a three-way relationship between the size of the CAD, NFD and level of the TWI or exchange rate for the A$.

Explain this relationship, giving examples of how changes in each of these might affect the others. (6 marks)

Question 5
A Define the government’s objective of an efficient allocation of resources. (2 marks)

B There are four main aspects of efficiency: allocative, technical, inter-temporal and dynamic. Explain how two demand-side factors and two supply-side factors or events from the following list, would affect the level of efficiency in Australia’s allocation of resources. (2 + 2 + 2 = 8 marks)
a severe inflationary boom caused by over-optimism by households and firms
capital widening
a rapid take-up in the application of new technology by firms
a rise in the level of industrial unrest and strikes, including a ban on unpaid overtime
an extension of the performance-based pay system, the abolition of the minimum wage and the removal of the unfair dismissal laws
the drought in rural areas (e.g. 2002–03 to 2005–06)
stronger levels of business confidence
a rise in interest rates by the RBA (e.g. as in 2005 and 2006)
reduced tax rates on company profits and capital gains
the signing of a free trade agreement (FTA) with China
a sudden drop in the level of economic activity.

C Explain how the ABS measures labour productivity. How does this indicator vary from multifactor productivity as a measure of efficiency? (4 marks)

D (i) Using table 3.17, calculate the annual percentage rise in the index of GDP per hour worked for a hypothetical country for both 2007–08 and 2008–09. Show your basic working. (1 mark)

Table 3.17 Index of GDP per hour worked for a hypothetical country

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Index of GDP per hour worked (2006–07 = 100 = base year)</td>
<td>100</td>
<td>98</td>
<td>105</td>
</tr>
</tbody>
</table>

(ii) Outline how one important supply-side factor may account for the trend, over the period. (2 marks)

E Australia’s Productivity Commission stated that:
‘... improvements in productivity can initially accrue to consumers and firms in the form of lower prices, to labour in the form of higher wages, to capital owners in the form of greater profits, improved product quality or as a combination of these possibilities . . . The general result is that productivity improvements stimulate gains in output, incomes (real wages), consumption, employment and government revenue.’

Thinking about economic relationships, explain how rises in productivity are largely compatible with any two of the following government objectives: (4 + 4 = 8 marks)

- increased rates of economic growth
- improved equity in personal income distribution through higher wages and incomes for workers, and increased government tax revenues available for use
- improved price stability
- greater employment
- improved external stability and a lower CAD.

Question 6

A What is meant by the government’s objective of an equitable distribution of personal income? (2 marks)

B Explain the meaning of each of the following terms:
   (i) private income (1 mark)
   (ii) disposable income (1 mark)
   (iii) final income (1 mark)
   (iv) the Gini coefficient. (1 mark)

C Before answering the following questions, examine figure 3.38 showing the changes in Australia’s distribution of equivalised mean disposable income, 1994–95 to 1999–2000.

   (i) Explain what is meant by the term, equivalised mean disposable income by quintile. (1 mark)
   (ii) How does this graph show that there is income inequality in Australia? Using figures, contrast the incomes of quintiles 1 and 5. (1 mark)

D Identify and explain two important factors that cause great inequality in the distribution of private incomes in Australia. (2 + 2 = 4 marks)

E Explain how any three of the following factors or events would affect Australia’s distribution of personal income. (2 + 2 + 2 = 6 marks)

   - a sustained and dramatic dive in the level of domestic consumer confidence
   - higher inflation and substantial rises in interest rates
   - a fall in the A$
   - a rise in business bankruptcy rates
   - a decline in union membership rates as a percentage of the labour force.

F What is meant by the poverty line? Explain one problem associated with using this measure, as an indicator of the distribution of personal income. (3 marks)

G Explain clearly how the pursuit of a more equitable distribution of personal income as a government priority, may have a conflicting relationship with any one of the following government goals:

   - efficiency in resource allocation and economic growth
   - price stability
   - full employment.

Illustrate your answer by reference to specific government income redistribution policies. (2 marks)

Figure 3.38 Australia’s changing level of equivalised mean disposable income ($ per week) by quintile — 1996–97 to 2002–03

Source: Data derived from ABS, 6523.0 (released 2004).
WRITTEN report

Outline: Your teacher may direct you to complete a written report as a school-based assessment task for Unit 3, Outcome 2. The following will give you an idea of what could be expected in the written report. The task may involve writing a 1000-1200 word report in 120-150 minutes of class time over 1 week. It will be marked out of 60 marks or 60 per cent of the total assessment for Unit 3. The precise report topic needs to reflect any specific details set down by the VCAA in its latest Assessment guide. You may be required to select and report on the performance of only one Australian Government economic objective (i.e. price stability, or economic growth, or full employment, or external stability or equity in the distribution of income or efficiency in resource allocation) during the past 10 years.

Example: A written report about the ‘objective of price stability’.

Instructions:
- This assessment task requires that you prepare a written report about the government’s ‘objective of price stability’. As outlined in the week prior to sitting this task, the report has three main parts to it, each with several sub-sections. The total class time allowed for this task is about 120 minutes, with one of the three parts of the report to be completed every lesson.
- In writing your report, you may refer to the approved materials that you have been allowed to bring into class (e.g. facts and example sheets, summary notes). Where appropriate, indicate the primary origin of the statistical information used (i.e. by acknowledging its source).
- Your work will be collected at the end of each lesson and handed out at the start of the next lesson.

Written report part 1: Australia’s performance relating to ‘price stability’ (20 marks total)
1. Clearly but concisely define what is meant by the government’s current objective of ‘price stability’. (4 marks)
2. Explain the important features of the CPI as a measure of the inflation rate. (4 marks)
3. Neatly draw, label and scale the axes, and appropriately title a compact-sized line graph showing changes in Australia’s inflation rate over the 10 years between 1996–97 and 2005–06. On this graph, clearly show and label the main phases in Australia’s inflation rate. (3 marks)
4. Beneath the graph, use figures to clearly describe the trend during each of the phases of Australia’s inflation rate over the 10 years between 1996–97 and 2005–06. (6 marks)
5. Referring to the graph, to what extent has the Australian Government successfully achieved its target representing ‘price stability’ during the 10 years between 1996–97 and 2005–06? (3 marks)

Written report part 2: Economic theory explaining changes in Australia’s inflation rate. (26 marks total)
1. Clearly explain in general theoretical terms (perhaps referring to a small, neat and fully labelled AD–AS diagram), how excessively strong demand-side conditions can sometimes affect the rate of inflation. (8 marks)
2. Briefly define what is meant by consumer confidence. Carefully explain how changes in the level of consumer confidence, as a specific demand-side factor, might be expected to affect Australia’s inflation rate. Illustrate your answer with actual statistical evidence of the possible link between consumer confidence and the level of inflation over the last 10 years. (5 marks)
3. Clearly explain in general theoretical terms (perhaps referring to a small, neat and fully labelled AD–AS diagram), how unfavourable supply-side conditions can affect the rate of inflation. (8 marks)
4. Briefly define what is meant by worker productivity. Carefully explain how changes in the level of worker productivity, as a specific supply-side factor, might be expected to affect Australia’s inflation rate. Illustrate your answer with actual statistical evidence of the possible link between worker productivity and the level of inflation over the last 10 years. (5 marks)

Written report part 3: Relationships between government economic objectives. (14 marks total)
Examine table 3.18 containing data relating to trends in selected economic objectives for Australia.
1. Briefly define what is meant by a compatible relationship as well as a conflicting relationship between government economic objectives. (2 marks)
2. Explain, in theoretical terms, the type of relationship that generally exists between price stability and external stability. Quote actual figures to provide at least one example that supports this relationship you have just described. (6 marks)
3. Explain, in theoretical terms, the type of relationship between price stability and economic growth. Quote actual figures to provide at least one example that supports this relationship you have just described. (6 marks)

Table 3.18 Trends in indicators of economic performance for Australia

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI (annual percentage)</td>
<td>1.3</td>
<td>0</td>
<td>1.2</td>
<td>2.4</td>
<td>6</td>
<td>2.8</td>
<td>2.7</td>
<td>5.5</td>
<td>6.2</td>
<td>5.5</td>
<td>5.2</td>
<td>2.6</td>
<td>5.1</td>
</tr>
<tr>
<td>CAD:GDP (percentage)</td>
<td>3.2</td>
<td>4</td>
<td>5.6</td>
<td>5</td>
<td>2.6</td>
<td>2.6</td>
<td>5.1</td>
<td>5.6</td>
<td>6.4</td>
<td>5.8</td>
<td>4.5</td>
<td>5.2</td>
<td>4</td>
</tr>
<tr>
<td>GDP (annual percentage)</td>
<td>3.8</td>
<td>4.5</td>
<td>5.2</td>
<td>4</td>
<td>1.9</td>
<td>3.8</td>
<td>3.2</td>
<td>4.1</td>
<td>2.7</td>
<td>2.8</td>
<td>3.8</td>
<td>4.5</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Source: Data derived from ABS 1350.0.
**A REPORT IN *multimedia format***

**Outline:** Your teacher may direct you to complete a report in multi-media format as a school-based assessment task for Unit 3, Outcome 2. The following will give you an idea of what could be expected in this report.

The task involves:
- creating a set of overhead transparencies accompanied by a set of explanatory notes
- creating a set of slides using a computer-generated PowerPoint presentation incorporating a set of explanatory notes
- creating a web page or website accompanied by a set of explanatory notes.

In all cases, the explanatory notes should be in the range of 700–900 words completed in 120–150 minutes mainly of class time during a 1 week period. It will be marked out of 60 marks or 60 per cent of the total assessment for Unit 3. The precise report topic needs to reflect the relevant assessment criteria set down by the VCAA in its latest *Assessment guide*. You may be required to select and report on the performance of only one Australian Government economic objective (i.e. price stability, or economic growth, or full employment, or external stability, efficiency in resource allocation or equity in the distribution of income) during the past 10 years. More specifically, you will need to ensure that your report meets any specific criteria stated by the VCAA.

**Note:** For more information, see the details about the assessment criteria found in the latest VCAA *Assessment guide*.

**References:** This task allows you to consult your study notes (e.g. on chapters 2 and 3). However, it requires the citation of all sources of information.

**Equipment:** If this task is selected for school assessment, clearly you need access to and some competence with technology.
- A PowerPoint presentation requires access to a computer installed with the necessary Microsoft software.
- The creation of overhead transparencies involves less technology, perhaps a printer connected to a computer using special acetate sheets or photocopying your printed masters onto special acetate sheets.
- Internet access to ABS and RBA databases
- Creating a web page or website requires that your computer is installed with the relevant software.

**Presentation:** You may like to consider the following ideas:
- Having obtained a copy of the report topic from your teacher and a copy of the relevant and latest VCAA assessment criteria, plan your report's structure carefully to cover all aspects.
- Divide your report systematically into paragraphs and use subheadings to break up the work. You may use the example provided earlier, for a written report as a guide for headings and sections. Ensure that your explanations are clear and relevant.
- Use Excel formatted supportive statistical and graphical evidence which is sourced covering the last 10 years. This must be explained and integrated into your answer.
- Meet the submission deadline set by your teacher.

**OTHER *learning activities***

Have you tried the following learning activities in your class recently?

**1. Web Quest**

Visit the website for this book and click on the Weblinks for this chapter (see Weblinks, page 310).

Use the Internet to research some of the following:
- ABS, Treasury and RBA data covering recent trends in, for example, unemployment, inflation, economic growth, productivity, the distribution of income and the CAD-GDP ratio.
- The annual reports of the Productivity Commission and its recent investigations.
- The Department of Foreign Affairs and Trade.
- Research about income distribution.
- Wider aspects of Australia’s economic performance reported in newspapers or magazines using various search engines.

The information collected could be used to prepare a short report about how well the Australian economy has performed during the last three years in terms of achieving the Australian Government’s economic objectives.

As always, teachers are strongly advised to check all website addresses listed in this text for suitability, appropriateness of content, operation and accuracy, before asking students to conduct research.

Alternatively, as noted by the VCAA in its ‘Advice to teachers’ (see latest Economics, VCE Study Design), the use of ICT might include the following fill-in-the-blank, Internet-based activities:
- hotlists
- scrapbooks
- treasure hunts
- subject samplers.

Additionally, the VCAA lists some interactive websites for students to access (see latest VCE Study design).

**2. Class debate**

Select one of the following:
- ‘That price stability should be the government’s main economic objective, not economic growth’
- ‘That strong economic growth will always guarantee low unemployment’
- ‘That foreign debt can be good’.

**3. Crosswords**

Construct a crossword using terminology and knowledge about Australia’s economic objectives and performance.
4. **Make a video**
Encourage students to make a short video about *one* of the following topics:
- The nature, causes and solutions to the problem of structural unemployment in the local area
- Demand and supply-side obstacles facing the growth of local businesses.

5. **Wall charts**
Get students to prepare wall charts for display which graph the latest trends in Australia’s indicators of economic performance. The graphs may include GDP, inflation, unemployment, CAD:GDP, and the growing deviation between minimum award wages and AWEs. The fastest way of doing this is to use a computer with Microsoft Excel and Internet access. This means that data can be easily updated as new figures are released each month or quarter.

6. **Team quiz**
Divide the class into teams. Members can consult each other when it is their turn to answer questions about economic activity in Australia. The teacher would need to prepare the questions beforehand. The winning team may even be awarded a prize. A variation of this is the *Economics Wheel of Fortune* using numbered questions and token prizes.
The six government objectives
The Australian Government actively pursues six main intermediate economic objectives in an effort to ultimately increase our material living standards (economic welfare). These objectives include price stability, sustainable economic growth, full employment, external stability, efficiency in resource allocation and an equitable distribution of income and wealth. This chapter examined each of these objectives in terms of its definition, its effects, the measurement, recent trends, causes, recent influences, government performance, and the relationships with other economic objectives.

Price stability
The objective of price stability now means achieving a slow annual inflation rate averaging around 2–3 per cent. Unfortunately inflation sometimes exceeds this target due to excessively strong demand in a fully employed economy (demand inflation). Alternatively, rising production costs caused by adverse supply-side conditions (cost inflation) can also cause inflation. The inflation rate is measured by the CPI which measures the average weighted price change in a basket of goods and services purchased by metropolitan households. However, there are limitations to the accuracy of this measure. Since experiencing high inflation in the 1980s due to demand- and supply-side conditions, the inflation rate between 1996-97 to 2007 has generally been much slower and price stability has been better achieved. The performance in this objective has either a compatible and conflicting relationship with other government economic objectives. Typically for instance, improved price stability can mean slower economic and employment growth in the short term, but it can also help improve external stability and equity.

Sustainable economic growth
The objective of sustainable economic growth is to achieve a steady annual rise of about 4 per cent in the volume of goods and services produced nationally. This is measured by the chain volume GDP. However, this measure is not without its limitations, including the problem caused by excluding household non-market activity, the need to impute a value for the production of some important items, and the problem of how to exclude the impact of price changes on the value of production. Demand-side factors (e.g. consumer and business confidence) can determine the timing of cyclical booms and recessions and the extent to which the economy’s productive capacity is actually used, thus affecting the rate of economic growth. By contrast, structural or supply-side factors (e.g. productivity, profitability and wage costs) can alter the speed limit, long-term capacity and willingness of firms to expand and increase production or supply. Improved supply-side efficiency means that more output can be produced from the same inputs or resources. These two sets of factors have combined to affect Australia’s growth rate during the past decade, but since the recession of the early 1990s, growth during the period 1996-97 to 2007 has generally been quite strong. In turn strong economic growth has conflicted with price stability and a low CAD, but is compatible with equity and full employment.

Full employment
The objective of full employment involves avoiding cyclical unemployment caused by a cyclical recession and weak demand-side conditions. However, the government’s acceptable target of a 5–6 per cent unemployment rate recognises the existence of a low level of natural unemployment caused by structural (the main cause), frictional, seasonal and hard-core factors. These latter elements reflect supply-side structural conditions. The unemployment rate, along with other labour market indicators, is measured by means of the ABS Labour Force survey. However, these data can be misleading because of problems, including the measurement of hidden unemployment, the increase in casual work and possible survey error. Demand- and supply-side conditions have changed, thereby affecting the trends in Australia’s unemployment rate during the past decade to 2007. Following high cyclical unemployment levels in the early 1990s, the unemployment rate generally fell to a 30-year low of 4.5 per cent in March 2007. Today unemployment is mostly structural unemployment. In turn, low unemployment has impacted (sometimes favourably) on the achievement of other government economic objectives including equity, price stability, efficiency, external stability and economic growth.

External stability
The objective of external stability means that Australia should ‘pay its way’ in its international trade and financial transactions without payment putting undue downward pressure on the A$. This means avoiding a CAD:GDP ratio above 3–4 per cent, a large unproductive NFD and associated debt servicing problems and an erratic and uninformed depreciation of the exchange rate. Thus the objective can be measured by these three main indicators. Both changes in demand- and supply-side conditions can affect the level of external stability. For instance, excessively strong demand-side conditions often cause inflation, higher interest rates and shortages of domestically produced goods and services. This leads to a cyclical blow-out in the CAD, a weaker Australian dollar and a rise in the NFD and its associated interest repayments. However, adverse supply-side conditions (e.g. the lack of national savings) account for the structural problems externally. During the past decade, Australia has not often achieved external stability, as seen by our generally high CAD:GDP ratio of over 4 per cent. In turn, this performance has impacted on other objectives including economic growth and full employment.

Equity in income distribution
The objective of an equitable distribution of personal income means ensuring that everyone has access to basic goods and services so that all can enjoy reasonable living standards without the threat of absolute poverty. There are a number of measures of
distribution including the share of income (market, gross, equivalised disposable, social wage and final income) by quintile which relies on infrequent ABS Income survey data. The disposable income and social wage income Gini coefficients are especially useful measures. Additionally, there are supplementary measures including estimates of poverty rates, the wage/profit shares of GDP, the ratio of female to male average weekly earnings, and some private estimates of the distribution of wealth. Recently, income inequality appears to have increased using most measures, but even so, the poor are now richer than before and enjoy improved living standards. Again, demand- and supply-side institutional factors have helped to shape Australia’s pattern of growing inequality in the distribution market gross, disposable and final incomes. In turn, the pattern of income distribution impacts on other government economic objectives including economic growth, full employment, efficiency and price stability.

**Efficiency in resource allocation**

The objective of improved efficiency in resource allocation means producing more with less so that resources are used to maximise national output and the satisfaction of society’s needs and wants. A labour productivity target of around 1.5 per cent to 2 per cent may be an appropriate level. Efficiency implies that opportunity costs are minimised, and unemployment and inflation avoided. There are two main measures of efficiency in resource allocation — the Index of GDP per hour worked and the Index of Multi-factor Productivity, although there are accuracy limitations of both indicators. Both these measures seek to assess the changes in the level of output per unit of input of resources per year. During the period 1994 to 1999, there was a marked rise in Australia’s productivity, but rates slowed in the cycle 1999–2004. Supply-side factors (e.g. structural change by firms, introduction of new technology, investment levels, spending on human capital, strike rates, work practices, government microeconomic policies) are easily the most important influence on the level of efficiency. However, productivity moves cyclically due to the ups and downs in economic activity following changes in demand-side conditions. Generally, greater efficiency in resource allocation is compatible with most other government objectives (e.g. economic growth, external stability, price stability, and even full employment and equity in the long term).