There has been a spectacular growth in global trade, from around 2 per cent of the world’s GDP in AD 1500 to around 60 per cent by 2016. Each year international trade in goods alone generates over $40 trillion (US) worth of production globally. This creates jobs, generates incomes, provides access to cheaper goods and improves material living standards for billions of people. However, a downside of this may be accelerated environmental damage and climate change.

Every day, Australians conduct international transactions with people from other countries through trade and capital flows. International trade involves exporting (selling) and importing (buying) goods and services, while international capital flows entail the movement of money capital or investments between countries.

Figure 3.1 (part a) shows Australia’s top 10 countries with which we trade, ranked by the total annual value of exports plus imports of goods and services. These include China, Japan, United States, South Korea, Singapore, New Zealand, United Kingdom, Malaysia, Thailand and Germany. The figure also shows the type or composition of Australia’s exports (part b) and imports (part c) of goods and services, ranked by value and in percentage terms.

(a) Australia’s top 10 countries for two-way trade in goods and services
### (b) The composition of Australia’s exports

**AUSTRALIA’S TOP 10 GOODS & SERVICES EXPORTS (a)**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Commodity</th>
<th>Value</th>
<th>% share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (b)</td>
<td></td>
<td>326 862</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Iron ores &amp; concentrates</td>
<td>66 008</td>
<td>20.2</td>
</tr>
<tr>
<td>2</td>
<td>Coal</td>
<td>37 999</td>
<td>11.6</td>
</tr>
<tr>
<td>3</td>
<td>Natural gas</td>
<td>17 743</td>
<td>5.4</td>
</tr>
<tr>
<td>4</td>
<td>Education-related travel services (c)</td>
<td>17 037</td>
<td>5.2</td>
</tr>
<tr>
<td>5</td>
<td>Personal travel (excl education) services</td>
<td>14 227</td>
<td>4.4</td>
</tr>
<tr>
<td>6</td>
<td>Gold</td>
<td>13 460</td>
<td>4.1</td>
</tr>
<tr>
<td>7</td>
<td>Crude petroleum</td>
<td>10 564</td>
<td>3.2</td>
</tr>
<tr>
<td>8</td>
<td>Beef, f.c.f.</td>
<td>7 751</td>
<td>2.4</td>
</tr>
<tr>
<td>9</td>
<td>Aluminium ores &amp; conc (incl alumina)</td>
<td>6 336</td>
<td>1.9</td>
</tr>
<tr>
<td>10</td>
<td>Wheat</td>
<td>5 920</td>
<td>1.8</td>
</tr>
</tbody>
</table>

(a) Goods trade are on a recorded trade basis, Services trade are on a balance of payments basis.
(b) Total is balance of payments basis.
(c) Includes international student expenditure on tuition fees and living expenses. Based on ABS trade data on DFAT STARS database and ABS catalogue 5368.0.

### (c) The composition of Australia’s imports

**AUSTRALIA’S TOP 10 GOODS & SERVICES IMPORTS (a)**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Commodity</th>
<th>Value</th>
<th>% share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (b)</td>
<td></td>
<td>336 957</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Personal travel (excl education) services</td>
<td>24 597</td>
<td>7.3</td>
</tr>
<tr>
<td>2</td>
<td>Crude petroleum</td>
<td>20 050</td>
<td>6.0</td>
</tr>
<tr>
<td>3</td>
<td>Refined petroleum</td>
<td>18 579</td>
<td>5.5</td>
</tr>
<tr>
<td>4</td>
<td>Passenger motor vehicles</td>
<td>17 566</td>
<td>5.2</td>
</tr>
<tr>
<td>5</td>
<td>Telecom equipment &amp; parts</td>
<td>9 845</td>
<td>2.9</td>
</tr>
<tr>
<td>6</td>
<td>Freight transport services</td>
<td>9 686</td>
<td>2.9</td>
</tr>
<tr>
<td>7</td>
<td>Medicaments (incl veterinary)</td>
<td>7 497</td>
<td>2.2</td>
</tr>
<tr>
<td>8</td>
<td>Computers</td>
<td>7 316</td>
<td>2.2</td>
</tr>
<tr>
<td>9</td>
<td>Passenger transport services (c)</td>
<td>6 141</td>
<td>1.8</td>
</tr>
<tr>
<td>10</td>
<td>Goods vehicles</td>
<td>6 008</td>
<td>1.8</td>
</tr>
</tbody>
</table>

(a) Goods trade are on a recorded trade basis, Services trade are on a balance of payments basis.
(b) Total is balance of payments basis.
(c) Includes related agency fees & commissions. Based on ABS trade data on DFAT STARS database and ABS catalogue 5368.0.

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**FIGURE 3.1** Australia’s top 10 two-way trading partners, and the composition of our exports and imports

*Source:* Graphs copied directly from DFAT, Australia’s Trade at a Glance 2015.

*Note:* Data is for 2014.
3.1 The relationship between trade and living standards

International trade occurs because it is beneficial to nations. It helps them to improve efficiency and living standards. Throughout history, there are many examples of how trade has strengthened empires, grown national production and incomes, created jobs, enriched cultures, increased knowledge and raised living standards. By contrast, closed nations that restricted trade ultimately lost their prominence and power.

In order to increase the volume of international trade and raise living standards, governments over the last few decades have adopted the policy of trade liberalisation or freer trade. This has involved reducing the level of trade protection by:

• cutting the level of tariffs and thereby making foreign goods cheaper
• reducing government cash subsidies paid to local firms and so allowing imports to compete on the same basis as locally manufactured products
• abolishing import quotas that restrict the volume of foreign goods entering the country
• signing up to more bilateral (usually between two nations) and multilateral (between many nations) free trade agreements (FTAs) with other countries.

As a result of trade liberalisation, openness, and a greater recognition of the benefits of international trade, world trade (the total value of exports plus imports of goods and services) as a percentage of GDP grew by 42 per cent over a recent 15-year period. In this section of the course, we examine some of the general benefits and costs of this growth in world trade, and its relationships with

• material living standards (such as per capita incomes, purchasing power and consumption)
• non-material living standards (such as world peace, cultural enrichment and environmental issues).

Trade can encourage international specialisation

Because countries have different combinations of natural, labour and capital resources, they are more efficient at producing some types of goods or services than others. This is reflected in their level of costs and prices. Especially in recent decades, with reduced government protection of local industry from imports and the growth of freer trade in recent decades, there has been an increase in international specialisation. Here, countries will produce only a limited range of goods and services, focusing on those areas where they have the greatest cost advantage over their international rivals. These goods and services can then be exported, and the income gained used to pay for imports that are too expensive to produce locally. By putting its resources to work in their most productive or efficient use, a nation can generate more output (GDP) from the same inputs (resources), and in so doing raise its income and material living standards.

Just by looking at the origin of the goods and services consumed, we can see that many countries specialise in production. For instance, you might wear a watch made in Switzerland, eat lamb grown in Australia, be entertained with movies from the United States or India, drink coffee from Brazil, holiday in Indonesia, wear shoes made in the Philippines and T-shirts sourced from Bangladesh, drive cars made in Germany or South Korea, and use a mobile phone manufactured in China.

Specialisation in production internationally can be based on two types of advantage: absolute cost advantage and comparative cost advantage.

• Absolute cost advantage. An absolute cost advantage occurs if a nation is the cheapest or most efficient producer of a single good or service in the world. For example, if Korea is the cheapest or most efficient producer of cars, it is said to have an absolute cost advantage over other countries. It is likely that its car exports will sell very well indeed. Similarly, if Australia is the cheapest producer of iron ore and has an absolute cost advantage, Korean and other manufacturers would be keen to buy from us. Clearly, both countries would benefit from international trade since each has an absolute cost advantage in different areas of production. However, as we shall see, international trade is still beneficial even if a country has no absolute cost advantage.

• Comparative cost advantage. A nation has a comparative cost advantage if it specialises in a few key areas of production where its cost advantages are greatest or its disadvantages are lowest. This means that opportunity costs (the value of production forgone or given up, which was illustrated in section 1.3 using a production possibility diagram) would be minimised and output maximised. Here, resources would be allocated most efficiently, and hence production, incomes and material living standards should be most favourable.

The famous English economist David Ricardo (1772–1823) outlined the principle of comparative cost advantage and supported the idea of free trade. He claimed that specialisation in international trade in areas of comparative cost advantage made countries better off economically, generating benefits for all. This idea probably makes good sense since, in many ways, nations are like individuals who have greater talent or efficiency in some areas than in others. Logically, we too should specialise in the few things we do best of all and give up other pursuits! To illustrate this concept, Ricardo used the example of two countries, England and Portugal. Each could produce two products, cloth and wine, with the resources available. Table 3.1 summarises the comparative cost advantage of each country producing these products, measured in terms of the number of man-hours that must be worked per unit of output produced.

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In this case, it can be seen that Portugal has lower expenses or an *absolute cost advantage* in producing both these products. The cost of producing cloth in Portugal is 90 per cent (90/100) of the cost of making it in Britain. By contrast, the cost of producing wine in Portugal is very much lower at only 66.6 per cent (80/120 or 2/3) of the cost in Britain. Some might conclude from this that Britain could not export to Portugal since it is uncompetitive (and to survive, its industries would need government protection). From Portugal’s point of view, it seems that it would not pay to import from England.

However, let’s re-examine the situation. Logically, both countries can benefit from trade provided that each specialises in its area of relative or *comparative cost advantage*. What this means is that relatively, Portugal is an even more efficient producer of wine than it is of cloth. Because it has a greater comparative advantage in producing wine, it should specialise in wine rather than in cloth if it wants to maximise output and living standards. By contrast, England has a comparative advantage in cloth (where its disadvantage is least) and should allocate its resources accordingly to minimise its opportunity cost and maximise efficiency, production and incomes. Despite the simplistic assumptions in this example (such as the absence of transport costs involved in trade), Ricardo powerfully argues that free trade and specialisation in areas of comparative cost advantage would be beneficial, increasing the total volume of world output, incomes and living standards.

**Trade promotes economies of large-scale production**

**Economies of large-scale production** are reductions in a firm’s average fixed costs per unit associated with an increase in its production levels. Fixed costs like equipment, product design, research, advertising and (up to a point) management can be spread more thinly when there are larger production runs. What international trade can do is encourage specialisation and help businesses grow their sales volumes by allowing them to produce on a much larger scale — for a potential global market of up to 7.4 billion people instead of only the local market. In turn this would lower fixed costs, strengthen competitiveness, grow incomes and boost material living standards.

The spreading of a firm’s fixed costs over higher annual levels of output to gain economies of large-scale production is illustrated hypothetically in figure 3.2. Notice that as a firm’s annual level of production rises from 1000 to 5000 units per year (perhaps enabled by growing its global exports), the average fixed costs of making each unit fall from $3 to just $1. Clearly, trade can boost production and efficiency, lower prices, strengthen competitiveness and sales, and thereby improve real incomes and material living standards.

**TABLE 3.1** Ricardo’s example of comparative cost advantage: the number of man-hours that must be worked per unit of output produced in England and Portugal

<table>
<thead>
<tr>
<th>Country</th>
<th>Cloth (hours per unit produced)</th>
<th>Wine (hours per unit produced)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>90</td>
<td>80</td>
</tr>
<tr>
<td>England</td>
<td>100</td>
<td>120</td>
</tr>
</tbody>
</table>

Notice that the per unit cost of each extra unit of production by this firm falls from $3.00 (at point A) to only $1.00 (at point B) as the company raises its annual production and sales from 1000 units to 5000 units. At higher levels of output, fixed costs can be spread more thinly. Exporting can help local firms justify higher output levels and can enable them to move from point A to point B on the fixed cost curve. This helps increase profits and competitiveness.

**FIGURE 3.2** International trade can increase economies of large-scale production for businesses by reducing their fixed costs of production per unit of output.
Trade helps lower prices for consumers

As a general rule, the rapid growth of international trade (assisted by trade liberalisation or reduced protection of local industry) has slowed inflation rates. Certainly this has been the experience of most countries, including Australia. For example, studies (such as those by Melitz, Schwerhoff and Sy in 2003 and 2013) showed that when tariffs came down, they caused the volume of global trade (as judged by the total ratio of world exports and imports to international production) to increase from an average of 38 per cent of GDP in 1990 to 54 per cent recently while reducing the average annual inflation rate for the same period from 26 per cent to just 4 per cent (based on over 120 countries). Indeed, freer and more open international trade has generated windfall gains for people around the world by increasing their purchasing power. Some of this data are shown in figure 3.3.

![Graph showing relationships between the average global rate of trade to world GDP, average tariff rates and average global inflation rates.](image)

*Note: Data for average global tariffs is for 2005 not 2010.*

There are several reasons why the growth in global trade has generally been associated with lower inflation:

- **Access to cheapest suppliers.** Freer trade allows domestic households and firms to purchase imported goods (mobile phones, cars, appliances, clothes, machinery, steel, coal, meat) and services (education, health, travel, finance, entertainment) from the cheapest suppliers around the world. This has been boosted by the explosion of online shopping and trading, and much cheaper and faster transportation.

- **Increased local competition.** Reducing industry protection around the world as a way of growing trade has dramatically increased competition in local markets, thereby encouraging international specialisation in production and higher productivity. Without protection, resources must be allocated to their relatively most efficient use where the cost advantage is greatest and the opportunity cost is least. This should lead to lower inflation.

- **Reduced market power.** The growth of trade has helped to reduce the degree of market power that exists in some domestic industries, because firms face fiercer competition from imports. In their fight for survival, businesses must now cut their costs, innovate, restructure production and use the latest technology (perhaps purchased more cheaply from overseas due to lower tariffs) in order to keep their prices down and quality up. In short, they are forced to become more internationally competitive.

- **Increased wage competition.** In domestic labour markets, the growth of trade through liberalisation and reduced protection has increased the level of competition from low-wage countries. This has helped to slow the growth of wage costs around the world, enabling firms to sell their product more cheaply and competitively.

- **Economies of large-scale production.** The growth in trade allows competitive firms to produce and sell on a bigger scale so that their fixed production costs per unit (including advertising, product design, tooling and equipment) can be spread more thinly and the product sold at a lower price both at home and abroad. Ultimately, what lower inflation means is that the real purchasing power of average incomes is usually higher (other things being equal). This enables per capita consumption to rise, thereby bolstering material living standards.

Trade boosts GDP and incomes

Especially in the longer-term, nations with open economies who have adopted the principles of trade liberalisation (combined with certain other policy measures) are far more likely to have higher levels of efficiency, national output and hence per capita incomes than those with trade barriers. This can occur for the following reasons:

- **Greater efficiency.** Countries will be forced to specialise in the production of commodities where they are most efficient (or least inefficient) and have a comparative cost advantage (where opportunity costs are...
relative lowest). Greater efficiency in resource allocation grows their productive capacity and the size of their production possibility frontier, causing real incomes, consumption and living standards to be higher.

- **Economies of scale.** Nations will gain cost reductions or economies of large-scale production in design, production, marketing, finance and transport. This advances efficiency, profitability and the expansion of businesses, leading to higher output, incomes, consumption and material living standards.

- **Innovation.** Because of stiffer global competition promoted through freer trade, firms are more likely to innovate and use new technology to lower their costs and grow technical efficiency, again boosting the nation’s productive capacity, real GDP, incomes and material living standards.

- **Imports of capital.** Through imports of machinery, resources, technology and know-how, trade facilitates the growth of a nation’s productive capacity, GDP, real incomes and material living standards.

### Trade can create jobs

Overall, it seems that increased international trade creates jobs and lowers unemployment, especially in the long term. This is because trade increases efficiency in resource allocation, lowers production costs, strengthens business profitability and expansion, and boosts economic growth. This should create more jobs, reduce unemployment, lift average incomes and improve both material and non-material living standards. In Australia’s case, around one in four jobs are now generated from our exports alone.

However, especially in the short term, it is possible that the growth in trade (facilitated by trade liberalisation measures) might cause a rise in *structural unemployment* as uncompetitive firms close down, relocate to low-wage countries or restructure their production by substituting machines for workers. When this occurs, living standards could fall temporarily.

### Trade enables access to more resources

Nations have different endowments of natural, labour and capital resources, causing them to specialise in producing particular types of goods and services. Some countries (including Australia) have vast natural resources that allow them to competitively produce more food and minerals than are needed locally. They can export the rest and use the income gained to purchase needed imports. For instance, nations like China, India and Indonesia have plenty of cheap labour available for supporting manufacturing industries, while others (including Japan and Singapore) have good access to inexpensive finance that makes their purchase of capital equipment more affordable. It is through trade or exchange that a country can access the resources, goods and services that it lacks or cannot produce itself at the lowest possible price.

What international trade does is to grow the quantity and quality of resources available to local businesses, allowing them to boost their production. Similarly, by growing businesses, jobs, incomes and profits, trade allows governments to access and pay for the various types of resources it needs to produce public goods and infrastructure like transport, education, health and defence, thus improving our living standards.

### Trade means greater consumer choice

International trade has created a shopper’s paradise that should increase the extent to which wants can be satisfied. Consumers now have an exciting smorgasbord of offerings from which to choose when buying clothes, cars, cosmetics, computers, holidays or foods. The range of goods and services is so wide that it would be impossible for any single country’s producers to cater efficiently for all tastes. Having freer access to imports solves this problem and helps to raise living standards.

### Trade can promote peace

Trade brings people from different countries together and creates dialogue, understanding and cooperation. In addition, it encourages nations to have cordial relationships with each other to promote exports and to maintain the supply of needed imports. Some studies have shown that when there are economic opportunities to improve incomes and living standards, civil war and conflict are less likely. This especially improves non-material living standards.

### Trade enriches the culture

Trade creates a great diversity of goods and services that enriches the culture of nations and leads to more vibrant and interesting societies. This supports non-material living standards.

### Trade has mixed effects on income distribution

Around the world it has been observed that although real incomes have generally increased, there has been a rise in income inequality coinciding with the accelerated growth in international trade. This has provoked academic debate about whether trade is responsible for this.
On the one hand, by accelerating economic growth, creating jobs and suppressing inflation, global trade is likely to have led to higher real per capita incomes, purchasing power and living standards for many. In addition, trade has increased government revenues, making it more affordable for governments to provide better education, health and economic infrastructure that are required for economic growth.

These positive outcomes seem to especially apply in countries like China, where the rise in international trade since the early 1990s appears to have been one of the key factors in reducing global poverty rates among people on very low incomes of less than $1.25 a day. Figure 3.4 shows that since 1990, poverty reductions have been greatest in East Asia (which includes China) and the Pacific, South Asia and Sub-Saharan Africa.

![Trends in the reduction of extreme poverty by global region](image)

**FIGURE 3.4** Trends in the reduction of extreme poverty by global region

*Source: Graph copied directly from World Bank 2014, Development Indicators, p. 2.*

On the other hand, experience from particular countries, especially over the shorter term, shows that the rise in global trade (facilitated by trade liberalisation and structural reforms) may have contributed to lower incomes and greater inequality. This could be due to the effect of stronger competition from imports depressing real wages by driving up the local price of basic food. This occurs when domestic producers are encouraged to sell overseas where they can get better prices for their crops than selling locally. In addition, trade has caused some local businesses to close down, possibly leading to structural unemployment and lower incomes.

**Trade has mixed effects on economic stability and other aspects affecting living standards**

Trade can have mixed effects on a nation’s economic stability and living standards.

**Trade can increase economic instability**

With growing dependence on international trade, momentous economic events like the GFC (2008–10) or a slowdown in a major economy (as happened in China in 2013–16) can spread globally and drag other nations into recession. In turn, this causes rising unemployment, falling incomes and depressed living standards across the world.

Despite this, the opposite is true too. If overseas conditions are strong, these can help offset periods of weak domestic economic activity locally and reduce instability, helping to maintain living standards.

**Trade can weaken the environment and living standards**

By growing exports and accelerating production, trade can have adverse direct and indirect effects on the environment both now and into the future:

- Natural and other resources will be depleted and degraded at a faster rate, as is evident in many countries like Indonesia, Nigeria, Ecuador and Brazil.
- Carbon emissions from production and the transportation of goods will increase. This will accelerate climate change and severe weather events, along with the pollution of rivers and soils as seen in China.
The growth of cities is likely to quicken, creating a host of urban problems, including overcrowding, waste disposal, transport congestion, injury from disasters and reduced health outcomes. With weaker environmental outcomes, material and especially non-material living standards are likely to suffer.

**Trade can prevent the development of new infant industries**

The liberalisation and growth of trade exposes domestic industries to stronger competition from often cheaper imports. This can discourage the growth of domestic infant industries, which typically have higher production costs and limited cash flow during their start-up phase than well-established foreign rivals. As a result, growth in capacity and job creation may be limited, with negative consequences for economic activity and therefore living standards.

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**eBookplus**

**Weblinks** The weblinks in these activities are available in this chapter’s student resources tab.

- The big ideas of trade
- Why international trade?
- Foreign trade – an introduction
- How international trade works (1951)
- Better understanding global trade flows
- International trade (unit 7, lecture 1)
- How beneficial is world trade?
- Comparative advantage and terms of trade, ACDC Econ 1.3
- The gains from trade
- International trade: Absolute and comparative advantage
- Comparative advantage and the tragedy of Tasmania
- Basic economic principles 3: Specialisation and trade
- Another look at comparative advantage
- Comparative advantage
- Chapter # 2 division of labour specialisation, trade comparative advantage
- Chapter # 2 division of labour and specialisation

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**CHECK YOUR UNDERSTANDING**

1. Identify and explain four important ways whereby the growth of global trade (partly assisted by trade liberalisation policies) might help to increase overall living standards.

2. Identify and explain two important ways whereby the growth of global trade (assisted by trade liberalisation policies) might undermine general living standards.

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**APPLIED ECONOMIC EXERCISES**

Apply your understanding of this subtopic by accessing and completing the Applied economic exercise(s).

- School-assessed coursework > Applied economic exercises > Question 1

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**3.2 Recording international transactions on the balance of payments account**

The balance of payments account (BOP) is an annual statistical record of the money value of different types of financial 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 by us to overseas is classified as a debit. Because this is a zero balance account, the overall balance of payments account always balances and the total value of credits is equal to the total value of debits. The items recorded on the BOP are grouped into either current account transactions or capital and financial account transactions, before being further subdivided. These transactions are illustrated in figure 3.5.

**Balance on current account**

From figure 3.5 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 or merchandise sold overseas (for example, wool, minerals and manufactured items) minus import debits for goods purchased from abroad (for example, oil, electronic equipment and machinery).

2. **Net services.** This is the difference between the value of service credits received by Australia (for example from tourism, education, transportation, construction, financial, royalties and licence fees) minus service
debts paid abroad (for example, for transportation, tourism, education, royalties and licence fees, and insurance).

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

4. **Net secondary incomes.** This is the difference between the value of secondary income credits received by our residents (for example, non-life insurance transfers such as pensions) minus the value of secondary income debits paid abroad (such as gifts, taxes and some foreign food aid donated by our residents). Secondary incomes are different from other transactions in that they are a one-way transaction with nothing exchanged in return.

To calculate the overall balance on current account, remember the following relationships.

![Structure of Australia's balance of payments account](image)

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)

- Net services (credits for services minus debits for services)
- Net primary incomes (credits for incomes minus debits for incomes)
- Net secondary incomes (credits for secondary incomes minus debits for secondary incomes)

**Overall balance on current account**

In Australia’s case, the overall balance turns out to be a large current account deficit (CAD), where the total value of debits exceeds the total value of credits. As we shall see, the existence of the CAD means that there will need to be a rise in the nation’s net external liabilities, which are made up of debt (borrowed money) and equity (ownership).

**Balance on capital and financial accounts**

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

1. **Balance on capital account.** Capital transactions include net capital transfers and the net acquisition of non-produced, non-financial assets.
   - **Capital transfers** generally involve the net inflow of funds into Australia by permanent migrants.
• The net acquisition/disposal of non-produced, non-financial assets covers the excess of credits over debits for the sale of copyright, patents, overseas franchises (such as KFC and McDonald’s) 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 shows how Australia lends or borrows from abroad (the inflow of funds) minus total debits for investments and lending by Australians abroad (the outflow of funds). It records the following transactions involving foreign financial assets and liabilities.

• Net direct investment involves the purchase, setting up or expansion of companies and assets in Australia by foreigners classified as credits (the inflow of funds or assets) minus similar investments overseas by Australian residents classified as debits (the outflow of funds or liabilities).

• Net portfolio investment is the difference in the value of transactions by foreign individuals purchasing Australian shares, debt and securities minus the value of similar assets purchased by our residents. Portfolio investment flowing in from overseas is recorded as a credit (the inflow of funds or assets), while this sort of investment abroad by Australian residents is recorded as a debit (the outflow of funds or liabilities) on our financial account.

• Other investment includes credits (the inflow of funds or assets) minus debits (the outflow of funds or liabilities) for loans, deposits and trade credits.

• Net reserve assets contains both RBA and government transactions involving dealings in reserves of foreign currencies, gold, special drawing rights and required contributions to the International Monetary Fund (IMF).

Moneys received from overseas are categorised as credits (the inflow of funds or assets), while payments overseas are categorised as debits (the outflow of funds or liabilities) on Australia’s financial account.

• Net errors and omissions 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).

Overall, Australia’s balance on capital and financial accounts is positive. This means there has been a net financial inflow seen as a rise in the nation’s liabilities overseas (consisting of either foreign debt or foreign equity in the case of ownership of Australian assets like property or shares). It will exactly offset the deficit recorded on our current account, allowing the overall BOP account to be in balance.

Relationship between the current account and the capital and financial accounts

The overall BOP account should exactly balance or equal zero, at least in theory. That is, Australia’s current account deficit (where the total value of debits exceeds credits for goods, services, primary incomes and secondary incomes) is exactly equal to or offset by a capital and financial account surplus (where the total value of credits exceeds debits for net capital and investments). This directly increases our net foreign debt (NFD).

As shown in Figure 3.6, the existence of ongoing CADs means that there has to be an offsetting rise in the nation’s net external liabilities, consisting of foreign debt (borrowed money) and foreign equity (ownership). Here, we are essentially drawing on savings from the rest of the world to finance our high levels of investment and consumption, and recording this as a net surplus (inflow) on our capital and financial accounts. Clearly this is a two-way relationship between the current account and the capital and financial accounts making up the overall BOP.

FIGURE 3.6 The relationship between Australia’s current account and the capital and financial accounts

As we shall see later, the main problem is that Australia has a national savings-investment gap. Here, there is a low level of savings by households, firms and governments relative to our high level of investment by households, firms and governments. This tends to make foreign borrowing and interest rates relatively cheaper.
and, by adding to our NFD, it means there are heavy primary income debits to pay out (interest on borrowed credit, dividends to foreign shareholders, and profits to foreign owned firms), adding greatly to our CAD.

**eBookplus**

Weblinks The weblinks in these activities are available in this chapter’s student resources tab.
- Investopedia video: The balance of payments
- 11 Understanding the capital account

**CHECK YOUR UNDERSTANDING**

1. What is the BOP account?
2. Draw and label a structural diagram representing the BOP account for Australia, giving two relevant examples of each specific type of transaction.
3. What is the CAD and why is this typically large for Australia?
4. Explain the relationship between the CAD and balance on capital and financial accounts.

**APPLIED ECONOMIC EXERCISES**

Apply your understanding of this subtopic by accessing and completing the Applied economic exercise(s).
- School-assessed coursework > Applied economic exercises > Question 2

### 3.3 The current account deficit and its causes

Each year Australia records a substantial current account deficit (CAD) on its balance of payments account (BOP). As shown in figure 3.7, Australia has a persistent current account deficit (CAD). This means that the total value of debits for goods, services, primary incomes and secondary incomes is greater than the equivalent value of credits. Commentators often seize on the CAD as a sign of external instability or weakness, especially when its value (expressed as a percentage of GDP — measuring the size of the economy) is high, perhaps at a level above 3–4 per cent. This is sometimes taken as an indication that Australia is not paying its way in its international financial transactions.

![Graph of CAD and CAD-GDP ratio](image)

**Figure 3.7** Indicators of Australia’s external imbalance and weakness, 2002–03 to 2014–15

*Source*: Data derived from ABS 5302.0 (Tables 1 and 35).

Figure 3.8 breaks down Australia’s current account into its four sub-accounts: net goods, net services, net primary incomes and net secondary incomes. As can be seen from the lower part of the graph, overall there is usually a CAD because most of the components are negative. Of special importance, however, is the huge deficit recorded every year for net primary incomes. This signals that Australia is very dependent on heavy overseas borrowing and relying on capital inflow, necessitating high levels of income debits.
Net balances making up the overall balance on current account ($ billions)

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<td>1 Net goods ($b)</td>
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<td>2 Net services ($b)</td>
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<td>3 Net primary incomes ($b)</td>
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<td>4 Net secondary incomes ($b)</td>
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<td>-1.7</td>
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FIGURE 3.8 Changes in the components making up Australia’s balance of payments current account

Source: Data derived from ABS 5302.0 (Tables 1 and 35).

To explain why Australia has a persistent CAD and ongoing external problems, we need to investigate the roles played by both aggregate demand-side factors and aggregate supply-side factors. The influence of these two sets of factors on the size of the CAD is illustrated hypothetically in figure 3.9.

1. Aggregate demand-side factors. When stronger aggregate demand conditions cause Australians to increase their spending, or when there are weaker demand conditions abroad, our cyclical CAD:GDP ratio will tend to rise from around 3 per cent to 6 per cent. Conversely, weaker spending locally or stronger spending overseas will usually cause the cyclical CAD:GDP ratio to fall.

2. Aggregate supply-side factors. Ongoing unfavourable aggregate supply-side factors cause Australia’s structural CAD:GDP ratio to be around 3 per cent. They reflect our dependence on overseas borrowing and debt due to the savings–investment gap, our lower efficiency and high costs, and our poor international competitiveness.

FIGURE 3.9 How aggregate demand- and supply-side factors can contribute to Australia’s CAD and external instability

1. Changing aggregate demand-side conditions

As we shall soon see, generally stronger demand-side conditions originating from within Australia (such as rises in our levels of consumer and business confidence, disposable incomes and population), and higher levels of activity, tend to cause a rise in the size of our cyclical CAD. This is shown in figure 3.9 where the CAD:GDP ratio ranges from perhaps 3 to 6 per cent of GDP or even higher. There are several reasons why stronger spending domestically can increase the cyclical CAD:

- Strong spending can sometimes cause increased shortages and higher domestic prices for locally produced goods and services. This makes imports relatively more attractive, increasing the CAD.
- Strong domestic spending reduces the potential level of Australia’s exports and makes them less attractive, increasing the CAD.
• Stronger domestic spending can cause the RBA to raise interest rates to control inflation. This then tends to make Australia relatively more appealing to investors, attracting additional capital inflow. This drives up our exchange rate, thereby reducing the value of our exports relative to imports and increasing the CAD.

In reverse, when aggregate demand-side conditions within Australia are generally weaker and domestic spending and activity are growing more slowly, the cyclical CAD usually shrinks.

One slight complication here is that when economic conditions overseas are stronger and these accelerate the value of spending on Australian exports (due to higher volumes and/or better commodity prices), our cyclical CAD should fall, whereas a slowdown in external demand can mean a larger CAD.

2. Changing aggregate supply-side conditions

Figure 3.9 also shows that generally less favourable aggregate supply-side conditions — such as the lack of domestic savings, higher costs of production, poor international competitiveness and severe weather events — cause Australia to have an ongoing structural CAD, perhaps equal to at least around 3 per cent of GDP.

• The lack of domestic savings causes us to depend on borrowing from overseas, leading to income payments abroad and a bigger structural CAD.

• Higher production costs and poor international competitiveness reduce exports sales while encouraging imports, thereby adding to our structural CAD.

However, if supply-side conditions (including lower labour and other costs, improved productivity, a higher savings ratio and ideal climatic conditions) generally become more favourable, the structural CAD should fall.

Let us now take a closer look at the specific aggregate demand-side factors and aggregate supply-side factors that determine the size of Australia’s CAD.

Aggregate demand-side causes of Australia’s cyclical CAD

As already mentioned, changing domestic and international aggregate demand-side conditions can cause cyclical changes (both up and down) in the size of Australia’s CAD. As a general rule, if demand conditions overall cause spending on imports to rise and our exports to fall, the cyclical CAD will increase; while if spending conditions cause imports to fall and our exports to rise, the cyclical CAD will decrease. For various reasons, there was some rise in the CAD:GDP ratio during 2010–11 and 2012–13, followed more recently by generally lower levels during 2013–14 and 2014–15.

Changes in economic activity overseas and our terms of trade index

The level of overseas economic activity (relating to the strength of GDP and economic growth among our major trading partners like China, Japan, South Korea, Europe and the United States) is an important aggregate demand-side factor that affects spending on Australia’s exports and hence our cyclical CAD. Overseas growth rates also directly affect the favourability of Australia’s terms of trade (the ratio of the prices the world is prepared to pay us for our commodity exports against the prices we have to pay for imports).

• In general, weaker overseas activity depresses commodity prices and our terms of trade. This tends to reduce the value of Australia’s exports relative to imports, increasing the size of the cyclical CAD.

• By contrast, when economic growth abroad is stronger with higher terms of trade, the value of net exports tends to rise faster, reducing our cyclical CAD.

This relationship is illustrated in figure 3.10. It shows how changes in the rate of economic growth in China, our most important customer for exports, has affected our terms of trade and Australia’s CAD. Weaker GDP growth in China in the last few years has tended to depress the terms of trade and cause a rise in our cyclical CAD.

![Figure 3.10: Relationship between China’s rate of economic growth, and Australia’s terms of trade and CAD](image_url)

**Sources:** Data derived from ABS 5206.0 (Table 3); and Trading Economics, http://www.tradingeconomics.com/china/gdp-growth-annual.
Changes in the exchange rate for the Australian dollar
The exchange rate for the Australian dollar can be an aggregate demand-side factor that affects spending and hence the cyclical CAD.

- A weaker Australian dollar, as seen between 2013 and 2016, tends to reduce the cyclical CAD. This is because exports are relatively cheaper and boost the value of sales or credits, while imports are dearer and depress our spending. As a result, the CAD tends to fall.
- A stronger Australian dollar results in lower net exports of goods and services (X – M), and this tends to increase the CAD.

Changes in consumer sentiment, business confidence and real disposable income
Changing levels of domestic consumer sentiment and business confidence about the future are aggregate demand-side factors that greatly affect our spending on imports of both goods and services, thus affecting the size of Australia’s CAD.

- When households and businesses are more pessimistic about their future economic circumstances or experience a fall in real household disposable income as occurred during 2013–15, they tend to save rather than spend, thereby slowing their purchases of imports such as appliances, cars, overseas holidays, machinery and materials. This reduces our cyclical CAD.
- In contrast, greater optimism and faster rises in disposable income tend to cause spending on imports to rise, increasing the cyclical CAD.

Changes in interest rates
As an aggregate demand-side factor, interest rates have an effect on the levels of both household consumption and business investment spending. At least some of this spending involves imports of goods and services, and hence interest rates will directly affect the CAD.

- Lower interest rates and cheaper credit offered to households and firms during 2011 and 2016 have encouraged more spending on imports of cars, electronics, clothes, overseas holidays and equipment, thus increasing the CAD.
- However, higher interest rates tend to discourage borrowing and spending on imports because of the increased costs of repaying debt. This should help reduce Australia’s CAD.

A slight complication with interest rates is that they also affect the exchange rate and thus the CAD. For instance, we will soon see that reductions in interest rates by the RBA in 2011–16 relative to those abroad (which would normally increase spending on imports and raise the CAD) have also weakened the Australian dollar. This offsetting factor tends to boost net exports and lower the CAD.

Changes in government defence spending and foreign aid
Levels of federal government budget outlays on defence equipment, peacekeeping and foreign aid all affect the CAD.

- Imports of defence equipment, including submarines and aircraft, along with foreign aid and spending on peacekeeping operations in Afghanistan, the Solomon Islands, Iraq and Timor-Leste, have all contributed to Australia’s large CAD.
- However, the recent cuts in foreign aid would tend to reduce the cyclical CAD by decreasing secondary income debits.

Aggregate supply-side causes of Australia’s structural CAD
Aggregate supply-side factors also help to explain Australia’s big and ongoing structural CAD and our net foreign debt (NFD). These factors relate to the way our economy is organised and how production is carried out. Structural problems can reflect various adverse supply-side conditions such as

- poor labour efficiency and rising production costs for local firms that reduce our business competitiveness against imports
- a lack of domestic savings leading to higher interest rates here relative to those overseas
- bottlenecks or constraints such as labour shortages
- an ageing population
- droughts and floods

all lower our ability to competitively produce exports. These structural problems worsen the structural CAD and erode our living standards.

In recent years, a number of supply-side factors (many of them adverse) have affected Australia’s international transactions and added to our structural CAD (and NFD). We will now take a closer look at them.

An overall deficiency of national savings and dependence on overseas borrowing
The level of national savings relative to investment is perhaps the most important aggregate supply-side factor influencing the size of a nation’s structural CAD.
Unfortunately, Australian households, businesses and governments generally do not save enough to finance the high level of national investment spending by firms and governments needed to grow the economy’s productive capacity and maintain high living standards. This causes Australia to have a large, long-term national savings–investment gap that has become the biggest single reason for our large structural CAD. Figure 3.11 illustrates this diagrammatically. Here, for example, national savings level of say, $200 billion a year, is insufficient to finance national investment of $300 billion a year. As a result, there has been an increase in foreign borrowing and liabilities of, say, $100 billion a year. This adds to our net foreign debt or NFD (the amount by which Australia’s liabilities abroad exceeds what people abroad owe us).

![Graph showing Australia's savings-investment gap](image)

**FIGURE 3.11**  Australia’s savings-investment gap shown hypothetically

Australia’s NFD has increased from 46 per cent of GDP in 2002–03 to a record high of 61 per cent by 2014–15. This is largely attributed to rising private sector debt or equity. However, the return of massive government budget deficits since 2008–09 (possibly to continue beyond 2019–20), partly financed by borrowing abroad, has pushed up our NFD. Additionally, as shown in figure 3.12, private borrowing overseas by Australians is encouraged by higher interest rates here against those overseas.

![Graph showing official interest rates](image)

**FIGURE 3.12**  Differences between official interest rates (percentage in July 2015) in Australia and those overseas contribute to our structural CAD and growing NFD.

We face high interest rates partly because of the relatively low supply of national savings (as a result of inadequate savings by Australian households, firms and government) combined with a high demand for credit (by Australian governments, businesses and households). In turn, large interest rate differentials like these not only make Australia look attractive to foreign investors or lenders seeking relatively high returns, they also encourage Australians wanting cheaper credit to borrow overseas. Either way, this causes Australia’s NFD and the structural CAD to remain high, with potentially adverse implications for our living standards.

Additionally, when extra credit is sucked into Australia from overseas following rises in domestic interest rates, this helps to drive up the demand for the Australian dollar and tends to lift the exchange rate. In turn, this makes our exports of goods and services less competitive relative to imports, thereby worsening our long-term structural CAD. By contrast, when the RBA cuts domestic interest rates as a result of weaker economic activity (as happened in between 2011 and 2016), interest rate differentials between Australia and overseas narrow. In itself, this development should help to lower production costs locally, weaken the exchange rate (as a result of the exit of money capital) and stimulate exports relative to imports, perhaps reducing the CAD.
In contrast to the situation in Australia, countries that have relatively high levels of national savings often have a current account surplus (CAS) from receiving substantial primary income credits for interest from their loans abroad, and dividends and profits from their ownership of shares and companies overseas.

Weaker growth in productivity

Productivity indicates efficiency. There are two main measures of productivity. Labour productivity reflects changes in GDP divided by the total number of hours worked, while multifactor productivity is calculated by dividing GDP by the total value of labour, capital and other inputs used. Efficiency levels are seen as an aggregate supply-side factor that can affect our competitiveness and the size of the country’s structural CAD.

Strong rises in labour and multifactor productivity during the 1990s meant more output per unit of labour and capital resources, lowering production costs for local firms. Unfortunately, productivity has also been relatively weaker in recent years. This has adversely affected Australia’s international competitiveness, slowing export sales, lifting imports and adding to the structural CAD. Indeed, current efficiency levels in most industries are only around 80 per cent of those in the United States, and even weaker relative to some other countries.

Changes in real unit labour costs (RULCs)

Wages are the major production cost in many industries, often accounting for around 60–70 per cent of the overall total. Hence, the level of real wage costs per unit is an important aggregate supply-side factor that can help determine whether or not locally made goods and services can compete with imports. In turn, this affects our structural CAD.

- Australia’s real unit labour costs recently recorded a zero increase, on average, during 2011–12 to 2014–15. This helped to keep a key production cost lower, making our exports more competitive or attractive and tending to lower the structural CAD.
- Yet in absolute terms, Australia’s average hourly pay rates are almost the highest in the world, and we have the highest minimum wage of any country. From an economic perspective, this is a problem. It reduces our international competitiveness and net export sales, pushing up the structural CAD.

Severe climatic conditions

Australia’s productive and export capacities are increasingly influenced by severe climatic conditions that have the ability to affect net exports of goods and services, and hence the structural CAD.

- Droughts (to 2010, again in 2012–16), floods (in 2011 and 2013), fires (in 2011 and 2013) and other extreme weather events in eastern and northern parts of Australia, have limited our capacity to produce some exports. These include rural production (grains, meat, wool, fruit, vegetables), minerals (due to flooded mines and destroyed transport infrastructure) and tourism (destroyed by storms and floods). As a consequence of slowing exports and, in some cases, a greater food dependence on imports, the structural CAD was pushed higher.
- By contrast, ideal climatic events would increase the value of net exports and reduce the CAD.

Changes in oil prices

Oil is an important production and distribution cost for many local producers. It is a significant import item that is reflected in the final selling price and hence competitiveness of locally produced goods and services.

- High oil prices (over US$100 per barrel in 2008 and 2012) greatly increased the cost and value of Australia’s oil imports (upon which we rely for around 60 per cent of our needs) and exerted upward pressure on the CAD and a downward force on the exchange rate.
- However, much lower oil prices (under US$50 per barrel in 2014–16) helped to reduce imports and took some pressure off our structural CAD.

Demographic events, including ageing

A country’s population growth and age distribution is an aggregate supply factor that can affect our productive capacity, exports and the structural CAD.

- Australia’s ageing population and decreasing participation rate slow the growth in labour resources and increase wages. This reduces the competitiveness of our exports. Additionally, labour and skills shortages act as a bottleneck, limiting the growth of exports and adding to the structural CAD.
- Immigration on the other hand (around 190,000 per year, of whom around 65 per cent are skilled with an average age of around 37) is potentially a more favourable supply-side factor that keeps wage costs lower and eases labour bottlenecks. As a result, exports become more internationally competitive, thus tending to reduce our structural CAD.

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Weblinks: The weblinks in these activities are available in this chapter’s student resources in tab.

- The relationship between the current account balance and exchange rates
- Economics 1, Lecture 23: Exchange rates and balance of payments
3.4 The net foreign debt (NFD)

Foreign debt is often associated with a country not living within its means or paying its way in international financial transactions. Here we might think of the problems experienced in recent years by countries like Greece, Spain and Italy, where there has been poor financial management over many years. Hence, debt levels often tell us something about the country’s external situation.

Definition of the NFD and NFE

Net foreign debt (NFD) is the difference in value between what Australia has borrowed from and owes overseas (our liabilities) minus what Australia has lent or invested abroad (our assets). It is sometimes used as an indicator of Australia’s external position and includes borrowing through the issue of bonds, loans, advances and overdrafts.

The NFD differs from foreign equity (the ownership of assets like shares and property) because debt implies that there is an obligation to pay interest and, at some time in the future, to repay the original capital borrowed. As previously mentioned, the NFD is largely the consequence of a deficiency of national savings by the private sector (households and firms) and the public sector (various governments) to finance our high levels of national investment. As mentioned already, this is called the savings–investment gap.

Foreign borrowing through the creation of debt is one type of overseas capital inflow. The other (and much less significant) type of capital inflow is foreign equity. Net foreign equity (NFE) represents the excess value of foreign-owned Australian assets (such as property, shares and the retained earnings of overseas-owned companies operating here) over overseas assets owned by Australian residents.

Composition of and trends in the NFD

Australia’s NFD has grown quite rapidly over the last decade (see figure 3.13). It is now almost $980 000 billion, or equal to over 61 per cent of GDP (as a measure of the overall size of the economy). For Australia, there are two main types of overseas borrowers:

- official (public or government sector) borrowers, who generate official debt
- non-official (private sector) borrowers, who generate non-official debt.
1. Public sector or official government borrowing

During and following the global financial crisis (GFC) of 2008–10, the federal and some state and local governments borrowed money overseas to help finance their often large budget deficits (the federal budget deficits alone total around $325 billion over eight years). To the extent to which governments depended on credit sourced overseas, this added to our NFD. Indeed, in 2014–15 the official or public sector’s foreign debt comprised approximately 25 per cent of our overall NFD.

2. Private sector or non-official borrowing

The main private sector or non-official borrowers are large companies that need to raise capital for financing business expansion and takeovers. Part of this represents net foreign equities that arise from the excess value of foreign-owned Australian assets (like companies, shares and property) over overseas assets owned by Australian residents. Additionally, our banks now source from overseas a large proportion of the money they use for lending to households and firms. Indeed, Australia’s high domestic interest rates and lack of national savings have exacerbated this problem.

Contrary to popular opinion, debt is not always bad. It can be good — provided it is used wisely for sound investment projects that deliver ongoing returns and future benefits. 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 payments. When the Australian dollar depreciates, the debt burden (if denominated in a stronger currency like the US dollar) may become very heavy indeed. Interest and other repayments then require more Australian dollars to be converted into other currencies. Additionally, if our foreign debt rises too quickly and exceeds our capacity to sustain repayments, our credit rating as a nation may be downgraded by rating agencies (Standard & Poors or Moody’s) to reflect a higher risk. This downgrading translates into even higher domestic interest rates (as found in countries with high levels of sovereign or government debt like Greece).

Causes of the net foreign debt

There are many reasons for the rise in Australia’s NFD, some of which have already been mentioned:

- **Lack of domestic savings.** We have a national savings–investment gap, where current savings by Australian households, businesses and governments are not sufficient to finance our high levels of investment. This has contributed to our interest rates being high relative to those abroad. In turn, high domestic interest rates encourage our banks, businesses and governments to borrow overseas, thereby adding to our NFD.

- **Many budget deficits.** The recent slowdown in Australia’s economic activity has led to expansionary government budget deficits (where the value of the government’s budget outlays is greater than the value of budget receipts) between 2008 and 2016, which were designed to stimulate spending. In part, these deficits were financed by borrowing abroad, usually by selling government bonds.

- **Opportunities for foreign investors.** Because of Australia’s vast natural resources, there are many opportunities for foreign investors to make high returns. Although this inflow of investment capital helps grow our economy’s productive capacity, it also adds to our external liabilities.

- **Sound economic, political and social climate.** Australia offers foreign investors a relatively stable economic and political environment, with sound infrastructure, efficient institutions (including the legal and financial systems), and an educated and skilled labour force. In addition, Australia is regarded as a good place to live and hence there has been massive foreign investment in residential property. In addition, countries like China are using rural investment here to enhance their food and resource security at home. This adds to our external liabilities.

- **A lower value for the Australian dollar.** A lower Australian dollar, as seen recently between 2013 and 2016, makes the purchase of our assets (businesses, shares, property) by non-residents relatively cheaper and hence more attractive. This adds to Australia’s external liabilities.

- **Financial sector deregulation and globalisation.** In recent decades, there has been considerable financial sector deregulation. Combined with trade liberalisation, deregulation has increased overseas capital inflow and foreign ownership of assets like businesses, shares and property, despite supervision of large projects by the Foreign Investment Review Board (FIRB).

The effects of Australia’s foreign debt

Foreign debt can have both positive and negative effects for a country.

Some benefits of foreign debt

Sustainable levels of debt can be a good thing, providing that it is used wisely to finance investment expenditure rather than consumption spending. Foreign debt provides the following benefits:

- **Finance for expansion.** Foreign debt can make up for a deficiency in local savings, which are needed to finance investment and business expansion, expand GDP and create new jobs.

- **Access to cheaper credit.** As Australian interest rates are often higher than rates overseas, foreign debt can provide access to cheaper credit.
Some costs of foreign debt

There are some downsides to foreign debt:

- **Creation of economic hardship.** As with all debt, the main problem is repaying interest and the principal. Excessive levels of government or sovereign debt create great hardship, forcing governments to lift taxes and cut spending, contracting economic activity. As seen in some European countries like Greece, this causes economic activity to shrink and unemployment to rise.

- **The burden of debt repayment.** The burden of debt repayment is especially heavy if the debt is expressed in another currency and the value of the Australian dollar falls against that currency. It can mean a reduction in our credit rating and, ultimately, higher interest rates.

- **Adds to the CAD.** The NFD is the major reason for Australia’s large deficit in net primary incomes and our big CAD. This ultimately weakens the currency and diminishes its purchasing power.

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**Weblinks** The weblinks in these activities are available in this chapter’s student resources tab.

- Foreign-held public debt and fiscal sustainability: Is China owning the US?
- Top 10 countries with largest external debt
- Foreign debt

**CHECK YOUR UNDERSTANDING**

1. What is the NFD? How is this different from the NFE?
2. Identify and explain three causes of Australia’s NFD.
3. Identify and discuss two important costs and two benefits of a rise in Australia’s NFD.

**APPLIED ECONOMIC EXERCISES**

Apply your understanding of this subtopic by accessing and completing the Applied economic exercise(s).

- School-assessed coursework > Applied economic exercises > Question 4

3.5 The terms of trade

The **terms of trade (TOT)** measures the ratio for the average price the world is prepared to pay Australia for our exports against the average price we pay the world for our imports. Put another way, it is the amount of imported goods that can be purchased with a unit of exported goods.

- The TOT is said to rise or become more favourable for a country when the export prices we receive rise faster, or fall less, than import prices. As a result, a nation can purchase more imports with a unit of its exports.

- The TOT is regarded as less favourable for a country when export prices rise more slowly, or fall more quickly, than import prices. As a result, a nation can purchase fewer imports with a given unit of its exports.

**Measurement of the terms of trade**

The TOT is measured by means of an index that uses a base year (where the index equals 100 points) to compare following years.

\[
\text{The terms of trade index (TOT) = \frac{\text{Export price index}}{\text{Import price index}} \times 100}
\]

Here the export price index is constructed by measuring changes in the average prices of a basket of Australian exported goods, with items weighted according to their relative importance in trade. Similarly, the import price index measures changes in the average prices of our imported goods, with items weighted according to their relative importance.

The TOT is primarily regarded as an aggregate demand factor affecting spending levels. This is because the prices we receive or pay in international transactions affect the value of our exports and the value of our imports. When, for example, the world chooses to pay us lower prices for our exports (as happened with our
commodities during 2013–16) because of weaker demand, this normally causes a drop in the value of exports sold. In turn, this tends to slow AD and economic activity. In reverse, if the world pays generally higher prices for our exports because there is a shortage or demand is strong, this normally boosts the value of exports and strengthens our level of AD and economic activity.

**Trends in Australia’s terms of trade index**

As can be seen in figure 3.14, Australia initially enjoyed stronger TOT between 2009–10 and 2011–12, but there was a spectacular deterioration in the subsequent years to 2014–15 as export prices fell relative to import prices.

**Factors that may influence the terms of trade**

Australia’s TOT display the prices received for the basket of our exports and those paid for a basket of imports in world markets. In turn, these reflect the various conditions of demand for our exports and imports, and the global conditions of supply of exports and imports. Assuming that global competition is reasonable and countries are price takers, the price of each good (P_e) is largely determined by its level of demand (D) and supply (S) at market equilibrium (E). This situation is shown hypothetically in figure 3.15.
Changes in global conditions of demand

The level of world demand for Australia’s exports has a tremendous influence on the prices we are paid and hence our TOT. This is shown in figure 3.16.

Hence, when there is an overall decrease in the global demand for Australian exports of commodities (like wheat, beef, wool, coal and iron ore) and manufactured items (relative to their global supply) at a given price (D₀ to D₁), the prices we receive for exports are lower (P₁ to P₀), perhaps depressing the TOT. Global demand for our exports may decrease as a result of several factors:

- weaker economic growth in our major trading partners like China (as occurred 2013–16), Japan or the United States
- depressed consumer and business confidence abroad reducing the demand for exports of our goods
- reduced growth rates in global disposable income or population.

In reverse, when there is an increase in the global demand for our exports (D₁ to D₂) at a given price (relative to their global supply), this tends to cause a rise in export prices (P₁ to P₂), perhaps increasing our terms of trade. Global demand for our exports may increase as a result of several factors:

- stronger economic activity among our major trading partners
- greater consumer and business optimism overseas
- faster growth rates in global disposable income or population.

So far we have looked at how a general increase or decrease in world demand for Australian exports affects our export prices and hence the TOT. Let us turn now to consider how the global conditions of supply can affect our terms of trade.

Changes in global conditions of supply

Changes in the global supply of commodities that Australia exports also have a significant influence on the prices we are paid and hence our TOT. This is illustrated in figure 3.17.

FIGURE 3.16 How a general increase or decrease in the demand for our exported goods might help to cause their price to rise or fall, thus affecting Australia’s terms of trade.

FIGURE 3.17 How a general increase or decrease in the supply of traded goods might help to cause a rise or fall in export prices, thus affecting Australia’s terms of trade.
Hence, when there is an increase in the global supply ($S_1$ to $S_2$) of the commodities Australia exports (like wheat, beef, wool, coal and iron ore) and manufactured items (relative to their global demand) at a given price, the general prices we receive for exports are lower ($P_1$ to $P_2$). This tends to make our TOT less favourable. Global supply of the things we export may increase due to the following:

- new discoveries of minerals or the opening of new mines
- the effect of new technology on productivity and hence production
- domestic and international growing conditions for crops.

By contrast, when there is a decrease in the global supply of the commodities and goods that Australia exports at a given price ($S_1$ to $S_0$), the prices received tend to rise ($P_1$ to $P_0$), and with them, possibly our terms of trade. Supply might fall due to the following:

- resource depletion and exhaustion
- declining productivity
- severe climatic conditions here and overseas.

**Effects of movements in the terms of trade**

Australia’s TOT has significant effects, not just on the CAD and exchange rate, but also on AD and the level of domestic economic activity.

**Effects of the terms of trade on Australia’s CAD**

When the terms of trade rise or fall (due to changes in our export prices relative to import prices), this will affect the values of both exports and imports and hence the size of Australia’s CAD.

- A fall in the TOT tends to cause the CAD to rise. This is because when we receive lower prices, for example, it often means that there is a relatively weaker demand internationally for our exports. In turn, the value of credits for our exports usually decreases, while dearer global prices paid by us for imports tend to increase the value of import debits.
- A rise in the TOT usually results in a decrease in the CAD due to higher prices causing a rise in the value of credits for exports relative to debits for imports.

**Effects of the terms of trade on Australia’s exchange rate**

Changes in the TOT have a powerful effect on the exchange rate for the Australian dollar. Our dollar’s exchange rate or value is what it is worth when swapped for other currencies to help facilitate international transactions between countries. The exchange rate is determined in the foreign exchange market by buyers (D) and sellers (S) of the currency. A rise in the D for our currency relative to its S will push the dollar higher, while a fall in D relative to S will weaken the exchange rate.

- A fall in our TOT tends to weaken Australia’s exchange rate. This is because lower export prices often indicate that there is relatively less international demand for our exports. This tends to reduce the value of exports relative to imports, in turn causing a decrease in the demand for the Australian dollar relative to its supply in the foreign exchange market. This weakens the exchange rate.
- A rise in our TOT often pushes up the value of the Australian dollar. This is because receiving better export prices relative to those paid for imports tends to increase the value of net exports. In turn, this means there is a rise in the demand for the dollar relative to its supply, causing the dollar to strengthen.

**Effects of the terms of trade on AD and domestic economic activity**

The TOT is an aggregate demand-side factor that can affect the level of spending and economic activity.

- A decline in the TOT tends to weaken the value of our export sales relative to import spending, and hence in itself tends to slow AD and the level of economic activity.
- A rise in the TOT, which means receiving better prices for our exports relative to those paid for imports, tends to boost the value of net exports, AD and domestic economic activity.

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**Weblinks** The weblinks in these activities are available in this chapter’s student resources tab.

- Comparative advantage and terms of trade, ACDC Econ 1.3
- Why are commodity prices falling?

**CHECK YOUR UNDERSTANDING**

1. Explain what is meant by the TOT, noting how it is measured.
2. What is meant by the phrase less favourable TOT for Australia?
3. Identify and explain how both demand and supply factors can affect Australia’s TOT.
4. Explain how you would expect a fall in Australia’s TOT to affect each of the following variables:
   a. the CAD
   b. the exchange rate.
3.6 The exchange rate

Because different countries use different currencies, it is necessary to swap or exchange currencies when conducting international trade and other financial transactions.

**Determination and measurement of the exchange rate**

The exchange 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. These days, Australia has a floating exchange rate. 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). This is shown in figure 3.18.

The exchange rate for the Australian dollar will appreciate (rise) in the foreign exchange market when there is less selling (a decrease in supply) or more buying (an increase in demand) of our dollar. This may reflect rapid domestic economic growth, strong consumer and business confidence locally, cuts in local interest rates, global economic growth, strong consumer and business confidence locally, cuts in local interest rates, global economic growth, strong consumer and business confidence locally, cuts in local interest rates, or exchange rate. Speculation of a rising dollar, and improved price competitiveness of our economy against prices in economies overseas. However, the exchange rate will depreciate (fall) when there is more selling and less buying of our dollar. This may reflect 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 like this is that market forces (i.e. the demand and supply for the Australian dollar) sometimes create instability and unpredictability in the exchange rate for the Australian dollar.

There are two main 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 rates express how many currency units for each country can be purchased with one Australian dollar.

2. **Trade weighted index (TWI).** The trade weighted index (TWI) represents the average exchange rate for a basket of foreign currencies weighted according to their relative importance for Australia’s trade (for example, 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.

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**Figure 3.18** How the exchange rate is determined in the foreign exchange market for the Australian dollar (A$)

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**TABLE 3.18**

<table>
<thead>
<tr>
<th>Exchange Rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appreciates</td>
<td>Increase in the value of the currency</td>
</tr>
<tr>
<td>Depreciates</td>
<td>Decrease in the value of the currency</td>
</tr>
</tbody>
</table>

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**Diagram**

The exchange rate is determined in the foreign exchange market for the Australian dollar (A$) with equilibrium price of A$, supply/demand for A$, and the actual exchange rate (ER) showing the price of the A$.
Recent trends in Australia’s exchange rate

Figure 3.19 shows that over the past decade, the exchange rate for the Australian dollar has moved cyclically. Peaks in 2007–08 and 2011–12 were followed by troughs in 2008–09 and 2014–15.

![Graph showing recent trends in Australia’s exchange rate](image)

**Source:** Data derived from RBA Statistics.

Causes of changes in the exchange rate

Rises and falls in the exchange rate come down to changing aggregate demand- and supply-side conditions here and abroad. These influence the level of purchases and sales of the Australian dollar in the foreign exchange market.

Factors affecting the sale or supply ($S$) of the Australian dollar

When Australian residents purchase imports of goods or services, make income payments or invest overseas, they must sell their Australian dollars (A$) to buy another currency. Figure 3.20 shows what happens in the foreign exchange market when sales of the A$ rise or fall. If sales of the A$ rise ($S_1$ to $S_2$ in part a) and exceed the demand for the currency at the original price or exchange rate ($ER_1$), there will be a depreciation of the exchange rate (to $ER_2$). However, in reverse, when sales of the A$ fall ($S_1$ to $S_2$ in part b) relative to the demand for the A$ at the original price or exchange rate ($ER_1$), there will be an appreciation of the currency (to $ER_2$).

![Graph showing how changes in sales of the Australian dollar (A$) affect the exchange rate](image)

The number of dollars sold ($S$) in the foreign exchange market (for example, to pay for imports of goods and services, and incomes abroad) is affected by the following factors:

* local consumer confidence
* local business confidence
• changes in our tax rates and disposable income
• movements in the terms of trade and the prices of imports
• levels of inflation, production costs and competitiveness, relative to those overseas
• levels of interest rates on loans and overdrafts, relative to those overseas
• changes in budget tax receipts, outlays and the overall outcome (equal to budget receipts minus outlays)
• population growth
• household savings ratio (the percentage of income not spent)
• speculation about future changes in the exchange rate.

Factors affecting the purchase or demand (D) for the Australian dollar
When people overseas want to purchase our exports, make income payments or invest in our assets, they must sell their currency and buy Australian dollars. Figure 3.21 shows what happens in the foreign exchange market when purchases of the A$ rise or fall.

\[ \text{Quantity of A$} \]

\[ \text{Price/exchange rate (A$)} \]

If the demand for our currency rises relative to its supply of the A$ (the shift from \( D_1 \) to \( D_2 \) shown in part a), the price of the dollar or exchange rate will appreciate (ER1 to ER2). If fewer A$ are bought relative to the supply in the foreign exchange market (the shift from \( D_1 \) to \( D_2 \) shown in part b), the A$ will depreciate (ER1 to ER2).

The number of dollars bought (D) in the foreign exchange market (for example, when those overseas pay us for our exports and incomes) is affected by the following factors:

• the level of economic activity overseas in our major trading partners (e.g. China, Japan and the United States) and globally
• consumer confidence in our major trading partners and globally
• the terms of trade and changes in our export commodity prices
• changes in our productivity, international competitiveness and relative inflation rate
• speculation about future changes in the exchange rate
• our level of production costs and inflation rate, relative to other suppliers abroad
• the interest rate differential (gap) between Australia and other nations.

Effects of exchange rate movements on domestic macroeconomic goals and the current account balance
Changes in the price of the A$ in the foreign exchange market have powerful effects on our key domestic macroeconomic goals (low inflation, strong and sustainable economic growth, and full employment). In addition, the exchange rate can cause the size of the CAD to rise or fall. This is largely because the exchange rate can act as an aggregate demand-side factor affecting levels of net export spending (X – M) and economic activity, as well as an aggregate supply-side factor affecting our international competitiveness. Now let us look more closely at the effects of a changing exchange rate on the Australian economy.

Effects of the exchange rate on inflation
The RBA and the government try to pursue the goal of low inflation — keeping the inflation rate rising slowly at an average rate of 2–3 per cent annually over the cycle. Rises and falls in the exchange rate for the A$ can affect the rate of demand inflation and/or cost inflation.
Demand inflation can occur when there is excessive and strongly rising spending in an economy that has little or no unused productive capacity. Here, there will be boom conditions with widespread shortages of goods and services. As an aggregate demand-side factor, a falling A$ can further stimulate exports (because they are more attractive abroad) while depressing imports (because they appear dearer to us). When the value of net exports \((X − M)\) rises, and there is already low unemployment, stocks fall and firms cannot readily replace them, leading to widespread shortages and hence demand inflation. In reverse, when the A$ appreciates, demand inflation slows. The higher dollar tends to reduce net exports, slow AD and cause unplanned rises in stocks, and thus widespread price discounting will slow inflation.

Cost inflation occurs when production costs (such as wages, equipment and materials) rise, eroding business profits. As a result, firms are typically forced to pass on higher costs to consumers, so prices rise. As an aggregate supply-side factor, a falling A$ can add to cost inflation because many local firms need to purchase imported equipment and materials. In reverse, when the A$ appreciates, costs for some local producers become cheaper, allowing firms to cut prices and ease cost inflation.

### Effects of the exchange rate on economic growth

The government generally seeks to promote the macro goal of a strong and sustainable rate of economic growth — keeping the GDP increasing at the fastest rate that is economically and environmentally sustainable — perhaps at around 3 per cent or a little more. Rises and falls in the exchange rate for the A$ can influence economic growth by affecting the level of aggregate demand and/or aggregate supply.

- As an aggregate demand-side factor, changes in A$ can alter AD by affecting net export spending \((X − M)\) and hence AD and the cyclical level of economic activity. A weaker A$ (as occurred in 2013–16) will tend to boost overseas spending on our exports, while slowing our spending on imports. As AD strengthens and stocks fall, firms will try to lift production, accelerating the rate of economic growth. In reverse, a stronger A$ will tend to slow net exports and weaken AD, causing stocks to rise and output to be cut.

- As an aggregate supply-side factor, changes in the A$ can make conditions for local businesses either more or less favourable, thereby affecting productive capacity and the potential rate of economic growth. For instance, a lower A$ will be less favourable for those firms importing materials and equipment since they face higher production costs and lower profits, possibly leading to business closures. Capacity would probably be reduced and the rate of growth slowed. However, these negatives might be partly offset since a weaker exchange rate also makes some businesses more competitive at home and abroad. In reverse, a stronger A$ has mixed effects too. While this is good for firms importing materials and equipment because it reduces costs and stimulates growth, it also makes other local businesses that do not have to import materials and equipment less competitive, possibly leading to closures and a lower rate of economic growth.

### Effects of the exchange rate on employment and unemployment

A third domestic government macroeconomic objective is to promote the goal of full employment or the lowest unemployment rate that doesn’t add to inflation. Changes in the exchange rate can affect rates of both cyclical and structural unemployment because the A$ can act as an aggregate demand- or an aggregate supply-side factor.

- As an aggregate demand factor, the exchange rate can affect net exports \((X − M)\), production, the demand for resources and unemployment. By boosting exports and slowing import, a weaker A$ helps to accelerate AD (as happened in 2013–16), causes firms to lift production and employ more labour, thereby decreasing cyclical unemployment. In reverse, a rising A$ slows net exports and aggregate demand, and leads to firms cutting their output and employment.

- As an aggregate supply factor, the A$ can alter production costs and our international competitiveness. On the one hand, a lower A$ means dearer imports and higher production costs for some (but not all) firms, reducing their profits and possibly leading to closures and structural unemployment. On the other hand, this problem may be partly offset by improved competitiveness for other local businesses, leading to fewer closures and less unemployment.
Effects of the exchange rate on the current account balance

In international trade, it is essential that we have a system to swap or exchange the currency of one country (like the Japanese yen, the euro or the US dollar) into that of another (like the Australian dollar or the British pound). Currencies are swapped at different exchange rates, and these rates are generally determined by the number of buyers and sellers of each currency in the foreign exchange market. Over time, exchange rates move up and down. Among other things, this affects the prices we pay for imports of foreign goods like electronics and oil, and the prices people overseas pay for Australian goods like iron ore and holidays, and the levels of AD, GDP and employment.

Australia’s current account records transactions between Australia and the rest of the world. These involve credits minus debits for goods and services, along with primary and secondary incomes. Australia typically runs a CAD. A rise or fall in the exchange rate for the A$ can affect the size of our CAD in two main ways: through the value of exports and imports, and through the value of primary income credits and debits.

1. Value of exports and imports of goods and services
Changes in the exchange rate for the A$ affect the price, attractiveness and value of Australia’s exports and imports of goods and services, thereby affecting the balance on current account.

   - A fall in the A$ makes Australia’s exports of goods (minerals like coal and iron ore, rural commodities such as wheat and beef) and services (tourism, education) relatively cheaper to overseas buyers in terms of their currency. As a result, the value of our export sales typically rises, causing the CAD to shrink. In addition, a lower exchange rate often makes imports of goods (oil, cars, electrical appliances) and services (overseas travel) dearer in terms of our currency. This tends to slow purchases of imports, reduce debits and decrease the CAD.

   - A stronger A$ often leads to a larger CAD. Our exports of goods and services become dearer, reducing the value of sales, while imports become cheaper, increasing purchases. As a result of decreased debits relative to credits, the CAD tends to increase.

2. Value of primary income credits and debits
Changes in the exchange rate for the A$ alter the cost or attractiveness of overseas capital inflow and outflow associated with buying and selling assets internationally. As a consequence, this can indirectly impact on net primary incomes and thus the balance on current account.

   - A fall in the A$ tends to make the purchase of shares and property, denominated in Australian dollars, cheaper and more attractive for non-residents. By increasing net capital inflow and foreign liabilities, this
could ultimately add to primary income debits involving the payment of dividends, rent and profits abroad, and thus the CAD. Additionally, the weaker dollar could make it dearer and less attractive for Australian investors to purchase foreign assets, at least those denominated in foreign currencies. In the longer term, this may indirectly tend to slow our primary income credits and add to our CAD.

• By contrast, a stronger A$ can sometimes encourage capital outflow associated with the purchase of overseas assets by residents. These assets become relatively cheaper and more attractive if denominated in foreign currencies. In the long term, this could lead to higher primary income credits while discouraging foreign capital inflow and primary income debits. As a consequence, there could be a reduction in the CAD.

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**Weblinks** The weblinks in these activities are available in this chapter’s student resources tab.
- The relationship between the current account balance and exchange rates
- Foreign exchange (FOREX), Macro 5.2
- Foreign exchange practice, Macro 5.3
- Economics made easy — Lesson 9: Exchange rate policy (devaluation)

**CHECK YOUR UNDERSTANDING**

1 What is the exchange rate and how is it determined for Australia?
2 Explain how Australia’s exchange rate is measured.
3 Identify and explain any three domestic and two international factors that are likely to affect Australia’s exchange rate.
4 Explain how you would expect a rise or a fall in the value of the A$ to affect each of the following economic variables.
   a The government’s domestic macroeconomic goals
   b The balance of payments on current account

**APPLIED ECONOMIC EXERCISES**

Apply your understanding of this subtopic by accessing and completing the Applied economic exercise(s).
- School-assessed coursework > Applied economic exercises > Question 6

### 3.7 Australia’s international competitiveness

As discussed earlier, Australia gains huge economic benefits from international trade. So it is hardly surprising that the federal government uses policies to encourage trade and make local firms more internationally competitive. This helps Australia to ‘pay its way in international transactions’ and ‘live within its means’, thereby promoting the Australian government’s goal of external stability. In addition, being internationally competitive strengthens the goals associated with domestic economic stability (simultaneously achieving low inflation, strong and sustainable economic growth and full employment), ultimately promoting Australian living standards.

**What is international competitiveness?**

The Australian government wants local businesses to be internationally competitive. **International competitiveness** simply means that Australian producers of goods and services can compete, survive, expand and flourish against foreign rivals, allowing them to capture a growing share of global sales and incomes, and in the process increasing our living standards. Typically, local firms can get the sales edge over foreign counterparts through several means:

• **A competitive selling price.** The selling price paid for goods and services greatly influences the purchasing decisions of many consumers. Hence, to grow their global market share, local sellers need to be able to trade profitably at relatively low prices against similar items made abroad (preferably without government financial assistance). This means that firms need to focus on maximising efficiency in their use of resources and keeping production costs down.

• **Non-price factors.** Consumer decisions are also affected by non-price factors such as:
  - offering better quality goods or services that match or exceed those available abroad
  - catering for and satisfying the changing needs of consumers better than rival suppliers overseas
  - providing superior customer service, including prompt and courteous delivery.
Factors that may influence Australia’s international competitiveness

Many factors influence whether Australian firms are internationally competitive. They include production costs such as wage rates, productivity, availability of resources, the exchange rate, relative rates of inflation, innovation and R&D, rates of company tax and government subsidies.

Production costs of businesses, including wages

The price and competitiveness of local firms is affected by how our costs of production compare with those abroad. Here, production costs for businesses might include:

- wages and labour on-costs like compulsory superannuation, leave entitlements and workers compensation
- the costs of utilities such as power, gas and water, as well as the costs of communications and transport
- the costs of firms borrowing credit or finance (the rate of interest on business overdrafts)
- the costs of purchasing raw materials and equipment.

If these costs overall are higher relative to those overseas, it is likely that local firms will be uncompetitive. Businesses will have to sell their products at a higher and therefore less attractive price in local and foreign markets, leading to lower exports, higher imports and a bigger CAD.

Productivity

Productivity relates to efficiency or the level of output gained from a given quantity of inputs or resources. Labour productivity is commonly measured by the level of GDP per hour worked, while multifactor productivity measures the efficiency with which the combined inputs of labour, capital and natural resources are converted into production. Low productivity translates into higher production costs, and hence act as a less favourable aggregate supply-side factor. It makes locally produced goods less attractive to imports. This weakens our international competitiveness.

Figure 3.22 shows how Australia’s labour and multifactor productivity have changed over the last 18 years, along with the recent changes by industry.

The graph in part (a) of figure 3.22 shows that, despite some good rises in labour productivity over the period, multifactor productivity overall has been decreasing since 2001–02. Looking at the graph in part (b) of the figure showing particular industries, multifactor productivity has recently been negative, especially in the mining and utilities sectors. While a few of these industries (especially services) do not directly compete with imports, most do; hence lower productivity is a worry. There are a number of explanations for these changes in efficiency that undermine our international competitiveness:

- Productivity often moves in cycles and is difficult to measure, as it is hard to determine the exact origin of the change.
- Industries where there have been rapid changes in technology record faster improvements.
- In the case of agriculture, severe weather events of late would not help, along with the use of more marginal land.
- In mining, there has been heavy investment of capital resources, but the full production returns have not yet been realised. In addition, the remaining natural resources are becoming more costly to extract since the easier ones have already been exploited.
- The rise in labour productivity may have been helped by the general increase in unpaid overtime.

Availability of natural resources

Australia is relatively rich in natural resources (coal, bauxite, iron ore, alumina) that are wanted by many nations, and we also have a relatively large area of productive land for grazing and agriculture. This means that mineral and rural commodities can often be produced at lower and more competitive prices, making us more internationally competitive.

The exchange rate

As we know, the exchange rate for the AS affects the price of exports and imports of goods and services.

- A generally lower exchange rate (as occurred between 2013 and 2016) allows Australian-made goods and services to be sold relatively cheaply. This usually helps to make local industry more competitive at home and abroad.
- In reverse, a higher A$ (as occurred between 2010 and 2013) makes our exports relatively dearer against imports, undermining our international competitiveness.

Relative rates of inflation

Australia’s inflation rate compared against rates abroad affects the international attractiveness of locally made goods and services.

- A relatively lower inflation rate here makes our goods and services more attractive to buyers at home and abroad, making us more internationally competitive.
- In reverse, a relatively higher inflation rate here erodes our international competitiveness and sales.
Part (a) Australia: Overall trends in labour and multifactor productivity

Part (b) Australia: Changes in multifactor productivity by industry

**FIGURE 3.22** Trends in Australia's labour and multifactor productivity

Innovation

R&D and innovation (the development of new products and different ways of making things, and adapting to the changing wants of consumers) can all help give a nation a competitive edge and allow it to sell more strongly in both local and international markets. In contrast to some countries, Australian businesses spend less than 1.2 per cent of GDP on R&D (down from around 1.4 per cent over the last five years). Government spending on education is also needed to grow our creativity and innovation, but this is also down. We are being overtaken by other countries, and this too helps to explain the fall in our international competitiveness.

Rates of company tax

Company tax rates affect the after-tax profits of firms and hence the price they must charge to make reasonable returns. With few exceptions, Australia’s corporate tax rates of 30 per cent for large firms and 28.5 per cent for small firms (in 2015–16), are generally higher than our competitors in Asia (China, Vietnam, India and Indonesia, where in 2016 the average tax rate was just over 21 per cent) and in Europe (Italy, Germany and Ireland, where it was just 22 per cent). It also means that local firms cannot afford to purchase more efficient technology and equipment needed to improve their productivity. In these ways, higher corporate tax rates help to explain why local businesses need to charge higher prices than some businesses overseas, making them less internationally competitive.

Government subsidies

The Australian government pays cash subsidies to local producers to help encourage structural change and cover some production costs. This allows businesses to sell their product at a lower price in both local and international markets. Sometimes the decision to pay subsidies is designed to correct market failure, but at other times it could be to help support infant industries and win greater political popularity. Whatever the case, subsidies can make local firms more internationally competitive.

CHECK YOUR UNDERSTANDING

1 Define the term international competitiveness.
2 How internationally competitive is Australian business generally?
3 Explain how each of the following might affect Australia’s international competitiveness.
   a High production costs
   b Weaker multifactor productivity
   c Readily available natural resources
   d Low domestic inflation rates
   e A lower exchange rate
   f High rates of company tax

APPLIED ECONOMIC EXERCISES

Apply your understanding of this subtopic by accessing and completing the Applied economic exercise(s).

School-assessed coursework > Applied economic exercises > Question 7
3.8 The effect of trade liberalisation on Australia’s international competitiveness, domestic macroeconomic goals and living standards

Most economists believe that free trade, or the absence of government protection of local industry from imports, helps to increase efficiency in the use or allocation of resources. In the long term, this should raise national output, employment, incomes and material living standards. Unfortunately, some countries (like Japan, China, United States and certain members of the European Union) still use subsidies and tariffs to protect their farmers and manufacturing industries.

Australia’s policy of trade liberalisation

Especially since the 1990s, the Australian government (like most governments around the world) has gradually adopted the policy of trade liberalisation. Essentially, trade liberalisation involves progressively reducing the various forms of protection of local industry, including the following:

- cutting tariffs
- reducing subsidies and industry assistance
- abolishing import quotas
- increasing the number of free trade agreements (FTAs)
- scaling back other protective devices.

This approach differs from the policy of free trade, which is the complete removal of all forms of government industry protection. The key policy elements involved in Australia’s policy of trade liberalisation are summarised in figure 3.23.
Reducing industry protection and liberalising trade allowed Australia to become part of the process of globalisation in the following ways:

- It forced us to specialise and allocate resources more efficiently into areas of production where we had a comparative cost advantage (or the least cost disadvantage). This meant that more output could be gained from the same inputs of resources, accelerating the sustainable rate of economic and income growth. It also helped to keep inflation in check, thereby lifting the purchasing power of incomes and material living standards.
- It gave local firms a clear choice: become internationally competitive by cutting costs and adopting world’s best practice in production or face extinction. By restructuring their production, some local firms have become exporters to a huge world market, strengthening our balance of payments current account. Despite the possibility of structural unemployment in some industries, especially in the shorter term, trade liberalisation has helped to grow employment, real incomes and material living standards.

Trade liberalisation also made the government more economically accountable and caused it to focus on other supply-side efficiency measures needed for survival in an open economy. Let us find out more about the specific policy measures associated with the adoption of trade liberalisation by the Australian government.

**Tariff cuts**

Tariffs (also called import duties) represent an indirect tax levied on selected imported goods. In general, tariffs are added onto the price of imports to make them dearer or less attractive to local consumers. They limit foreign competition and restrict the supply of goods in local markets. Because of this, economists agree that high tariffs cause resources to be allocated inefficiently into industries where we have no comparative cost advantage. This type of protection weakens competition. It means that local firms can remain inefficient and uncompetitive and still survive, while local households and businesses must pay higher prices for these items, reducing living standards. These costs offset any gains from a possible increase in incomes and employment arising in the short term from having tariffs. Additionally, when one country raises its tariffs, this becomes a justification for other nations to retaliate and increase their protection. This reduces trade volumes, real incomes, consumption and living standards.

In contrast to high rates of tariff protection, a gradual reduction of protection, as implemented in Australia over the past 50 years, helps to improve allocative, technical and dynamic efficiency. Importantly, tariff cuts encourage local firms to become more internationally competitive by forcing them to cut costs and restructure production operations so as to become internationally competitive. In so doing, this helps to grow Australia’s productive capacity, incomes and living standards. Figure 3.24 shows how tariff protection of Australian industry has been gradually reduced.

Notice the following trends in tariff rates shown in figure 3.24:

- **General tariff rate.** The general tariff rate on most manufactured items was cut from 36 per cent in 1968–69 to only around 5 per cent from 1995–96 onwards (where the tariff level has since remained).
- **Special tariff rates.** Tariffs applied to special industries like agriculture, TC&F (textiles, clothing, and footwear), kitchen whitegoods and passenger cars have all come down at varying rates. These industries initially enjoyed more protection and cutting them too quickly to 5 per cent would have meant certain collapse. From 2010, rates on cars came down to 3 per cent and TC&F to 10 per cent, while in 2015 most tariffs for TC&F were reduced to 5 per cent.

### Reduced net subsidies and other assistance to local producers

Subsidies are government cash payments made to local producers and industries designed to help them cover some of their production costs. In so doing, they can grow local industry and may help businesses compete internationally. Subsidies or industry assistance can come in many forms but most are normally financed through the government’s annual budget outlays. After a peak of $25 billion a year in 1970, overall net subsidies and budget assistance were generally reduced to roughly $9 billion by 2015. Lower subsidies are justified on the grounds that some subsidies damage efficiency in resource allocation and create costs that reduce overall living standards. Indeed, in times past, some Australian industries had become dependent on government protective handouts. They had not restructured their production to become internationally competitive.

Nevertheless, today, we still have some industry assistance in cases where there is market failure and various long-term benefits can be gained. Here we might think of the following schemes:

- **Export Development Grants (EMDG) are managed through AUSTRADE.** They seek to help firms cover up to 50 per cent of the costs involved with the promotion of their goods and services in foreign markets.
- **There is a Tax Incentive Scheme for investment in R&D by smaller companies involved in innovation and the commercialisation of ideas for manufacturing and rural industry.** It is designed to lift productivity and sales. This accounts for around a third of all budget assistance.
- **The Farm Household Allowance provides financial assistance to those experiencing financial hardship to support measures to improve their long-term situation.** This also includes concessional loans.
- **The Manufacturing Transition Program provides finance for individual businesses moving into different areas of production.**
- **Tasmanian Freight Equalisation Scheme aims to reduce the transport cost disadvantage for businesses operating in that state.**
The Automotive Transformation Scheme provided help that was conditional upon car companies undertaking investment to upgrade plant, equipment and technology. Despite the announced exit of local car makers Toyota, Ford and Holden by 2017, it was announced in 2015 that this scheme will be retained to help firms in the automotive supply chain diversify and develop new markets.

If applied carefully and in moderation, there is sometimes a case for the limited use of subsidies. They can act as a microeconomic, aggregate supply-side measure that grows productive capacity and our international competitiveness.

Abolition of import quotas and licences

Import quotas are designed to restrict the supply or quantity of specific types of imports allowed into the country. They act to protect local businesses and limit foreign competition. In order to achieve a stated volume target, prospective importers must obtain a licence that gives them permission to bring in a certain maximum number of articles of a particular description.

Quotas were commonplace in Australia during the 1970s and early 1980s, especially on cars, textiles, footwear and clothing. However, with the adoption of trade liberalisation, these were progressively abolished. The last quotas, applying to cheese, were terminated in 2000-01. Clearly the government believes that, in the long term, their removal will increase efficiency in resource allocation, boost productive capacity and sustainable economic growth, slow cost inflation, improve international competitiveness and, ultimately, strengthen our living standards.

The increased role of free trade agreements

Australia has membership of various multinational trading groups (involving many countries) like the World Trade Organization (WTO). Through the Doha rounds of trade negotiations with the WTO (so named because negotiations originally took place in Doha, the capital of Qatar), Australia has pushed hard for general reductions in global tariffs and the abolition of subsidies, along with increased access to agricultural, manufacturing and services markets internationally. Indeed, Australia was instrumental in setting up the Cairns group of fair agricultural traders bent on eliminating the agricultural subsidies commonly found in Europe, Japan and the United States. Despite these efforts, progress has been slow due to significant opposition from interest groups.

Given this slow pace of multilateral trade reform, Australia has increasingly negotiated bilateral free trade agreements (FTAs) with two or more individual countries. For example, by early 2016, we had ten FTAs:

- Australia–New Zealand FTA (also known as Closer Economic Relations) commenced in 1983
- Australia–Singapore FTA in 2005
- Australia–Thailand FTA in 2005
- Australia–United States FTA in 2005
- Australia–Chile FTA in 2007
- ASEAN–Australia–New Zealand FTA in 2009
- Malaysia–Australia FTA in 2012
- Korea–Australia FTA in 2014
- Australia–Japan FTA in 2014
- China–Australia FTA in 2015

In addition, negotiations are well underway for striking new bilateral FTAs with India and Indonesia, along with an Australia–Europe FTA. Furthermore, in October 2015, Australia was one of 12 countries (United States, Japan, New Zealand, Canada, Mexico, Brunei, Chile, Malaysia, Peru, Singapore and Vietnam) to sign the massive Trans-Pacific Partnership Agreement (TPP) covering 40 per cent of the global economy and eliminating 98 per cent of tariffs on our agricultural exports. However, this agreement still needs to be ratified by the Australian Parliament later in 2016 and by those of other signatories.

Essentially, FTAs involve the removal of industry protection. This includes cutting tariff rates applied on trade between member countries, increasing access to services and easing restrictions on foreign investment. In addition to exposing local firms to more intense foreign competition and forcing them to become more cost efficient and improve their international competitiveness, FTAs help Australian producers gain access to potentially huge export markets abroad. They can allow our businesses to expand GDP, gain economies of large scale production, grow Australia’s share of export sales and incomes, improve living standards and reduce our CAD.

Impacts on other government policies

Trade liberalisation is regarded by economists as an important government supply-side microeconomic reform policy designed to improve efficiency in the use of resources, and grow Australia’s international competitiveness and living standards. Additionally, as a direct consequence of adopting trade liberalisation and openness, other productivity-promoting government reform policies have also had to be undertaken. More specifically, these included the following:

- reform of the labour market
- development of a national competition policy
- taxation reform, including the lowering of rates and changes to the tax mix.

These measures also sought to strengthen Australia’s international competitiveness, domestic economic stability and general wellbeing. We will see that although trade liberalisation can sometimes have negative effects in some industries, particularly in the short term, the overall benefits normally become more apparent in the longer term.
Effects of trade liberalisation on Australia’s international competitiveness

As a policy, trade liberalisation has been under way for some decades now, and is one of a number of government measures designed to strengthen Australia’s international competitiveness and living standards. Remember that international competitiveness gives firms the ability to expand their share of global sales and incomes against foreign rivals by selling better quality goods and services at relatively lower prices without government support. Government measures such as lowering tariffs, reducing subsidies, abolishing import quotas and negotiating FTAs should:

- increase competition for local businesses from imports of goods and services, forcing them to lower prices and improve quality and service
- encourage Australian firms to specialise their production in areas of comparative cost advantage, minimising opportunity costs and allowing them to sell their products more competitively at a lower price
- allow local firms to gain economies of large-scale production and an ability to sell exports at a lower, more competitive price through larger production runs made possible by selling in massive export markets
- force firms to restructure their operations, lift efficiency and cut their production costs, thereby allowing them to sell at a lower, more competitive price
- allow local firms to gain access to the latest technology at the lowest cost, increasing technical efficiency and helping them to compete more effectively
- encourage firms to think creatively, provide better service and meet customers changing needs, thus helping to strengthen our international competitiveness.

While it is difficult to precisely measure the effects of trade liberalisation and to know what would have occurred in its absence, we do have some research that compares changes in Australia’s international competitiveness. For instance, figure 3.26 uses data comparing Australia’s rank out of 60 countries (shown in part a), and looks at scores on specific aspects of competitiveness that were used to compile this data (in part b).

![Figure 3.25](https://via.placeholder.com/150)

According to critics of agricultural protectionism, consumers and governments in rich countries have paid $350 billion per year supporting agriculture — enough to fly their 41 million dairy cows first class around the world one and a half times.¹

Source: WTO.

¹According to critics of agricultural protectionism, consumers and governments in rich countries have paid $350 billion per year supporting agriculture — enough to fly their 41 million dairy cows first class around the world one and a half times.
FIGURE 3.26  (continued)

<table>
<thead>
<tr>
<th>Indicator of competitiveness</th>
<th>Australia rate as a percentage of the US rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Australia’s official interest rates as a percentage of the US rate</td>
<td>700</td>
</tr>
<tr>
<td>2. Average number of working days lost per 100 000 employees in Australia as a percentage of the US average</td>
<td>143</td>
</tr>
<tr>
<td>3. Approximate cost of a kilowatt hour of electricity in Australia as a percentage of the US cost</td>
<td>134</td>
</tr>
<tr>
<td>4. Australia’s hourly minimum wage as a percentage of the US wage</td>
<td>132</td>
</tr>
<tr>
<td>5. Index of Australia’s GDP per hour worked (USA = 100)</td>
<td>83</td>
</tr>
<tr>
<td>6. Australia’s rate of company tax as a percentage of the US rate</td>
<td>75</td>
</tr>
</tbody>
</table>


From the graph in figure 3.26 (part a), notice that our relative competitiveness has slipped badly, from a high of 5th place in 2009–10, to a recent low of 18th place in 2014–15. This deterioration is shown by the upward trend line. Of the 15 indicators of competitiveness (shown in part b), the business opinion survey felt that Australia’s attractiveness was generally mediocre and outright poor in some key areas such as the R&D culture, company tax regime and cost competitiveness.

Figure 3.27 sheds additional light on some other factors influencing Australia’s costs and competitiveness compared with the United States.

FIGURE 3.27 Some factors affecting Australia’s international competitiveness compared with the United States

Notes:
(a) Cost is a rough guide as special power rates apply in some countries for businesses, and rates also depend on season and quantity purchased.
(b) Most data is for 2012 or 2013.

Sources: Data mostly 2013–14 or more recent. Information has been derived from many sources including the following: indicator 1 derived from RBA Statistics; indicator 2 selected from NationMaster, Labour, Strikes, Countries compared, www.nationmaster.com/country-info/stats/Labor/Strikes; indicator 3 derived from Wikipedia, the free encyclopedia, Electricity Pricing, en.wikipedia.org/wiki/Electricity_pricing; indicator 4 derived from Wikipedia, the free encyclopedia, countries selected from a table, en.wikipedia.org/wiki/List_of_minimum_wages_by_country; indicator 5 derived from The Conference Board, Total Economy Database, Summary statistics 1997–2014, Summary tables; indicator 6 derived from KPMG for corporate tax rate comparisons, 2015.
With the exception of our lower rate of company tax, the data show that Australia has a competitive disadvantage with the United States in areas including the cost of borrowing, working days lost through industrial action like strikes, electricity charges, minimum hourly pay rates and labour productivity.

What these data also show is that Australia’s international competitiveness appears to have declined against that of some other countries in recent years. However, it is probably fair to say that without the progress made through liberalising international trade, our situation would almost certainly have been even worse. It is also likely that other countries have been more successful with measures designed to strengthen international competitiveness.

**Effects of trade liberalisation on domestic macroeconomic goals**

Trade liberalisation (as an important microeconomic reform policy), has helped to lift allocative, technical, dynamic and even intertemporal efficiency, grow Australia’s productive capacity and increase AS. As a result, it has impacted on the government’s three key domestic macroeconomic goals of low inflation, strong and sustainable economic growth, and full employment.

**Effect of trade liberalisation on the achievement of low inflation**

One important domestic macroeconomic objective of the RBA and Australian government is the goal of low inflation (keeping the average rise in price around 2–3 per cent per year over the business cycle). Trade liberalisation has helped to slow Australia’s inflation rate (especially cost inflation). This might have happened in several ways:

- Trade liberalisation has caused resources to move into their most efficient uses and out of areas of inefficiency and high costs. There has been an increase in allocative efficiency, slowing inflation.
- Trade liberalisation (especially FTAs) has grown our access to larger markets abroad, allowing local firms to gain economies of large-scale production and cutting fixed costs per unit.
- Trade liberalisation has allowed local firms to have cheaper input costs for equipment and raw materials accessed from overseas. Indeed, the Productivity Commission recently estimated that, despite reductions, tariffs add over $7 billion annually to costs for manufacturing and service businesses. Reducing tariffs should therefore slow inflation.
- Trade liberalisation has forced local firms to restructure their operations more efficiently, cut production costs and apply world’s best practice. This has increased dynamic efficiency and helped to slow inflationary pressures.

Figure 3.28 shows that since significant trade liberalisation from the early 1990s, Australia’s average inflation rate has slowed dramatically to just 2.7 per cent over the last 25 years, compared with 9.3 per cent during the previous 20 years. While trade liberalisation is not the only cause (there were also other microeconomic or aggregate supply-side government policies that helped to slow inflation, such as the deregulation of the labour market), it is likely to have been an important contributing factor. In other words, cutting tariffs, import quotas and subsidies, as well as and signing FTAs, has probably helped to promote the goal of low inflation. In turn, this has helped to increase the real purchasing power of incomes and raise material living standards.

**Effect of trade liberalisation on the achievement of strong and sustainable economic growth**

A second core macroeconomic objective of the federal government is to promote the goal of strong and sustainable economic growth. This is defined as the fastest average rate of growth in real GDP, around 3 per cent per year or a little more, that is consistent with achieving other economic and environmental goals.

![Figure 3.28](https://example.com/figure3.28.png)

*Figure 3.28* The likely link between Australia’s trade liberalisation and our lower inflation

*Sources:* Data derived from RBA Statistics, Occasional Paper 8A; ABS 5206.0 (Table 34).
Trade liberalisation might have helped to strengthen the economically sustainable rate of growth in several ways, particularly in the medium to longer term:

- Trade liberalisation leads to a greater specialisation and a more efficient allocation of resources involving lower opportunity costs. This means there is more output gained from the same or fewer inputs, thereby growing Australia’s production possibility frontier and productive capacity. This increases the sustainable rate of GDP growth.
- With trade liberalisation, local businesses need to reorganise their operations efficiently to allow them to survive more intensive competition from imports. This allows for an increase in productive capacity and rate of economic growth.
- Trade liberalisation has allowed our local firms to access equipment, materials and technology at a lower cost, creating the more favourable aggregate supply conditions needed to grow Australia’s GDP at a faster rate.
- Trade liberalisation has grown the size of Australia’s export markets, turbocharging sales and encouraging firms to boost production levels and GDP.

By increasing the growth rate of GDP, trade liberalisation helps to increase national incomes faster. This helps to lift average real disposable income and consumption per head, and hence material living standards.

A 2009 report concluded that trade liberalisation has delivered a rise in average family incomes over two decades of around $3900 per family per year by adding 1.8 per cent to real GDP (Benefits of Trade and Trade Liberalisation by DFAT and Centre for International Economics). Again, in the medium to long term, some of the rise in average real disposable incomes per head might be attributable to the Australian government’s acceleration of trade liberalisation from the early 1990s. Figure 3.29 seems to confirm that there has been a faster growth in real disposable income of 1.8 per cent per year on average in the 25 years to 2014–15 against 1.4 per cent growth in the 20 years to 1990, prior to significant liberalisation. However, this could be a coincidence rather than proof of a causal relationship.

![Figure 3.29](image)

**FIGURE 3.29** The possible link between Australia’s trade liberalisation and our faster growth in real net disposable income per head

Sources: Data derived from RBA Statistics, Occasional Paper 8A; ABS 5206.0 (Table 34).

Despite the benefits of economic growth in the medium to longer term, in the short to medium term, trade liberalisation may actually slow economic growth. The main reason is that some local firms, unable to cut costs quickly enough and restructure, may be forced to close. Here we might think of recent examples in the car industry, TC&F and low end manufacturing. This would mean the loss of productive capacity, slower economic growth and weaker living standards.

**Effect of trade liberalisation on the achievement of full employment**

The goal of full employment is a third domestic macroeconomic economic objective of the federal government. This is defined as the lowest rate of unemployment, around 5 per cent of the labour force, that does not accelerate inflation.

Nearly 25 per cent of all Australian jobs are currently generated through international trade. The effect of trade liberalisation on Australia’s unemployment rate depends partly on whether we consider the short or long term period of time. As a general rule, in the long run, it seems that trade liberalisation has created more jobs and employment, albeit sometimes in different industries, whereas in the shorter term, the effects can be severe for industries that cannot become internationally competitive fast enough.
Starting with the longer term, trade liberalisation might have helped to create more jobs and better material and non-material living standards in various ways:

- By boosting efficiency and slowing domestic inflation, trade liberalisation may make local businesses more internationally competitive, enabling them to increase their sales in domestic and foreign markets. This can lead to higher production levels and demand for resources including labour, keeping unemployment lower.
- Trade liberalisation, especially FTAs, create bigger markets abroad, allowing for increased sales and business expansion. This creates job vacancies and helps lower unemployment.
- Trade liberalisation allows local firms to reduce their costs of equipment and materials. This is a favourable aggregate supply-side factor that enhances business competitiveness and profitability, again reducing business closures and structural unemployment.

By creating more jobs and lowering unemployment, material living standards and consumption should be higher. In addition, lower unemployment can support better non-material living standards including greater happiness, less crime, improved health outcomes and less family conflict.

However, having suggested that trade liberalisation should help to promote the goal of full employment, evidence of this appears rather thin. Indeed, average unemployment rates in the years since significant trade liberalisation have tended to be significantly higher (see figure 3.30). Again, this may not entirely be the result of trade liberalisation measures but it is possible that these and related policies have contributed to the problem.

Other evidence of the effects of trade liberalisation on domestic economic goals

We will conclude this section about the effects of trade liberalisation on the domestic economy in both the short and long terms by looking at some recent research. Economic modelling has recently been concluded showing the possible annual impacts of FTAs for the Australian economy predicted for 2016 to 2035. One report looks at the results of Australia’s three FTAs with Northern Asia (with China in 2015, and with Japan and South Korea in 2014). The results are summarised in table 3.2. Notice the expected significant additions to GDP, consumption and employment.

### FIGURE 3.30 The possible link between Australia’s trade liberalisation and our unemployment rate

**Sources:** Data derived from ABS 1350.0, 6202.0; RBA Statistics, Occasional Paper 8A (Table 4.3).

In fact, one of the main criticisms of trade liberalisation in Australia and elsewhere, especially in the shorter term, is that it prevents the growth of infant industries, destroys others that are uncompetitive and causes higher levels of structural unemployment as seen in basic manufacturing during recent decades.

**Other evidence of the effects of trade liberalisation on domestic economic goals**

We will conclude this section about the effects of trade liberalisation on the domestic economy in both the short and long terms by looking at some recent research. Economic modelling has recently been concluded showing the possible annual impacts of FTAs for the Australian economy predicted for 2016 to 2035. One report looks at the results of Australia’s three FTAs with Northern Asia (with China in 2015, and with Japan and South Korea in 2014). The results are summarised in table 3.2. Notice the expected significant additions to GDP, consumption and employment.

<table>
<thead>
<tr>
<th>Period of time</th>
<th>Average unemployment rate (%) before significant trade liberalisation (1970–71/1989–90)</th>
<th>Average unemployment rate (%) since significant globalisation (1990–91/2015–16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4.2</td>
<td>7.1</td>
</tr>
</tbody>
</table>

**TABLE 3.2 The projected economic effects of Australia’s three FTAs with North Asian Economies (Japan, China and South Korea), 2016–35**

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP (A$m)</th>
<th>Real consumption (A$m)</th>
<th>Real consumption per household* (A$)</th>
<th>Employment (persons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1 036</td>
<td>2 886</td>
<td>312</td>
<td>7 925</td>
</tr>
<tr>
<td>2035</td>
<td>2 260</td>
<td>4 630</td>
<td>370</td>
<td>5 434</td>
</tr>
<tr>
<td>Net present value</td>
<td>24 362</td>
<td>46 260</td>
<td>4 348</td>
<td></td>
</tr>
</tbody>
</table>

*Per household figures use ABS projected number of households (series II) in the relevant year (http://www.abs.gov.au/AUSSTATS/abs@.nsf/ Primarymainfeatures/0AACBBFAC8ED022D41CA256B9A0013942A?opendocument)

Note: Present value calculations use a discount rate of 5%


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**TOPIC 3 Australia and the world economy**
Effects of trade liberalisation on living standards

Overall living standards or wellbeing depend on both material and non-material conditions:
• Material living standards reflect real annual levels of production, income and consumption of goods and services per person, and the extent to which our wants are actually satisfied.
• Non-material living standards could be affected by many things, from personal happiness and free choice, to world peace, the existence of democracy, level of cultural enrichment and experiences, the absence of crime, and a clean and sustainable environment.

Positive effects

Trade liberalisation has had mostly positive effects on the welfare of Australians, especially in the long term:
• Trade liberalisation should have bolstered our economic wellbeing through:
  – greater efficiency in resource allocation and the growth of productive capacity
  – faster economic growth
  – increased real per capita incomes and purchasing power
  – lower consumer prices
  – increased employment in the long term.
• Trade liberalisation can also enhance some aspects of non-economic wellbeing, perhaps through
  – increasing consumer choice
  – improving cooperation and world peace
  – enhancing cultural enrichment, and providing more exciting and diverse experiences.

Negative effects

However, trade liberalisation has not been without its problems:
• It has led to higher structural unemployment in some uncompetitive industries that have relocated, restructured or closed down, and it may also have stilled the growth of infant industries that would have provided job opportunities had they been able to prosper. In turn, structural unemployment reduces incomes and consumption. It also undermines aspects of non-material living standards including personal happiness, feelings of self-worth, health outcomes and family tensions, and potentially, even increased crime rates.
• It has possibly exposed Australia to greater economic instability like the effects of the GFC.
• By increasing production, it has accelerated the depletion of non-renewable natural resources and further compromised the environment.

eBookplus

The weblinks in these activities are available in this chapter’s student resources tab.

Weblinks
• A video case study on Aaco Beef
• A video case study on AusAb
• A video case study on ACPET
• A video case study on Burch Family Wines
• A video case study on Burra Foods

CHECK YOUR UNDERSTANDING

1. Outline the main policy measures of the Australian government associated with the progressive adoption of trade liberalisation.
2. How would you expect trade liberalisation to affect each of the following areas?
   a. Our international competitiveness
   b. Our domestic macroeconomic goals including:
      i. Inflation rate
      ii. Rate of economic growth
      iii. Unemployment rate
   c. Overall living standards.

APPLIED ECONOMIC EXERCISES

Apply your understanding of this subtopic by accessing and completing the Applied economic exercise(s).

• School-assessed coursework > Applied economic exercises > Question 8
3.9 School-assessed coursework

Three SACs are to be completed for VCE Economics Unit 3. SAC 3 is worth 30 per cent of the total assessment for Unit 3. It assesses the skills and knowledge associated with Outcome 3 that is largely covered in topic 3. The SAC should be part of the regular teaching and learning program, and completed mainly in class and within a limited timeframe. The SAC could involve one or more of the following:

- a folio of applied economics exercises
- an essay
- a report
- structured questions
- media analysis
- case study.

Courses and assessments can change, so teachers are urged to carefully check the latest VCAA assessment guide and various bulletins to ensure that all the assessment requirements are met fully.

Multiple-choice test questions

Instructions: Using the multiple-choice answer grid available in the Resources section, select the letter (A, B, C, D) that represents the most appropriate answer for each question by marking this with a tick (√).

The answer grid for the multiple-choice questions is available in this topic’s student resources tab.

Question 1
International relationships exist between countries. Typically, these involve:
A exports of goods and services.
B imports of goods and services.
C exports and imports of goods and services.
D exports and imports of goods and services along with movements of money capital and investments.

Question 2
Currently, Australia’s three most important export customers in descending order are:
A China, Japan and the US.
B the US, China and Japan.
C the US, Japan and China.
D Japan, China and the US.

Question 3
Freer international trade usually improves living standards by:
A increasing efficiency in resource use, growing GDP and decreasing inflation.
B allowing countries to specialise in areas of comparative cost advantage.
C growing jobs and incomes, especially in the longer term, thereby increasing our purchasing power.
D all of the above.

Question 4
Study the hypothetical data below for country A and country B. It shows the total number of hours that must be worked by each employee to produce a unit of wool or a unit of wheat. Each country can produce the same two products, wool and wheat.

<table>
<thead>
<tr>
<th>Country</th>
<th>Wool (hours worked per unit produced)</th>
<th>Wheat (hours worked per unit produced)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>200</td>
</tr>
</tbody>
</table>

Based on this data:
A country B has an absolute cost advantage in wheat.
B country A has a comparative cost advantage in wheat.
C country B has no type of cost advantage in either product.
D country B has an absolute and comparative cost advantage in both goods.

Question 5
Referring to the data from question 4, which statement is false?
A Country A is more efficient at producing both wool and wheat than country B.
B Country B is less efficient at producing both wool and wheat than country A.
C Concerning Australia's NFD and liabilities, which statement is the opposite to the other three responses?

Question 6
Which of the following would not generally explain a country's comparative cost advantage?
A Superior access to natural resources
B Lower productivity levels for labour
C Exploitation of economies of large-scale production
D A rapid rise in the population of working age.

Question 7
Examine the following hypothetical data relating to a nation's balance of payments for 2016–17.

<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 primary incomes</td>
<td>−100</td>
</tr>
<tr>
<td>Net secondary incomes</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 8
Regarding Australia's BOP current account and the BOP capital and financial accounts, which statement is least correct?
A In total, the capital and financial accounts are a surplus to offset the CAD.
B Australia depends on foreign debt and liabilities to offset the excess of debits on the current account.
C A rise in foreign investment in Australia normally reduces our CAD.
D The existence of a national savings–investment gap ultimately adds to the CAD while creating a surplus on the capital and financial accounts.

Question 9
Which of the following would have the opposite effect on the size of Australia's CAD to the other three responses?
A Severe climatic conditions result in drought and cyclones in Australia.
B Australia’s average inflation rate is consistently below that of our trading competitors.
C There is a rise in domestic consumer confidence and a fall in confidence in China.
D The exchange rate for the Australian dollar rises strongly.

Question 10
Which of the following would be likely to have the opposite effect on the size of Australia’s CAD to the other three responses?
A Overall stronger domestic aggregate demand-side conditions
B A higher household savings ratio domestically from 3 per cent to 10 per cent
C Generally less favourable aggregate supply conditions including weaker rises in domestic productivity, higher RULCs and rises in international oil prices to over US$100 a barrel
D Less favourable TOT for Australia and rises in defence spending on equipment

Question 11
Concerning Australia’s NFD and liabilities, which statement is false?
A The NFD is the excess of what Australia has lent overseas relative to what we have borrowed.
B The rise in official debt is partly the result of weaker economic activity and hence larger budget deficits.
C Non-official, private sector debt has risen due to the savings–investment gap and lower interest rates in some overseas countries.
D In part, our abundance of natural resources and favourable economic and social institutions help to explain the rise in our external liabilities.

Question 12
Which statement about Australia's trade liberalisation is most correct?
A A reduction in the protection levels for local industries
B A general reduction of tariffs to 5 per cent or less, and the removal of higher rates of protection for TC&F (textiles, clothing and footwear) and passenger vehicles during 2015
C The abolition of import quotas, an overall reduction in the net value of producer subsidies to local industries and the signing of additional FTAs
D All of the above
Question 13
Trade protectionism may involve:
A cutting tariffs.
B abolishing foreign capital or ownership restrictions.
C providing Export Development Grants and other types of financial assistance.
D removing anti-dumping legislation for foreign goods.

Question 14
Which of the following is not an advantage of free trade?
A Resources are diverted to areas where cost disadvantages are relatively lowest and opportunity costs tend to be minimised.
B Local businesses need to restructure their approach to improve efficiency in production.
C Imports of capital goods incorporating new technology become cheaper for local firms, helping to boost their competitiveness.
D Employment rates will probably be higher in the short term.

Question 15
The dominant reason for Australia’s CAD in recent years is:
A the lack of domestic savings and relatively high local interest rates, which encourage overseas borrowing and lead to massive income repayments abroad.
B too many imports of merchandise and services.
C a lack of export competitiveness and sales abroad.
D Australia’s secondary income debits are too high.

Question 16
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 primary and secondary income debits exceed credits.
D the total value of debits exceeds credits for merchandise, services, primary incomes and secondary incomes.

Question 17
The aggregate demand-side or aggregate supply-side development most unlikely to cause an appreciation of the Australian dollar is:
A a rise in world commodity prices and the terms of trade.
B a recession in Japan, China and the United States.
C higher domestic interest rates and the relaxation of controls on the level of foreign investment.
D huge new discoveries of natural resources.

Question 18
The aggregate demand-side or aggregate supply-side development most unlikely to cause a depreciation of the Australian dollar is:
A a rise in the federal government budget surplus where government receipts exceed outlays and there is no need to borrow credit abroad.
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 an ongoing reduction in R&D funding by the federal government.

Question 19
Which statement is generally false for Australia?
A Very strong levels of domestic economic activity usually cause a cyclical fall in the CAD.
B A weaker Australian dollar can actually help improve the balance of net goods.
C Very rapid economic growth resulting in higher inflation can cause a fall in the TWI.
D Foreign borrowing can tend to weaken the balance of payments current account by raising the overall value of primary income debits relative to the overall value of primary income credits.

Question 20
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 Corporation Ltd to overseas shareholders would be recorded as a debit on Australia’s capital account.
C Investment by the Royal Dutch Shell oil company of the Netherlands in expanding its operations 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 21
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, the United States and Asia generally.
D depressed international commodity prices for minerals, wool and cereals.

Question 22
Which of the following is not normally regarded as a disadvantage of free trade?
A The weakening of national defence and self-sufficiency in times of war and isolation
B A reduction in the opportunities for new industries to get started and create jobs
C Greater domestic economic stability in times of global slowdowns
D Dangerous or unsafe goods becoming more likely to be sold locally

Question 23
Trade liberalisation is likely to slow inflation because:
A resources are reallocated into areas where efficiency is highest
B local firms are exposed to stiffer competition from imports, especially of goods.
C firms can spread their fixed costs more thinly over larger production runs.
D all of the above may be applicable.

Question 24
Which statement about trade liberalisation is incorrect?
A For one reason or another, the average unemployment rate appears to now be higher than before significant trade liberalisation as a policy was widely adopted.
B Over a quarter of all jobs in Australia are related to international trade.
C Trade liberalisation may destroy jobs in some industries but is likely to create more jobs overall, especially in the longer term.
D Recent FTAs with Northern Asia are expected to decrease GDP and employment.

Question 25
A rise in the Australian dollar is most likely to be caused by:
A a fall in the TOT and lower rural and mineral commodity prices.
B a rise in the supply of the Australian dollar due to weaker confidence and lower economic activity domestically.
C a cut in interest rates locally, relative to those overseas.
D stronger levels of global economic activity, especially in China and Japan, and a weaker US dollar.

Question 26
A lower Australian dollar is likely to lead to which of the following macroeconomic effects?
A Higher cost and demand inflation, stronger economic growth and lower cyclical unemployment
B Lower inflation and economic growth, with higher structural unemployment
C Overall reduced competitiveness of domestic manufacturing industries that export and compete with imports
D A smaller number of overseas tourists coming to Australia and locals tending to holiday abroad, slowing down the growth in GDP and employment

Question 27
Examine the following data for a hypothetical country’s TOT.

<table>
<thead>
<tr>
<th>Year</th>
<th>Export price index</th>
<th>Import price index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015–16 (base year)</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2016–17</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>2017–18</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>2018–19</td>
<td>90</td>
<td>80</td>
</tr>
<tr>
<td>2019–20</td>
<td>120</td>
<td>70</td>
</tr>
</tbody>
</table>

Which statement is false?
A There was no change in the TOT between 2015–16 and 2016–17.
B The TOT moved unfavourably in 2017–18 against that for 2016–17.
C The TOT moved unfavourably in 2018–19 against that for 2017–18.

Question 28
Australia’s TOT would tend to fall and be less favourable if:
A there was stronger global economic activity.
B there was weaker global economic activity.
C global disposable income rose.
D there were generally less favourable growing conditions for crops worldwide.
Question 29
Which of the following macroeconomic effects would be unlikely, given a general fall in Australia’s TOT as seen between 2013 and 2016?
A. Rising demand inflation and economic growth
B. Higher cyclical unemployment
C. A slowdown in the rate of economic growth
D. Lower material living standards

Question 30
Concerning Australia’s international competitiveness, which statement is false?
A. Over recent years, our competitiveness has declined.
B. Multifactor productivity has risen strongly but the fall in labour productivity has weakened our international competitiveness.
C. The cut in company tax for small businesses from 2015 (along with the announcement of further reductions in the 2016–17 budget) should help improve our international competitiveness.
D. The abundance of many natural resources should enhance our international competitiveness but our relatively high labour costs undermine it.

Applied economic exercises
Instructions: Complete a selection of the following short-answer questions.

Question 1
A. Why has world trade grown so quickly in recent decades? (2 marks)
B. Most believe that the growth in world trade has helped to increase material and non-material living standards. Explain how each of the following points associated with the growth of international trade (and trade liberalisation) might affect general living standards.
(i) Increased international specialisation in production based on comparative cost advantage (2 marks)
(ii) Greater economies of large-scale production (2 marks)
(iii) Better access to resources (1 mark)
(iv) Environmental impacts (1 mark)
(v) More consumer choice and lower prices (2 marks)
(vi) Higher GDP and average incomes (2 marks)
(vii) Job creation (2 marks)
(viii) Promotion of world peace (1 mark)

Question 2
A. What is the BOP account and how is it structured? (2 marks)
B. Copy the following table, then classify each transaction and indicate where and how each would initially be recorded on Australia’s BOP account. (12 marks)

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Major section of Australia’s BOP account (e.g. current account, or capital and financial accounts)</th>
<th>Minor sub-account making up Australia’s current account, or capital and financial accounts</th>
<th>Recorded as a credit (+) or debit (–) on Australia’s BOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) You purchase a laptop computer made in Korea for $2800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) Australia sells lamb to the US and Indonesia worth $750 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii) You donate $50 in food aid to Ethiopia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) BHP-Billiton pays $15 million in dividends to overseas shareholders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(v) The government pays $12 million in interest on its overseas debt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vi) You make a $10 phone call using an overseas phone company</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vii) An immigrant transfers $45 000 to an Australian bank account</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(viii) Qantas sells an old aircraft to Indonesia’s Garuda Airlines for $7 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ix) Grand Prix tickets worth $4.5 million are sold to overseas visitors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(x) Chinese investors purchase residential and rural property worth $25 billion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(xi) James Packer buys shares in an overseas media company worth $9 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(xii) Overseas students from India, China and Thailand purchase $5 billion of education from Australian secondary schools and universities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C Use table 3.3 to calculate the following balance of payments items for Australia, 2014–15. Show your working.

(i) Net goods
(ii) Net services
(iii) Net primary incomes
(iv) Net secondary incomes
(v) The overall balance of payments on the current account
(vi) The overall balance of payments on the capital and financial account

(6 * 1 = 6 marks)

<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>256</td>
<td>Primary income credits</td>
<td>53</td>
</tr>
<tr>
<td>Goods debits</td>
<td>269</td>
<td>Primary income debits</td>
<td>87</td>
</tr>
<tr>
<td>Services credits</td>
<td>63</td>
<td>Secondary income credits</td>
<td>8</td>
</tr>
<tr>
<td>Services debits</td>
<td>71</td>
<td>Secondary income debits</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: ABS 5302.0 (Table 1).

D What is meant by the current account deficit (CAD)? How big is Australia’s CAD? (2 marks)

E Explain the type of relationship that exists between Australia’s balance of payments on current account and the balance of payments on the capital and financial accounts? (2 marks)

Question 3

A The size of Australia’s CAD changes over time. Distinguish Australia’s cyclical causes of the CAD from the structural causes of the CAD. (2 marks)

B Examine figure 3.31 relating to some of the key aggregates making up Australia’s BOP account.

(i) Describe the trend in the current account balance over the period. (1 mark)

(ii) According to the graph, which area was the main cause of the negative current account balance? (1 mark)

(iii) Suggest two likely reasons for the quarterly surpluses recorded on net goods and services in 2011 and between December 2011 and December 2015. (2 marks)

C Australia’s CAD is affected by both aggregate demand-side factors and aggregate supply-side factors. Giving examples, explain the difference between these two types of factors. (4 marks)

D What is meant by Australia’s savings–investment gap and why does it exist? (3 marks)

E From the following list, select two aggregate demand-side factors and two aggregate supply-side factors and explain how they are likely to have affected the size of Australia’s cyclical or structural CAD during the past two years. Where possible, illustrate your answer with reference to some specific factors or events to help show the cause–effect relationship.

(i) A drought in the northern and some eastern parts of Australia
(ii) Generally slower rates of economic growth in China, Japan and Europe during 2013–16

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(iii) Large budget deficits totalling over $320 billion in 2008–09 to 2015–16, which the Australian government partly financed by overseas borrowing
(iv) The 30+ per cent fall in the exchange rate for the Australian dollar against the US dollar between 2013 and early 2016
(v) A rise in international terrorism
(vi) The staging of the Soccer World Cup in Melbourne
(vii) A sustained slowdown in multifactor productivity from 2002–03 to 2015–16
(viii) A heavy fall in Australia’s terms of trade index during 2013–16
(ix) A fall in oil prices from over US$100 per barrel to under US$50 per barrel in 2015–16
(x) A fall in the annual level of the household savings ratio in Australia from over 10 per cent to around 8 per cent of GDP between 2013 and 2015
(xi) A decline in consumer and business confidence in Japan and China during 2013–16
(xii) A fall in or flat levels of domestic business confidence during 2011–13
(xiii) Lower world commodity prices and terms of trade during 2013–16
(xiv) A decrease in the interest rate differential between 2013 and 2016, with rates in Australia falling closer to those overseas
(xv) Speculation that the exchange rate for the Australian dollar will fall even further

**Question 4**

A Australia now has over $1000 billion of NFD. Define the term net foreign debt (NFD). (2 marks)
B Distinguish Australia’s NFD from NFE. (2 marks)
C Distinguish official debt from non-official debt, noting which of the two is higher. (2 marks)
D Identify and explain two factors that have led to the rise in official foreign debt in recent times. (2 marks)
E Identify and explain two factors that have led to the rise in non-official foreign debt in recent times. (2 marks)
F Outline one important cost and one benefit of Australia’s NFD. (2 marks)

**Question 5**

A Define terms of trade. (2 marks)
B Explain how Australia measures the terms of trade. (2 marks)
C Examine the hypothetical data relating to a country’s export price index and import price index shown in the table below. (2 marks)
   (i) Showing the formula, calculate the TOT index for the four years 2016–17 to 2019–20. (1 mark)
   (ii) Describe the trend in this country’s TOT index over the period. (1 mark)

<table>
<thead>
<tr>
<th>Year</th>
<th>Export price index</th>
<th>Import price index</th>
<th>TOT index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015–16 (base year)</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2016–17</td>
<td>130</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>2017–18</td>
<td>90</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>2018–19</td>
<td>80</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>2019–20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D What are the general determinants or causes of changes in Australia’s TOT index? (2 marks)
E Identify and explain the key factors that caused Australia’s TOT index to fall between 2013 and 2016. As part of your answer, illustrate the impacts of these factors hypothetically on D–S diagrams representing global markets for our exports and imports. (4 marks)
F How would you expect a fall in Australia’s TOT index to affect each of the following variables? (2 marks)
   (i) The size of our CAD
   (ii) The exchange rate for the Australian dollar
   (iii) The general level of domestic economic activity

**Question 6**

A How is Australia’s exchange rate determined? Illustrate this diagrammatically for the foreign exchange market (2 + 1 = 3 marks)
B Using D–S diagrams to show the before and after situations in the foreign exchange market, explain what would happen to the exchange rate for the Australian dollar (A$) in each of the following: (1 mark)
   (i) there was increased buying of the A$ (1 mark)
   (ii) there was increased selling of the A$. (1 mark)
C What does the trade weighted index or TWI measure? (2 marks)
D Giving clear reasons, explain how each of the following events would be likely to affect the exchange rate for the Australian dollar: (2 marks)
   (i) cuts in domestic interest rates, which occurred in 2011–16
   (ii) overall slower economic activity overseas including China and Japan, as happened in 2013–16 (2 marks)
(iii) relatively weak business and consumer optimism in Australia, as occurred (2 marks)
(iv) speculation of a future rise in the Australian dollar next week (2 marks)
(v) a fall in our terms of trade index, as between 2013–15. (2 marks)
(vi) a rise in interest rates in the US relative to those in Australia, as occurred in 2014–15 (2 marks)
(vii) a fall in RULCs in Australia, as happened in 2012–14 (2 marks)
(viii) reduced foreign aid and a substantial cut in defence spending on new equipment, such (2 marks)
as happened in 2014–15 (2 marks)
(ix) a slower rate of inflation in Australia than in some overseas countries. (2 marks)

E Explain how a fall in the exchange rate for the Australian dollar would be likely to affect each variable:
(i) size of the CAD (2 marks)
(ii) rate of inflation (2 marks)
(iii) rate of economic growth (2 marks)
(iv) rate of unemployment. (2 marks)

Question 7
A Define what is meant by international competitiveness. (2 marks)
B Identify and outline four important factors that have affected Australia’s international (4 marks)
competitiveness over recent years.
C Examine figure 3.32 showing Australia’s international rankings (out of 60 nations; lower scores represent (2 marks)
better competitiveness) on various dimensions of international competitiveness. In which three areas of (2 marks)
competitiveness is Australia ranked relatively (i) highest? (1 mark)
(ii) lowest? (1 mark)

<table>
<thead>
<tr>
<th>Economic performance</th>
<th>Government efficiency</th>
<th>Business efficiency</th>
<th>Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic economy</td>
<td>Public finance</td>
<td>Labor market</td>
<td>Basic infrastructure</td>
</tr>
<tr>
<td>International trade</td>
<td>Fiscal policy</td>
<td>Finance</td>
<td>Technological infrastructure</td>
</tr>
<tr>
<td>International</td>
<td>Institutional framework</td>
<td>Management practices</td>
<td>Scientific infrastructure</td>
</tr>
<tr>
<td>investment</td>
<td>Business legislation</td>
<td>Attitudes and values</td>
<td>Health and environment</td>
</tr>
<tr>
<td>Employment</td>
<td>Social framework</td>
<td></td>
<td>Education</td>
</tr>
<tr>
<td>Prices</td>
<td>Productivity &amp; efficiency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Figure 3.32](http://adminpanel.ceda.com.au/PAGES/Service/Files/Documents/26525-Australia.pdf)

**FIGURE 3.32** Australia’s international competitiveness by area

*Source: Graph copied directly from the Committee for Economic Development of Australia (CEDA), http://adminpanel.ceda.com.au/
*PAGES/Service/Files/Documents/26525-Australia.pdf.*

Question 8
Government trade liberalisation has gained pace in recent decades, especially since the 1990s.
A Detail the key policy features of Australia’s trade liberalisation policies. (3 marks)
B One aspect of trade liberalisation has been the rapid growth in the number of FTAs. What are bilateral (2 marks)
FTAs and why are they potentially important for Australia?
C Explain how you would expect Australia’s trade liberalisation to affect each of the following economic (2 marks)
variables.
(i) Australia’s international competitiveness (2 marks)
(ii) The inflation rate (2 marks)
(iii) The rate of economic growth (2 marks)
(iv) The unemployment rate (2 marks)
(v) Living standards (2 marks)
D Most commentators agree that trade liberalisation by Australia has led to faster economic growth, higher disposable incomes, lower inflation and, possibly in the short term, higher structural unemployment. China is a country of over 1.3 billion people undergoing economic transformation. If it is not already, it will soon be the world’s largest economy. Examine Figure 3.33 showing macroeconomic data, generated through 2008 modelling, of the expected effects of the China–Australia FTA (enacted in 2015) on our economy.

(i) According to this data, by how much is this FTA expected to boost our GDP from the baseline level? (1 mark)

(ii) Explain the various ways whereby this FTA could accelerate Australia’s rate of economic growth (GDP). (4 marks)

(iii) Other things being equal, explain how would you expect this FTA to affect our unemployment rate in:
(a) the short term (1 mark)
(b) the long term. (1 mark)

(iv) Other things being equal, explain how you would expect this FTA to affect our incomes and material living standards. (2 marks)

(v) Explain why economists generally believe that FTAs will reduce Australia’s inflation, and thus raise our purchasing power and material living standards. (3 marks)

**Figure 3.33** The expected economic effects of the China–Australia FTA

However, trade can bring some problems too:

- Trade generally increases material and non-material living standards by:
  - Trade volumes have grown rapidly in recent decades due to trade liberalisation (reduced protection of local industries by cutting tariffs, subsidies, import quotas and signing FTAs).
  - Trade generally increases material and non-material living standards by:
    - encouraging production specialisation in areas of comparative cost advantage
    - the exploitation of economies of scale
    - lower prices for goods and services
    - accelerating GDP growth
    - the creation of jobs, employment and incomes
    - increasing access to resources
    - growing consumer choice
    - reduction of conflict
    - cultural enrichment.

- Australia’s international relationships include international trade (involving the flow of exports and imports of goods and services), and capital flows (movements of money capital and investments between countries).

- Trade volumes have grown rapidly in recent decades due to trade liberalisation (reduced protection of local industries by cutting tariffs, subsidies, import quotas and signing FTAs).

- Trade generally increases material and non-material living standards by:
  - possibly increased economic instability
  - cultural tensions
  - income inequality
  - prevention of the growth of infant industries.

### (vi) Examine the following table showing China’s estimated tariff rates for selected products. With the China–Australia FTA now in place, these tariffs would be reduced and later abolished. How would this be likely to affect the following?

**Product** | **Estimated tariff rate (percentage of price) imposed by China before the recent FTA**
---|---
Wheat, corn and rice | 1–10%
Vegetable oils | 9%
Sugar | 20%
Wool | 5.5%
Cotton | 26.6%


### An essay

Write an 800 word essay in answer to one of the following questions.

**A** Has trade liberalisation lowered Australian living standards and so done more harm than good? (20 marks)

**B** How would you expect the recent decrease in Australia’s terms of trade to affect our standard of living? (20 marks)

**C** The Australian dollar is lower in early 2016 than it was four years earlier. How is this likely to affect the government’s key domestic macroeconomic goals, the CAD and the standard of living? (20 marks)

### A written report

**Change to international transactions**

Write a 1000 word report on the following topic. In total, it is worth 20 marks. Ensure you include statistical data, diagrams and graphs where possible.

Recently (to 2016), Australia’s domestic economy has grown more slowly, unemployment has increased and inflation is very low. How would each of the following events be likely to have contributed to these economic conditions during the last two or so years?

**A** The terms of trade (5 marks)

**B** The change in the A$ (5 marks)

**C** The signing of FTAs (5 marks)

**D** The decline in Australia’s international competitiveness (5 marks)

### 3.10 Review

**Summary**

**Relationship between trade and living standards**

- Australia’s international relationships include international trade (involving the flow of exports and imports of goods and services), and capital flows (movements of money capital and investments between countries).
- Trade volumes have grown rapidly in recent decades due to trade liberalisation (reduced protection of local industries by cutting tariffs, subsidies, import quotas and signing FTAs).
- Trade generally increases material and non-material living standards by:
  - encouraging production specialisation in areas of comparative cost advantage
  - the exploitation of economies of scale
  - lower prices for goods and services
  - accelerating GDP growth
  - the creation of jobs, employment and incomes
  - increasing access to resources
  - growing consumer choice
  - reduction of conflict
  - cultural enrichment.
- However, trade can bring some problems too:
  - possibly increased economic instability
  - cultural tensions
  - income inequality
  - prevention of the growth of infant industries.
Recording international transactions on the BOP account

- **Definition:** The BOP account records the various types of transactions between a country and the rest of the world over a period of time.

- **Structure:** The BOP account is made up of two main types of transactions, each with sub sections:
  - The current account records credits and debits for goods, services, primary incomes and secondary incomes.
  - The capital and financial account records credits and debits for capital transactions, especially investments or the movements of money capital.

Relationship between the current account and the capital and financial accounts

- The BOP is a zero balance account where overall, the total value of credits equals the total value of debits.
- For Australia, theoretically, our CAD is exactly offset by a capital and financial account surplus involving a rise in our liabilities (debt and equity) abroad.

The CAD and its causes

- **Definition:** The CAD represents the excess of total debits over total credits on the BOP current account (made up of net goods, net services, net primary income and net secondary income). Australia runs a CAD.
- **Causes:** The size of Australia’s CAD is determined by both aggregate demand and aggregate supply conditions:
  - Stronger domestic demand-side conditions (due to locally stronger consumer and business confidence and rising disposable incomes), and weaker spending from abroad (due to a slowdown in economic activity or a drop in the TOT), usually lead to increased imports and decreased exports, and hence a bigger cyclical CAD.
  - Ongoing aggregate supply-side conditions also add to the structural CAD (a large savings–investment gap, rising oil prices, drought, high production costs and poor international competitiveness).

The composition and cause of the NFD and NFE

- **Definitions:** The NFD represents the excess of what Australia owes the rest of the world against what the world owes us. It implies there will be interest payments as well as the repayment of the borrowed capital. Net foreign equity (NFE) is associated with foreign ownership of Australian assets (such as shares and property) minus our ownership of foreign assets.
- **Composition:** There is both official (government sector) and non-official (private sector).
- **Causes:** Various factors account for our large NFD. These include the rise in official debt (due to a large number of large governments budget deficits in recent years), the national savings–investment gap and relatively high domestic interest rates, a recent lower A$, plentiful natural resources, a skilled labour force and good economic infrastructure.
- **Effects:** The NFD brings benefits (more finance for expansion, cheaper costs of borrowing) and costs (the burden of incomes repayments, and a bigger CAD).

The terms of trade

- **Definition and meaning:** The TOT relates to the ratio of export prices Australia receives from overseas (we are mostly price takers), relative to the prices we pay for imports. A fall in the TOT means that Australia is trading under relatively less favourable conditions because we are receiving relatively lower prices against those we pay for imports. Here, a given quantity of exports will purchase a smaller quantity of imports, so we are not as well off.
- **Measurement:** The TOT is measured by means of an index where the base year equals 100 points.

\[
\text{The terms of trade index (TOT)} = \frac{\text{Export price index}}{\text{Import price index}} \times 100
\]

- **Determinants:** For Australia, our TOT is greatly affected by international commodity prices that in turn reflect the global conditions of demand (such as global economic activity) and supply (such as climatic conditions and new discoveries) for the things we trade.
- **Effects:** Changes in the TOT affect the balance on current account and the exchange rate. For instance:
  - **The CAD:** A fall in the TOT involving the world paying lower export prices tends to cause a drop in the value of exports and/or a rise in the value of imports, leading to a rise in our CAD.
  - **The AS:** A fall in the TOT tends to reduce the demand for the AS because of the likely decline in the price and value of exports, and/or an increase the supply of the AS because of the rise in the price and value of imports (less demand for the AS and/or more supply of the AS tends to weaken the exchange rate).

The exchange rate

- **Definition:** The exchange rate is the price of an AS when swapped into other currencies in the foreign exchange market.
Determinants. Being a floating exchange rate, the price of the A$ is determined by the forces of demand for the A$ (as affected by international commodity prices and the terms of trade, overseas economic activity, our inflation rate) and the supply of the A$ (as affected by our levels of imports, local confidence and economic activity, interest repayments on foreign debt) in the foreign exchange market at equilibrium.

Measures. The TWI measures the average exchange rate, but there are also separate rates for every currency in the world. As the exchange rate appreciates or depreciates, it can have both good and bad effects on individual companies and the overall economy.

Effects. Changes in the A$ have both good and bad effects for particular groups in our economy. The exchange rate can affect the cost/price and value of exports, the cost/price and value of imports, and the size of the CAD. It also affects the achievement of the Australian government’s key domestic macroeconomic goals by affecting the levels of AD (via changes in X and M), the inflation rate, the rate of economic growth (GDP), and employment and unemployment rates.

An appreciation of the A$ tends to reduce the value of exports/credits relative to imports/debits and increase the CAD. It also slows the growth in AD. This tends to weaken economic activity, reducing inflation and economic growth, and causing a rise in unemployment.

A depreciation of the A$ tends to increase the value of exports/credits relative to imports/debits, and decrease the CAD. It also stimulates AD and economic activity, and so tends to accelerate inflation and economic growth while reducing unemployment.

Factors that may influence Australia’s international competitiveness

International competitiveness refers to the ability of a nation’s businesses to sell goods and services at an attractive price here at home and also abroad, without special government assistance or protection.

Trends: Recently, Australia’s international competitiveness ranking has decreased against various countries. We have become less internationally competitive according to some measures.

Determinants: A nation’s competitiveness is affected by many factors including:
- the relative production costs (including wages) for businesses
- productivity growth
- the availability of natural resources
- the exchange rate
- relative rates of inflation
- innovation and R&D
- the relative rate of company tax
- government subsidies.

Effects of trade liberalisation on Australia’s international competitiveness, domestic macroeconomic goals and living standards

Definition of trade liberalisation: Trade liberalisation involves the government policy of gradually reducing the level of protection of local industries. For Australia, trade liberalisation since the early 1970s, and especially since the early 1990s, has involved:
- cutting all tariffs (the general rate is now 5 per cent or less)
- reducing the overall value of government subsidies to local firms
- abolishing import quotas
- signing more bilateral FTAs (10 by early 2016).

Free trade means no protection of local industry and is the opposite of protectionism.

Effect of trade liberalisation on Australia’s international competitiveness: Trade liberalisation should help increase our international competitiveness by forcing businesses to use resources most efficiently in areas of comparative cost advantage. It also forces firms to restructure and cut production costs, and allows them to gain better economies of large-scale production by selling in bigger markets.

Effect of trade liberalisation on domestic macroeconomic goals: It increases efficiency in the use of resources and promotes stiffer competition. As a result:
- It can slow cost inflation pressures by helping to lift efficiency and lower production costs
- It can strengthen economic growth through greater efficiency in the use of resources, restructuring production, growing access to overseas markets and sales, and increasing economies of large-scale production.
- In the long term, it can grow efficiency along with markets for goods and services, thereby expanding local businesses and creating more jobs.

Positive effects of trade liberalisation on the standard of living: Both material and non-material living standards can gain from trade liberalisation:
- Material living standards can gain by raising efficiency, real per capita GDP, incomes and consumption.
- Non-material living standards can gain perhaps by encouraging peace and cooperation through trade relationships, and culturally enriching our lives and experiences.

Negative effects of trade liberalisation: However, trade liberalisation can present some problems for living standards. It may increase structural unemployment, especially in the short term, increase environmental problems including the depletion of resources, and possibly add to economic instability in countries.
Key terms

A depreciation of the exchange rate occurs when the value of a nation’s currency falls against another currency. A subsidy is a cash payment by the government to local producers to help reduce their production costs and selling price, making them more competitive against imports. A tariff is an indirect tax added onto the price of imports to make them dearer to local consumers and protect local industries from overseas competition.

Absolute cost advantage occurs if a nation is the cheapest or most efficient producer of a single good or service in the world. An appreciation of the exchange rate occurs when the value of a nation’s currency rises against another currency.

An import quota is a government restriction on the quantity of particular goods that can be imported. Balance on current account is equal to the total value of all credits minus the value of all debits for goods, services, primary incomes and secondary incomes, measured over a period of time.

Comparative cost advantage occurs if a nation specialises in a few key areas of production where its cost advantages are greatest or its disadvantages and opportunity costs are lowest. Current account surplus (CAS) is when the total value of all current account credits for goods, services, primary incomes and secondary incomes, measured over a period of time, exceeds the total value of all current account debits for goods, services, primary incomes and secondary incomes, measured over a period of time.

Cyclical CAD is the rise in the CAD that occurs when there is a rise in AD or spending as a result of strong aggregate demand-side conditions. Direct investment are capital movements into and out of Australia that involve establishment, purchase or expansion of companies and other assets. Dumping refers to the actions of an overseas competitor who sells a good below its cost price, thus damaging local producers.

Economies of large-scale production are reductions in a firm’s average fixed costs per unit associated with an increase in its production levels, perhaps enabled by trade liberalisation. Free trade agreements (FTAs) involve two or more nations agreeing to remove various forms of protection of their local industries. They are often seen as beneficial because countries will be inclined to specialise in areas of comparative cost advantage where opportunity costs are minimised and material living standards maximised.

Free trade involves abolishing protection of local industry by removing tariffs, subsidies and import quotas, thereby forcing local firms to become more internationally competitive. International competitiveness means that Australian businesses are relatively efficient in their use of resources, and can compete or sell their goods and services both here and in markets around the world without relying on government protection. They can sell goods and services of comparable quality at a lower price than overseas rivals.

International specialisation occurs when countries produce only a limited range of goods and services, focusing on those areas where they have the greatest comparative cost advantage. Labour productivity is commonly measured by the level of GDP per hour worked. Multifactor productivity measures the efficiency with which the combined inputs of labour, capital and natural resources are converted into production.

Net errors and omissions is an item that reflects the inaccuracies in the recording of international transactions. It can be positive or negative. Net foreign debt (NFD) is the difference in value between what Australian households, businesses and governments have borrowed from and owe overseas, minus what Australia has lent or invested abroad. This debt entails paying interest and repaying the capital borrowed at some time in the future.

Net foreign equity (NFE) is the difference in value between foreign-owned Australian assets (such as property, shares and the retained earnings of overseas-owned companies operating here) and overseas assets owned by Australian residents. Net goods is a subsection of the BOP current account that records the value of credits for goods exported minus the value of debits for goods imported from overseas, measured over a period of time.

Net primary incomes is a subsection of the BOP current account that records the value of credits for primary income received from overseas minus the value of debits for primary income paid to overseas, measured over a period of time.

Net reserve assets involves both RBA and government transactions, and includes foreign currencies, monetary gold, and required contributions to overseas governments and international agencies. Net secondary incomes is a subsection of the BOP current account that records the value of credits for secondary income received from overseas minus the value of debits for secondary income paid to overseas, measured over a period of time.
Trade protection is a government policy that involves using high tariffs, import quotas and subsidies to local producers to support local industry so that it can compete with imports.

Tariffs, subsidies and import quotas, and the signing of FTAs.

Trade liberalisation is a government policy that entails reducing protection of local industry by cutting tariffs, subsidies and import quotas, and the signing of FTAs.

Trade weighted index (TWI) is a general measure of Australia’s exchange rate. It represents the value of our dollar against a basket of foreign currencies, each weighted according to their relative importance to Australia’s trade.

The terms of trade (TOT) represents the ratio of the export prices we receive to the import prices we pay.

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Net services is a subsection of the BOP current account that records the value of credits for services exported minus the value of debits for services imported from overseas, measured over a period of time.

Non-official debt represents borrowing overseas by Australian businesses to finance expansion.

Official debt represents borrowing by the government, perhaps to finance budget deficits.

Portfolio investment involves money transactions into and out of Australia involving shares, debt and securities.

Productivity relates to efficiency or the level of output gained from a given quantity of inputs or resources.

Structural CAD is an ongoing deficit on the current account resulting from structural or supply-side problems, including our lack of national savings, high production costs and poor international competitiveness.

The balance of payments account (BOP) is an annual statistical record of Australia’s financial transactions with the rest of the world. In turn, these transactions are divided into two main types of transactions — current transactions, and transactions involving the capital and financial accounts, each recording credit and debit transactions.

The balance on capital account is a subsection in the BOP capital and financial accounts. It records the total value of credits minus the total value of debits for capital transfers and other intangible assets.

The balance on financial account is a subsection in the BOP capital and financial accounts. It mainly records international transactions involving the movement of money capital or investment, as well as the dealings of the Reserve Bank of Australia (RBA).

The exchange rate is the number of units of another currency that can be purchased with or swapped for one unit of our currency.

The foreign exchange market is where currencies are swapped or converted into other currencies.

The national savings–investment gap is the shortfall in value between what Australian households, firms and governments save and the level of their investment. This must be covered by overseas borrowing or debt.

The terms of trade (TOT) represents the ratio of the export prices we receive to the import prices we pay.

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